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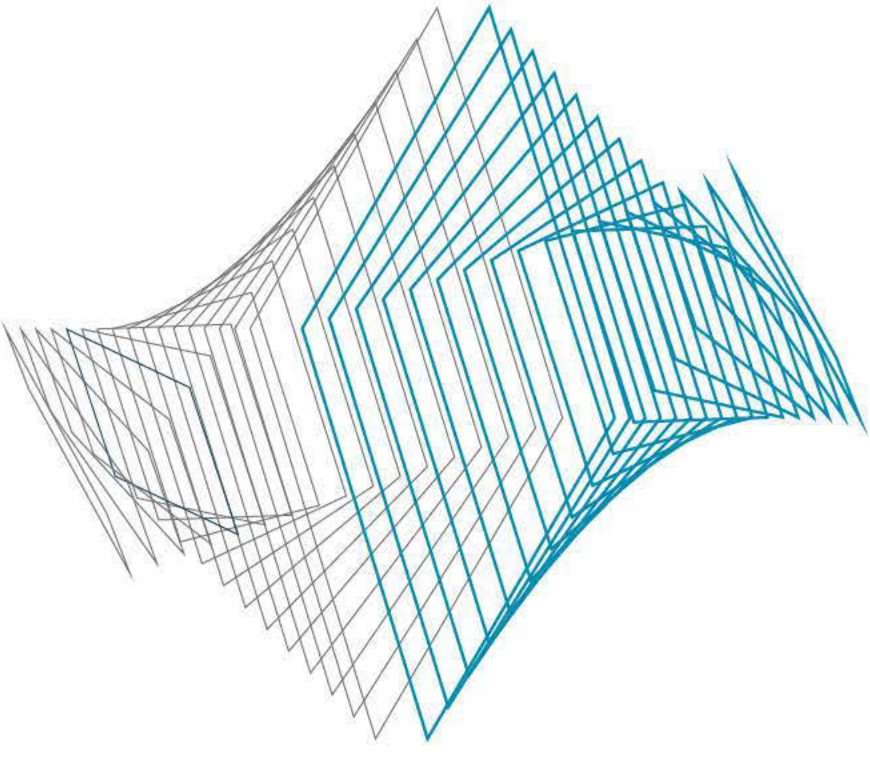
Entrepreneurial Spirit IV



Conference Proceedings Entrepreneurial Spirit IV

VYSOKÁ
ŠKOLA
EKONOMIE
A MANAGEMENTU

Conference Proceedings

Entrepreneurial Spirit IV

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Content

Introduction

The main mission and objective of University of Economics and Management (VSEM) is to be an independent higher education institution offering internationally competitive study programmes.

The educational process at VSEM involves conveying information on development and current trends in line with the concepts and approach of individual study programmes, with the objective of preparing the graduates to succeed in the increasingly competitive environment of the integrated and globalized world.

We encourage the students' personal and professional growth by supporting their self-confidence and social responsibility. We help them to put their ambitions and personal beliefs into effect, and maintain international ethical standards.

The conception of study plans and teaching methods is developed in line with changing social needs and requirements and it reflects the individual attitudes and needs of the students, who are helped to cope with management and analytical tasks. Students are trained to be able to assess the existing situation (input and output) of the examined area using both external and internal information sources.

In creating, updating and assessing the quality of the study programmes, majors, and specializations, VSEM cooperates with its partner institutions in all fundamental areas of academic focus (economics, management, marketing, information and communication technologies, and human resources), on both national and international levels.

Every year VSEM welcomes many foreign students who wish to spend a part of their studies at our university. VSEM accepts students from all over the world, so that they can experience at least one trimester on our campus.

The annual international student conference „Entrepreneurial Spirit" is organized by the students of University of Economics and Management. The goal of the event is to improve presentation skills, to provide the floor for discussion and exchange of experiences, and to master English language of the participants. Therefore, the whole programme is carried out in English language.

Students´papers

1. Cikánek David: Potential of Instagram for commercial use

SUMMARY
Main objective: The main goal of the work is to set general rules for commercial use of Instagram. It is based on observing the most followed accounts. In the beginning author investigates, how individuals present themselves on visual social media, especially on Instagram. Then he compares visual social media with written social media and mentions the growing importance of the visual ones. Author formulates general strategies used for commercial purposes.
Research methods: The primary method, which was used, was literary research, mainly articles. The information was taken either from articles in academic journals and books, or from official web sites of the selected companies. And also from the Instagram accounts. According to this case study was made. Knowing the fact that this is a current topic are utilized sources of data or information, Internet ones. In practical part, the author uses methods of induction, deduction, or comparison and uses it to get information about users of social media and their behavior.
Result of research: Essay shows efficiency of hashtag campaigns and use of Influencers. The case study investigates mistakes, made by selected companies on Instagram platform. After that, author confronts style of chosen posts and their frequency in the above mentioned companies with the most successful Instagram accounts.
Conclusions and recommendation: According to information obtained, author mentions general rules for a successful Instagram account. The author shows mainly two ways how to improve your Instagram account. Firstly by influencers. Secondly by hashtag campaigns.In this seminal work, the author highlights higher interact between users, compared toother social media.In conclusion Instagram strategy is always based on individual and it mirrors company goals, as well as its image. The strength of visual media in their closeness between users and therefore successful strategies are focused on connecting consumers and businesses.

KEYWORDS
Instagram, Social medias, Visual social medias, Instagram strategies, the most successful Instagram accounts

JEL CLASSIFICATION
M310 Marketing M370 Advertising O350 Social innovation

LIST OF PICTURES AND GRAPHS

1.1 Introduction

Social media became part of our lives. Thousands and thousands of books and articles have been written about social networks, their influence or marketing use. Describing written social media strategy would be old-fashioned. Facebook is going to celebrate the 13th birthday this February. Considering facebook "new platform"is just showing speakers ignorance. All written social networks are directly connected to teens right now. Networks are dramatically changing like are adolescences in that age. For young teens is Facebook something like boring family dinner, you have to be there, even if you do not want. Couple years ago new trend, called visual social networks, rose up. It is a new word for service you have probably already heard about and it is led by phenomenon of Instagram and Snapchat. A new generation of people grew up with them. These men speak different language, language of pictures. They have got a lot of nicknames: "generation Z, silent generation or digital natives". Picture speaks a thousand words, says old proverb. New picture-focus social networks beat written ones, like Facebook and Twitter, mostly in growth. These new medias are really flexible and understandable. Older platforms also changed after the success of Instagram and Snapchat. They became more video and picture friendly with an emphasis on live broadcasts.

Instagram was chosen because it is the most popular visual social network in Europe. 75% percent of their users live outside the USA simply because Snapchat is leading in the United States of America.

Despite this huge trend in last few years there are still businesses not using or using Instagram wrong. Many companies fail on Instagram field with a strategy for written social medias. In the end of this work, we should know if there are any general rules about marketing use of Instagram.

1.2 Theoretical part

1.2.1 Online vs Offline life

For better understanding motivation of people using Instagram and to study the behavior of visual social network generation author used thoughts of Ervning Goffman (1999). Erving Goffman (1999) posited that people operate as performers, expressing their identity through verbal and non-verbal messages with a goal to display the most credible image to the audience. Even when this idea was developed more than 50 years ago, it perfectly fits to social media generation. In the same book he is also saying that in a social interaction, as in a theatrical performance, there is an on the stage area. Individuals appear before the audience. We call this area on-line, not on stage, however, behavior is same. Where these positive self-concepts are offered, as well, as desired impressions. But there is a hidden, private area where individuals can drop themselves and their societal roles and identities too. However, self-presentation strategies are dependent on the presenter's goals.

Cook (1971), takes more aggressive view. According to Cooks Interpersonal perception (1971), self-presenters most basic motive is to gain power in the relationship between presenter and audience. Power here means more influence, than superiority.

Hill (2004) talks about evocative power. He mentions that advantage of pictures is their greater weight in contrast with print or spoken arguments. Bassicli visual arguments have a bigger persuasive capability.

Very same view has Boehm (1994). Boehm presents that images are understood as an additional source of communication complementing written or spoken text. Pictures are building credibility faster and creating more interaction. He is talking about restoring trust as well. That is why Instagram have higher social interaction than written social media.

Traditionally in real life, sooner or later you face the challenge of prooving your self-presentation in face to face contact. For example, if you consider yourself able to speak any foreign language, someone would ask you to prove it. However, in internet space you can create completely new and fake person to gain more confidence, power and respect. This prooves Papacharissi (2011), they said that online sites allow people to emphasize salient identities that perhaps are not appropriate or desirable to display in face to face situation.

Lauren Reichart Smith and Jimmy Sanderson (2017) were analyzing twenty-seven professional athletes and their behavior on Instagram. With the advent of social media, athletes are now equipped with the capability to take more control over their self-presentation and express aspects of their identity that they perceive to be most salient. They were mapping how sportsmen present themselves according to how mass media present them. They found Instagram much more personal than other platforms. This opens up avenues for fans that are generally not seen in traditional mainstream media coverage. It shows an effort of all famous people, not only sportsmen, on social networks, to be closer to the audience, and show also their privacy, which mainstream media can not.

1.2.2 Methodological part

The primary method, which was used, was literary research, mainly articles. The information was taken either from articles in academic journals and books, or from official web sites of the selected companies. And also from the Instagram accounts. According to this case study was made. Knowing the fact that this is a current topic are utilized sources of data or information, Internet ones. In practical part, the author uses methods of induction, deduction, or comparison and uses it to get information about users of social media and their behavior.

1.2.3 Online sources

While Instagram exists only for seven years, all sources of information are online. Statistics sponsor in all social medias called socialblade.com is mapping and editing stats about Instagram accounts every day. The author uses their statistics database as the main source of data. Finally, informations were also taken from official Instagram and Facebook sites.

The author includes theory from a lot of different segments. Presentation of individuals in an online environment. Scientific knowledge of the perception of images and videos, compared with the perception of the single text. Differences between presenting well-known people offline and online. Connected with current data and modern view on Instagram marketing.

1.2.4 Influencers

For those who are using product placement often in their post was special name created. They are influencers. Influencer is person with enough publicity making money from publishing posts of companies (Forbes.com, 2014). There is also group of people having Instagram as the main source of income. With the help of visual social media, they do not need to wait for your time on stage or catwalk. They can earn money from publishing pictures. Nevertheless, there is very thin line between spontaneous recommendations and selling. Costumers are really sensitive.

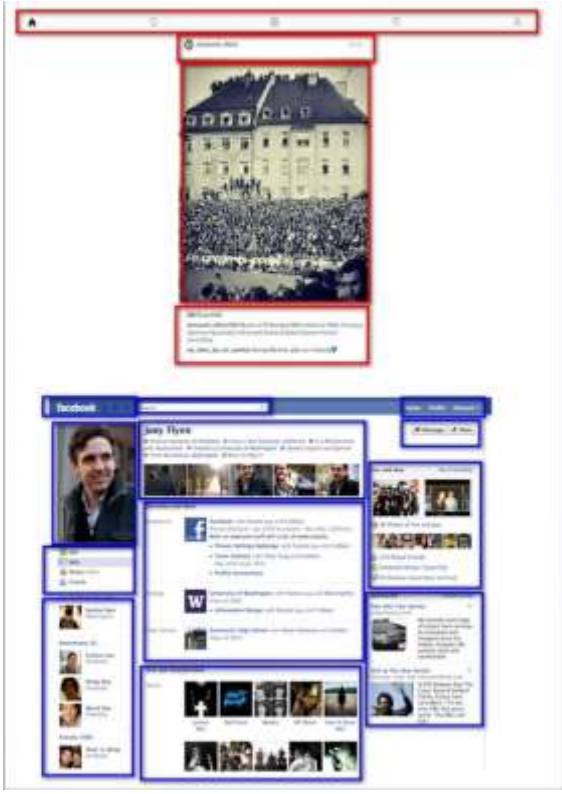
1.3 Practical part

1.3.1 Visual vs. Written social media

The social network, which has recently become a boom, named after the words instant camera and telegram and translates as transporter photos.

The picture sharing service Instagram was launched in October 2010 and in December 2014 Instagram had over 300 million users worldwide. In September 2015, after nine months it was 400 million people worldwide. However phenomenal growth (with 25-30% increase per year) reached 600 million monthly active users. Big jump forward was the start of Instagram stories in summer 2016 (Statista.com, 2016). It was the copy of principle of Snapchat but implemented into Instagram platform. We can see the trend behind those numbers, trend of growing visual social medias. All this has gained importance in recent years, as visual media has significantly impacted our daily lives in terms of the way information is disseminated and used.

Picture 1 Main screen Facebook vs. Main screen Instagram



Source: Cikánek (2017)

Visionaire and father of Facebook Marc Zuckerberg paid a billion dollars in the year 2012 for application called Instagram. At those times this company only had thirteen employees. Facebook predicted and enable the success of Instagram (Instagram.com, 2016).

As you can see, another advantage of Instagram is simplicity. The screen only has one main subject, a picture. On the other hand, Facebook screen can be distracting with paid advertisement, a lot of small pictures and suggestions. Author marked three main parts of Instagram screen, while Facebook has twelve. This partly explains the huge growth of Instagram users.

Depending on the Instagram user's settings, every picture, video, hashtag, comment or like is either visible to the public. Users can choose to watch from the sidelines too, if they prefer. Searching by hashtag supports to find anyone, not just your friends.

1.3.2 Marketing potencial

Accepting the idea that visual social media show even more private situations of people, as Smith and Sanderson (2017) says, gains big marketing power to Instagram. In 2016 about 50% of all brands are visible on Instagram, prediction of brandwach.com (2016) is that this number will increase to 70% in the end of 2017. If someone still has a feeling, that there is no need to be on Instagram as a company, brandwatch.com (2016) is also saying that Instagram has 10 times higher engagement with brands than Facebook. 50% of users are following minimum of 1 brand and 60% of user learning about new brand after seeing it on Instagram (Internetworldstats.com, 2016). However, there are differences in segments of business. The biggest group is fashion, with 96% of brands (Brandwatch.com, 2016).

Ignoring the fact that the most followed Instagram profile is Instagram company account their purpose is different from the others. There are eighteen personal accounts and two companies in top twenty most follower accounts (Instagram.com, 2016). This paper took most successful subjects as an idol or a goal what other companies should learn. Of course, there are big differences in types of businesses. However, goal of this essay is to set general rules for companies. For the purpose of this article, author analyzes most successful Instagrams and their activities, hashtags, number of followers and style of pictures. This paper is also focused on Instagram accounts of the brands, which have different or interesting strategy.

1.3.3 Reputation is more, than business

According to the story of Australian model Essena O'Neill. 18 years old fashion star started to publish prizes and marketing backround of her posts. She demonstrated, how corrupted social media, Instagram and models are. She ended up with Instagram claiming that social media "is not real life". She started to edit her post with comments about money, which she gets for this picture or time spent on a beach trying to make the best picture for Instagram.The post from a beach looks like the casual post (Instgram, 2015. Youtube.com, 2015). This behavior is very good example of Goffmans Presentation of self in everyday life (1999). She shows her 2 selves. However, both identities were so different from each other that she stopped it.

It is important, to be honest. If follower feels insincerity, about 60% of cases, this will discourage further interest in the post says bloggin's research (E-marketer, 2017). Approximately same number of users who are following influencer because of news from influencers industry. Finally, when people know about this behavior and product placement, but the post is still honest and casual, they are ready to accept it.

As on other social media, you can buy single post, prize depends on a number of followers, usually starting about 200 USD per post.

1.3.4 Inspire, not sell

Recent post from the most followed person, Selena Gomez, with new leather handbag looked like this:

"Being able to create is my favorite thing in the whole world. I'm so excited to be a part of the vision and family @coach AND I get the honor to design with @stuartvevers –ahhhhhh" (Instagram.com, 2016).

She named company as their family and she posted personal account of the designer. The post looks really personally. Leather handbags making company started to cooperate with Selena Gomez just couple weeks before this post. Nevertheless, words like family and naming designers name seem more personal than business.

Famous furniture company IKEA set their Czech Instagram account as design blog. There are no prizes, names of products or information related to the company. Swedish phenomenon uses Instagram just for inspiration. Most of their posts are professionally decorated pictures of products. They are using hashtags connected with art, photo shooting and design as well as love, living, home, life or inspiration. IKEA posts every 2-3 days. According to the blog style of platform seems this frequence is sufficient.

1.3.5 Hashtags

Instagram allows to use 30 hashtags. More hashtags you have, faster you can increase the number of followers. Check top hashtags and use those, which fit to your product or service (Internetworldstats.com, 2016).

#EsuranceSave30

A great example of hashtag use shows campaign from US Superbowl 2015. Company called Esurance bought the first ad directly after the Superbowl and deployed their #EsuranceSave30 campaign. According to the commercial, they saved roughly thirty percent by opting for an ad spot after, not during the game. Then they used the ad to announce a hashtag sweepstakes of epic proportion using the money they saved. Contestants entered by using the hashtag #EsuranceSave30 and, after thirty-six hours, one lucky person was picked to win the entire pot. The price was astronomical 1,5 million dollars.

First of all, the sheer scale of the campaign assured that people would participate. In addition to this extremely simple process of tweeting to enter made participation much easier. It was obvious that people would get involved, but what makes the campaign even more brilliant is that it matched perfectly with the message. They wanted to tell the consumers – that Esurance can save them thirty percent (Twitter.com, 2016).

The main platform was Twitter. The whole campaign lasted only for thirty-six hours however, 5.4 million uses of the #EsuranceSave30 hashtag occurred. More than 200,000 entries within the first minute of the commercial airing appeared. To increase the chance to win, people basically just spam Twitter account of Esurance. During the campaign 2.6 billion impressions have been made. Number of followers on Twitter was 30 times increased during a day and a half.

#ThrowMeBack

Expedia's Thrown Back Thursdays campaign is a perfect example of how brands can take existing trends and leverage them to creating trends of their own. The travel company played off of what was already the fourth most utilized hashtag on Instagram – #tbt (or Throwback Thursday) – and came up with the #ThrowMeBack hashtag. It was a great concept. They asked users to tag their nostalgic #tbt posts with the hashtag #ThrowMeBack, and vowed to give ten lucky winners the opportunity to revisit the places where the photos were taken and recreate them in the modern day. The imagery that the campaign spawned was very modern cool, and Expedia displayed it in a promotional video of the first winners' trip to recreating their photo. Submissions for the contest doubled weekly over a ten-week period until all the winners had been chosen.

Thrown Back Thursdays worked because Expedia tapped into the emotion of how travel makes people feel. The campaign generated: Over 5 million impressions, 96% Instagram growth over the 10-week period. Hashtag #tbt is still popular, 5th most using one (Twitter.com, 2016).

1.3.6 Case study

After describing best of the best, let me talk about difficulties. For better understanding problems, that successful businesses are doing, the case study of Czech passenger railway traffic has been made.

Sampling

SZDC, institution collecting list of companies providing freight and passenger traffic, records 27 subjects of passenger traffic. 3 major companies have been chosen. Other companies were not taken into account because of their size. ČESKÉ DRÁHY (marked as subject 1), REGIOJET (subject 2), LEOEXPRESS (subject 3). The goal of the study was to show the trend, mistakes and suggest better strategy, not to analyze the whole segment of traffic. Data were sample from official websites of selected companies and their Instagram accounts (Instagram.com, 2017) CD.cz (2017), studentagency.cz (2017) and le.cz (2017).

Data

Researchers selected the date of January 3, 2017. From each company's Instagram account, all posts have been analyzed. A total of 273 pictures and 9 videos were analyzed.

Coding procedures

a) According to the main object of the post, post has been marked as VIP/employees and passengers or trains and other equipment.

In connection with the trend, that was mentioned before (pop music and lifestyle VIP accounts success), one of the criteria was set 1) number of VIPs posted per account. Backround of the post was not analyzed. The study focuses only on the quantity of VIP persons, not on motivation, whether it was paid add or random post with no marketing goal.

The second category was focused on how many posts were 2) trains and other equipment connected with a company take. The last category was represented by 3) employees and passengers.

b) In the end, relative efficiency was defined due to the number of followers/posts/VIPs and one million transported passengers. These results were compared with bigger foreign company, Deutsche Bahn (German railways).

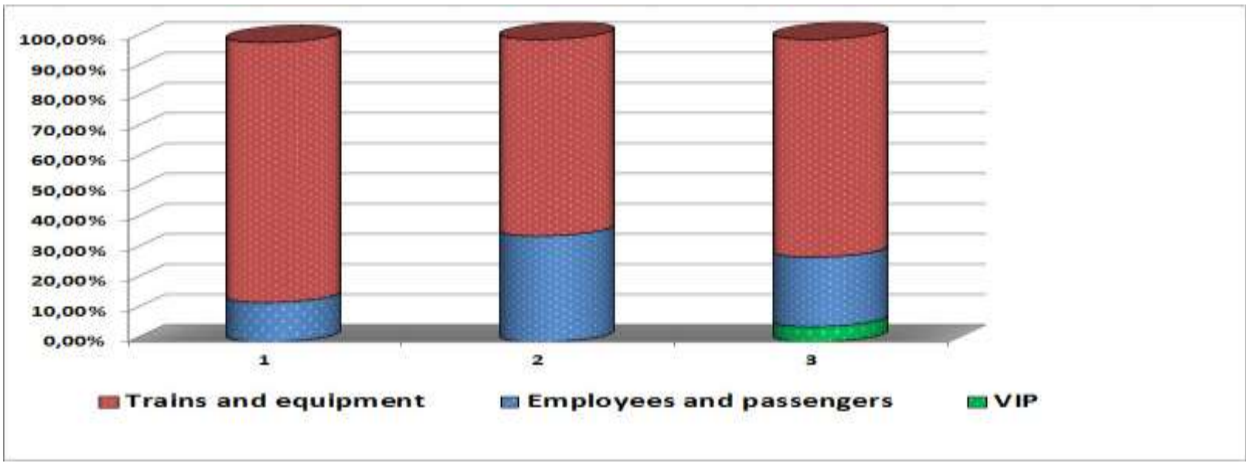
c) Criteria of activity were based on how often is company posting on Instagram, time was not reflected.

d) To analyze hashtag use of each account, last 10 posts were investigated. The result of hashtag use category was coded by the following items: language, most popular hashtags and the number of hashtags. Last but not least how often Instagram users are using hashtag with the name of each company?

Result

As we can see in graph 1, only company number three has relatively good number of VIP posts, totally eight pictures**.**

Graph 1 Total posts on company accounts



Source: Cikánek (2017)

Other subjects have none or one VIP post actually. Knowing the fact, that Instagram is for many people more personal and not so formal platform, companies should have more VIP posts. Admin should be careful to try to post honest and casual pictures. If people see marketing goal in the backround of the post, not just post of interesting situation, the trust is dramatically going down.

Huge differences are made in the age of accounts. Subjects 2 and 3, both are about 4 years old, however, subject 1 is only 6 months old. This difference is keen in fact, that all companies have an approximately same number of followers (from 2400 till 3000). While subject number 1 reached 3000 followers over 6 months, other two businesses did not reach 3000 during 4 years.

Table number table 1b is showing that subjects 2 and 3 are using a low number of hashtags and only in Czech, number 1 is using twenty-six on average and some of them even in English or German. We can also see that company number 2 has big potential because it is leading in total using the name of company through Instagram.

Table 1b Accounts statistics

	1	2	3
Total number of passengers 2015	170 000 000	7 000 000	1 000 000
Averige number of hashtag per picture	26	5	6
Frequency per 1 post	3 days	60 days	7 days
Language	CZ+NJ	CZ	CZ

Source: Cikánek (2017)

Complete stats from January 3, 2017 are in table 1c. Finally, company 1 had started good direction with using different language and sufficient number of hashtags. They should post little bit more often, and maybe choose best time according to target group and their location. It would be nice if they implement more VIPs into the posts. According to the size of the company, account is still week.

Company number 2 had the worst result from all analyzed subjects. Posting frequence, no VIPs in the posts and number or character of hashtags disqualifies them from chance to improve business account. However, the result of thirteen thousand hashtags with their name means that people still know about this company, even if their Instagram is unused. It is because of other business activities, which company has.

Subject number 3 is the smallest one, having the least number of passengers and number of company name hashtags as well. They have satisfying number of post, however low number of hashtags per post. It means, pictures are not used effectively. They should try to sell VIP posts better. Limit for number of hashtags is 30 per post, two of selected companies are not using even half.

They should try to sell VIP posts better. Limit for number of hashtags is 30 per post, two of selected companies are not using even half.

Table 1c Accounts statistics

	1	2	3
Follower	2400	2600	3000
Posts	88	23	171
VIPs	1.00%	0.00%	5.00%
People and employee	13.00%	35.00%	23.00%
Trains and other stuff	86.00%	65.00%	72.00%

Source: Cikánek (2017)

For all three firms, Instagram is definitely not main communication platform. The potential here is enormous because hashtags connected with traveling are one of the most used ones through the whole internet.

1.4 Conclusion

The author shows mainly two ways how to improve your Instagram account. Firstly, by influencers, local or worldwide Instagram stars publishing your brands for money, Secondly by hashtag campaigns and how to involve your target group. It is necessary to set moral limits. Long-term reputation should never be less important than one single marketing goal. Instagram strategy must be subordinated to a higher goal. Instagram post, even bought ones, should look honest. Influencer or Instagram model should be part of your company, not your mascot. People are very sensitive, there is a thin line between selling and just publishing your favorite product. If people see marketing goal in the background of the post, not just post of an interesting situation, the trust is dramatically going down. Because people going on Instagram to see more private situation, company should show "human face". The content of visual social media is less formal than content on written social media. Instagram is main source of inspiration not only information or data.

The case study shows common mistakes mentioned in results of the case study.

To post a couple times per week or every day seems to be comfortable for both sites. Influencer posts a couple times a day, companies usually couple times per week. The concept of showing your brand or company on other profiles, can accelerate success of your Instagram account or strategy.

On two examples author shows, how to involve your customers into a hashtag campaign. Try to use general, popular hashtags, as well, as very specific one. Closely connected with your business. Connecting your target group with company name hashtag seems to be effective.

Another revolution in social media is coming. Social platforms are main marketing field for e-shops to catch new costumers. Further, what if you could buy something directly through your social media application? Exactly this situation will happen in next few months, Instagram is coming with the new plugin. This will probably change the concept of Instagram for many businesses. Global marketplaces like Amazon are negotiating with visual social media. So far you can get only inspiration from Instagram, but in future, you will be able to buy everything, that you can see. That is another reason for studying Instagram.

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2. Čech Martin: Evaluation of the European amendment on non-financial reporting

SUMMARY
Main objective: The aim of this seminar thesis is to evaluate the impact of the European amendment on non-financial reporting on the Czech market and to formulate recommendations, based on the public available data.
Research methods: As the research methods in this thesis there were used a literary research of publicly available resources about the Corporate Social Responsibility problematics, research about the relevant European directive and explanatory report for its adoption into the Czech national law. There was also realized a research within the surveys of two respected legal firms about the issue of non-financial reporting in the Czech Republic and abroad. Based on this information, the main findings will be compared and the final evaluation and conclusion will be reached by the induction method.
Result of research: According to the gained information, this amendment will have, in terms of direct impact, just minimal impact on the Czech market. In fact, there is only 26 companies that meet the criteria established by European Union. However, it can be expected that it will have significant indirect impact on corporate social responsibility in general. It is because the reporting requirements include the entire supply chain and thanks to this fact, the network of responsible companies will be growing. It may be also expected that awareness and activity of the general public will be increasing. This may cause a pressure to companies into social responsibly behavior. Even in the CEE region is a bigger ratio of companies that publish the non-financial reporting than in the Czech Republic. It can be expected that this amendment will help to increase public awareness and growing non-financial reporting trend in the country.
Conclusions and recommendation: Based on the obtained results, it is recommended to all companies on the Czech market to participate in social responsibility and realize their business an accordance with the corporate social responsibility. Every company should consider the impact of its business on its environment and inform the public. According to the gained data, it can be expected that it is a matter of time when companies will have to do so, because of a pressure from its suppliers or customers. It is also recommended to all public and customers to consider not only for how much they buy goods / services, but also where and from which manufacturer. Then to try purchasing only from this socially responsible, in order trying to force the other companies to realize the impacts of their business.

KEYWORDS

Corporate Social Responsibility, European Union, Non-financial reporting, Corporate environment

JEL CLASSIFICATION

M14 Corporate Culture, Diversity, Social Responsibility

LIST OF ABBREVIATIONS

CSR	Corporate Social Responsibility
EU	European Union
CEE	Central and Eastern Europe
KPMG	KPMG Česká republika, s.r.o.

2.1 Introduction

Although the concept of corporate social responsibility (CSR) has been developing several decades, there is still no uniform definition for this term. It is due to the fact, that CSR has no specific defining boundaries and it is based on a voluntary basis. Socially responsive companies are reflecting needs of their internal and external environment, are contribute to sustainable development, should be transparent and generally help to the overall improvement of the company condition.

Behavior in accordance with the principles of CSR brings series of advantages and profits especially from the non-financial point of view to the company. Importance of these factors may be for good and sustainable function of the company very significant. As well as tangible assets in the form of real estate, stocks and financial assets are important for the company, intangible assets as human capital, capital contained in natural resources, brand value, reputation and partnership relation are significantly important too. Socially responsive companies are characterized by its proactive, not just reactive policy and their management anticipates and actively creates new and positive trends.

1 January 2017 comes into force an amendment to the Accounting Act and Act on Business Activities on the Capital Market, which reflects the EU Directive 2014/95/EU. This provision means obligation to publish so-called non-financial reporting for some companies. It means that affected companies have to report their activities on society and the environment. This novelty should mean above all an opportunity for positive change. Non-financial reporting should encourage to the fact that CSR will not look only like as one-off company's contributing in a charity or sending a team to a volunteer day.

Company have to focus more closely on social and environmental issues, human rights issues and the risks of corruption. It is not "just" CSR report, which is voluntary and highlights the strengths of the company. Non-financial reporting should encourage to consider the negative impact which could company cause by its activities and for searching the solutions.

The aim of this seminar thesis is to evaluate the impact of the European amendment on non-financial reporting on the Czech market and to formulate recommendations, based on public available data.

2.2 Theoretical – Methodolgical Part

The theoretical – methodological part introduces problematics about the Corporate Social Responsibility issues, especially what this term means, about its history and current trends. It is followed by the basic specifics about the Directive 2014/95/EU, which has been implemented into the Czech national legislation coming into force by 1 January 2017 and has changed the previous rules. The end of this part introduces the methodology of this seminar thesis.

2.2.1 About the Corporate Social Responsibility

According to Kunz (2012, p. 12), the concept of CSR has been dynamically developing for several decades. Howard R. Bowen, considered as the one of the first significant theorists in the field of sustainability defined in 1950s CSR as *"the obligations of businessmen to pursue those policies, to make those decisions, or to follow those lines of action which are desirable in terms of the objectives and values of our society."* Kunz adds the fact that although this definition emphasis particularly committed and exemplary businessman's attitude, it became entirely important for further development of the CSR concept.

The same author adds that as a crucial factor in terms of the genesis of the corporate social responsibility concept, may undoubtedly be considered the year 1979. This year, Archie B. Carroll suggested definition of CSR, which focused on four basic areas that were until this time mostly considered as mutually exclusive, namely:

- economic responsibility;
- statutory (legal) responsibility;
- ethical responsibility;
- voluntary responsibility, which later renamed as philanthropic responsibility.

As presented by Kunz (2012, p. 12-13), spontaneous development, as well as quite width of this concept which is related to a cross-section with a number of different disciplines have resulted in a very high terminological disunity so far. There is no global unified definition for the "Corporate Social Responsibility" concept and it seems there is no change in future. Author suggests that social responsibility of companies is based on voluntary and not strictly defined boundaries. This gives space to wide discussions, as well as a very broad understanding and interpretation of this complex concept to individual interest groups.

Pavlík, Belčík et al. (2010, p. 19) say that most definitions of corporate social responsibility requires the organization to behave socially responsible towards employees, customers, suppliers, local communities, the environment etc. In other words, it means that the organization is required doing own business and behaving in accordance with what it proclaims, for example investing in activities which exceed the statutory obligations without its obviousness why it should be involved in. It is important to note that the primary business objective is to create a profit for the owner, so it is clear that these activities should be worth it.

2.2.2 Corporate Social Responsibility and the EU

According to Huber et al. (2016, p. 83), the European Commission considers a new definition of CSR as "the responsibility of enterprises for their impact on society". To accomplish this responsibility, it is important to respect the relevant legislation and collective agreements among social partners. Therefore, companies should establish procedures dealing with integration of social, environmental, ethical, human rights and consumer concerns into their own business strategies and should be closely collaborating with their stakeholders. The aim of these steps is to maximize the creation of common values for their owners and / or shareholders, as well as for their other stakeholders and for the society. They should also identify, prevent and soften their possible unfavorable impacts.

2.2.3 Corporate Social Responsibility reporting

According to Pavlík, Belčík et al. (2010, p. 47), mainly large global corporations process various reports and reports on the implementation of social responsibility. These reports are prepared beyond the legal requirements for annual reports. CSR reports indicate the company’s approach to the environment, the sustainability responsibilities or are directly focused on the fulfillment of social commitments undertaken by businesses within CSR. Communicating with the public by this way has already become a matter of good reputation, prestige and demonstration of efficient and prudent management.
The CSR reports contains the following issues:

- basic introduction of the company;
- the relationship of the company to its employees, the environment and surrounding communities;
- the environmental impacts and potential risks associated with running the business (e.g. activities endangering the environment and surroundings);
- specific CSR activities and projects (realized, planned).

2.2.4 Basic specifics of the Directive 2014/95/EU

According to Gregor (2016), the Directive was approved by the European Parliament on 22 October 2014. It sets up an obligation on certain large corporations to publish information regarding the environmental, social and employment issues, human rights and the fight against the corruption and bribery in their annual reports. The directive also requires the disclosure of information about the diversity within the administrative, management and supervisory bodies of the company and its policy in this area. Publication of non-financial information should enable an understanding of impact of business on society. This information is determined for company management and a wide range of stakeholders, especially investors and customers. The broader aim of the Directive is to contribute to the transformation to a sustainable economy and it means (Gregor, 2016):

- to provide a minimum standard for assessing and addressing the risks of negative impacts;
- to provide to the investors and the public information about the way how large companies approach to the negative impacts of their activities;
- to ensure the basic comparability of published information.

The Directive applies to businesses that meet the following criteria:

- public interest entities. It means entities governed by the law of a Member State and traded on an exchange, credit institutions and insurance companies. Member state may extend the definition;
- they reach a net turnover of 40 million EUR or a balance sheet total of 20 million EUR;
- they have at least 500 employees.

EU member states should have transposed the Directive into their national laws by 6 December 2016, with effect from 1 January 2017. Affected companies should publish the first reporting of the non-financial information in 2018, for the period corresponding of the accounting year 2017 (Gregor, 2016).

KPMG (2017a) in its article adds that similarly as in case of financial reporting, the Directive defines the rules for the group. If the consolidated company publishes relevant non-financial information in the consolidated non-financial reporting of the company group, individual company already does not have to publish this information separately.

2.2.5 Methodology

This seminar thesis is prepared on the basis of public available bibliography and internet resources research. Then the aim of this thesis - the evaluation of the impact of the European amendment on non-financial reporting and formulating recommendation - was reached by induction method on the obtained data from the research.

Introduction shows a brief information about the corporate social responsibility, what it means for the company and what is its connection with the non-financial reporting. It also briefly outlines information about the European amendment on this non-financial reporting and why it has been ratified. Finally, there is determined the aim of this thesis in this part.

For collecting information in theoretical-methodological part, there was used a literary research of three books about the CSR problematics in order to present what is CSR, how it is developed from historical point of view and what are the issues of CSR reporting. This also includes a comparison of more opinions for the current CSR concept and which areas are covered by the social responsibility. The European amendment is about non-financial reporting, which globally deals with CSR, and that is why the CSR problematics was introduced. To gain information about the specifics of the EU Directive 2014/95/EU, it was used by collecting information from public internet resources - from the web pages of two legal firms where they describe and evaluate the Directive.

In the first chapter in the practical part there were described three examples of social responsibility of the KPMG Czech Republic - its strategy for sustainable development, how it takes care of its employees and how it behaves in accordance with the green environmentally policy. KPMG was mentioned as the example because it is considered as one of the market leading company in its field and with big tradition within CSR. Also, evaluations made by KPMG, are used later in the practical part. In the following chapters (about non-financial reporting in the Czech Republic and abroad) there was used research of internet resources about what the Directive means for the Czech specifics. For completing specific information, it was reached by presenting the summary information from the explanatory memorandum to adoption of the Directive into Czech national law by Czech Ministry of Industry and Trade. Thanks to this information it was recognized how many companies on the Czech market is impacted by this amendment. Then there were used the conclusions of highly detailed non-financial surveys of two respected Czech law firms – KPMG and Frank Bold. These results are compared together and based on gathered information, it was determined how many companies already do the non-financial reporting in the Czech Republic. Next chapter was made by the public resources research and presents the current non-financial reporting trends in other European countries. The last chapter in the practical part gives a comparison of the number of companies, which do the non-financial reporting between the Czech Republic and other countries in Europe.

Conclusion deals with fulfillment of the aim of this seminar thesis. First, it was evaluated direct impact of the Directive, which was based on number of affected companies on the Czech market. Then, indirect impact was evaluated, based on gathered information in previous chapters. Both of these impacts were determined by induction method according to the previous researches. Finally, according to determination of impacts of the Directive and gained knowledge about the problematics, the recommendations were formulated, both for companies and for customers.

2.3 The Practical Part

The practical part of this thesis presents successful example of the CSR project in the Czech Republic at first. Then it focuses on the non-financial reporting in the Czech Republic in the sense of what application of the Directive changes in the Czech specifics and what are current non-financial reporting trends on the Czech market. The end of this chapter focuses on international trends in the non-financial reporting.

2.3.1 Example of Corporate Social Responsibility

As example of a company with successful CSR is introduced the CSR concept of KPMG Czech Republic. This audit and advisory consulting firm has a long tradition in the development of its CSR. Some of its successful projects are presented below.

Sustainable Development Strategy

The company actively seeks dialogue with its stakeholders about the impacts of business on society, economy and environment. It keeps continuous contact with the various groups and collaborates with them within a number of key topics in the field of sustainable business. Among these stakeholders are primarily involved: customers, employees and partners of KPMG, potential employees, former employees, regulators and professional bodies, the media and the wider public, non-profit organizations and suppliers. KPMG's ambition for the future is to focus on measuring the impact of the responsible projects for the company's environment and company itself. The company wants to integrate more non-profit organizations and social enterprises in its supply chain, to control its suppliers in compliance with its supply code and much more (KPMG, 2016a).

Taking care of its employees

One of the strategic goals of KPMG Czech Republic is to become employer of the choice that offers interesting work in a motivating environment. Therefore, all the management processes in the field of people's development are customized to it. As the core value the company includes leading by example, teamwork and respect for each individual. The prior areas for the company is recruiting talented students and graduates, long-term development of employees and high level of taking care of them. The company believes that satisfied and strongly motivated people are the key reasons of its success. Therefore, its aim is to build a friendly atmosphere and maintain a high level of motivation and involvement of employees (KPMG, 2016b).

Doing green business

The company's aim is to minimize the impact of its activities by regularly monitoring and motivating its employees to mirror its environmentally responsible behavior. KPMG Czech Republic recycles waste, watches its paper consumption, energy and water and the company also monitors the amount of generating waste. Its employees drink tap water at work and the company tries to keep business trips abroad at a minimum level. KPMG also promotes environmentally-friendly means of transport (KPMG, 2016c).

These CSR activities, as well as a number of others, KPMG Czech Republic publishes in its report on responsible business every year (KPMG, 2016d).

2.3.2 Non-financial reporting in the Czech Republic

This chapter consists of the two parts – the first one focuses on implementing the Directive into the national law and the second one describes findings about the CSR reporting in the Czech Republic.

2.3.2.1 The Directive and the Czech specifics

Franc and Vojtíšková (2016) in their article points out the analysis of non-financial information and CSR of hundred Czech companies. According to the authors, this analysis shows that CSR in the Czech Republic is often realized as one-off charitable activities that are not generally connected with areas of company business. It means where their daily activities help to create an entrepreneurial culture and influence their surroundings and the labor market. Authors adds that the often objection to the non-financial reporting is that it forces companies to do charitable activities. When reading the text of the directive many people could think that what companies today do as their good will, will be mandatory. The fact is it is not like that. The Directive aims to inform businesses about how to evaluate and address risks of negative impacts of its activities, not about its fundraising.

According to Weikert (2015), usually pro-tuned Czech government protested against the Directive, but with no effect. Together with some other states it opposed the fact that the obligation for non-financial reporting should became a part of the European directive. The Ministry of Finance of the Czech Republic stated that this issue should be realized on a different platform and left on more voluntary basis than set obligation on publishing such information. This obligation also brings the threat of fines. Although it is still early to estimate, it could be the same as for unassembled annual report of the company, which could therefore be three or six percent of the value of company assets.

Working Group for consulting non-financial reporting (2016) of Czech Ministry of Industry and Trade in its explanatory memorandum to adoption of the Directive into Czech national law accents that with regard to the Directive’s criteria publishing of non-financial information required by the Directive will cover about 26 companies in the Czech Republic. Working Group also says that it is necessary to consider the possibility of exemption from publishing non-financial information for entities, which are already included in the consolidation in higher consolidated group. After considering this exemption publishing non-financial information will cover about 5 companies in the Czech Republic.

Despite the European efforts, the number of companies that behave in a socially responsible manner is increasing and the Czech Republic has been following this trend. When the Association of social responsibility started operating in the Czech Republic, its members were about thirty companies. Over the past two years, the number of its members is four times larger, which means about 120 companies. According to its director, Lucie Mádlová, the social responsibility is no longer a trend, it becomes a norm. Although she supposes that this obligation may seem like a new administrative burden for some companies, it can help to increase their transparency. It is because CSR activities also have supporting side effects and thanks to this fact companies can better negotiate with banks on loans, or with city halls or politicians (Weikert, 2015).

2.3.2.2 Number of Czech companies publishing the non-financial information

Frank Bold Lawyers (2016) law firm analyzed non-financial information and news about the social responsibility of large Czech companies and evaluated how they fulfill the principles of the new European legislation on non-financial reporting. The firm also focused how this provided information was relevant, specific and comparable. This firm analyzed the annual reports, CSR reports and websites of hundred prominent Czech companies. The analysis also included companies, which directly concerns the new directive (corporations whose shares are traded on stock exchanges, insurance companies and credit institutions). Research also has included companies that were identified as Public Interest Entities (which includes particularly large employers) and several firms that have positive long-term ratings in the Czech Top 100.

According to this law firm, the mandatory reporting will affect a relatively small number of companies, but companies with great significance. Their position in the labor market, the impact on the environment and the economic impact is significant. Therefore, it makes sense that the public could read, for example, whether these companies perceive that their activities may have numerous negative impacts on society and the environment and what they do for preventing such effects.

Frank Bold Lawyers (2016) law firm determined that 56 % of surveyed companies publish information on the impact of their activities and their reports do not follow any uniform template. Although there are several internationally recognized standards for CSR reports, their use is rather an exception in the Czech Republic. The common phenomenon is that companies prefer optimizing their CSR reports depending on what information they want to use for their marketing image. Furthermore, only 32 % of companies publishing non-financial information include to their annual reports or CSR reports information corresponding with the areas in which we can expect a negative impact due to the activity of the company.

KPMG (2017b) did the similar survey in the beginning of 2016. This firm did an analysis of the status of non-financial reporting in 45 countries, including The Czech Republic. It focused on the hundred largest firms in each country and 250 largest companies which operates globally. The firm analyzed the annual reports, separate reports on social responsibility and sustainability and the websites of the selected companies. The Czech

Republic was, according to the survey, among the countries with the lowest number of companies that report their non-financial indicators.

According to KPMG (2017b), in the Czech Republic the non-financial indicators, for example business impacts on the environment, human rights, philanthropy or anti-corruption and transparency rules publishes only 43 % of the largest companies.

It is obvious at first glance, that findings of these two surveys differ from each other. It is because the Frank Bold's survey includes a larger sample of companies, that the KPMG's one (the firm says the survey includes the Public Interest Entities). According to the Frank Bold there is 56% share of the hundred of the Czech largest companies that are already doing the non-financial reporting, while according to the KPMG's survey it is 43 %. Therefore the difference in the representation of these companies is 13 %, which means 13 companies (since the investigated sample in both surveys is the hundred biggest companies on the Czech market). Based on these two surveys, it can be estimated the general conclusion that approximately half of the hundred largest companies on the Czech market is currently doing the non-financial reporting.

2.3.3 International trends

According to the KPMG's (2017b) survey, the biggest rate of the hundred largest companies publishing non-financial information is in France (93 %), United Kingdom (90 %), Norway (86 %) and Denmark (82 %). The average rate in the Western Europe is 79 %, meanwhile in whole Europe it is 74 %. Overall Europe rate decrease especially countries from the CEE region, where non-financial information published 61 % of the hundred largest companies.

If it is made the comparison of reality between the Czech market (determined in the previous chapter) and reality in other European countries (based on the survey by KPMG), it is evident than the proportion of companies in the Czech Republic, which do the non-financial reporting, is in all respects lower. In Western Europe the number of such companies is higher by almost 30 % than in the Czech Republic, while in generally Europe it is about 25 % more. Also by the comparison with the CEE region it is clear that the Czech Republic stands worse. As in this region the share of these companies is 61 % and in the Czech Republic half, means the difference is about 11 % in favor of the CEE region. Based on this finding it is evident that the non-financial reporting has generally larger tradition in Europe, as the companies do it in a greater extent than in the Czech Republic. Therefore, it can be concluded that in the Czech Republic is still enough space for improving this status and growth trend in terms of non-financial reporting.

Editors of flagship.cz (2017) say that the Directive is based on well-established practice. Abroad, it becomes entirely normal that companies are publishing CSR reports or sustainable reports now. For the company it means not only a competitive advantage but also a better reputation and more successful communication with stakeholders or the society. In addition, important company's partners (banks or investors) often require this report. They are usually not prepared by just large companies, but also small and medium ones (including non-profit organizations).

Horáková (2014) says that in European Union the Directive covers about 6 000 companies. According to KPMG (2014), reports on Corporate Social Responsibility are for the majority of businesses around the world almost as much important and natural as the annual reports. The biggest rate of non-financial reporting by the number of companies is in the United

States, but the highest quality reports companies publish in Italy, Spain and the United Kingdom.

Yvo de Boer, chairman for services in the field of climate change and sustainable development of the global KPMG network says that companies should no longer deal with the question of whether or not they should realize their non-financial reporting. This debate ended. At present, it is necessary to answer the question what to focus in the reports and how to choose the method of reporting (KPMG, 2014).

2.4 Conclusion

This seminar thesis deals with the CSR or non-financial reporting. The main aim is to evaluate the impact of the EU amendment on publishing of this non-financial reporting, which means an obligation for publishing these reports for some companies and to formulate recommendations.

The Directive was implemented into the Czech national law without any tightening measures of specified rules, although it was allowed to individual Member States. Because of this Czech approach, the number of affected companies in the Czech market is very small. There are only 26 companies, which satisfy the criteria established by the EU (regardless of the fact that most of these companies already publish these reports). Moreover, it is necessary to consider exemptions for the companies, which belong within the consolidated group. The number of affected companies than decreases do 5. Based on this fact it can be said that the direct legislative impact on the Czech market is minimal. In this respect, this amendment brings "nothing new".

However, it can be considered that the indirect impact of this amendment as significant on the overall social responsibility, because the reporting requirements covers the entire production chain. Therefore it can be assumed that suppliers and of goods and services will be also (in a lesser extent) affected by these requirements and thus the network of responsible companies will keep growing. It can be also assumed that in combination with current trends in Europe (Czech rate of the non-financial reporting among the hundred of the biggest companies is even lower than the average in the CEE region), the demand from investors and from civil society for bigger transparency. Thanks to these factors, as well as increasing number of member of Association of social responsibility, corporate responsibility can be growing in general. The new rules also allow business to take advantage of the potential of CSR and can contribute to sustainable growth in Europe.

It can be also considered that the combination of some current negative trends / affairs (global warming, Dieselgate etc.) and this amendment will help to inform public and change the perception of the company's environment. Then the public will be able to create pressure on companies to change their corporate behavior into "social responsibly".

It is recommended to all companies on the Czech market to consider their impact of its business. Every company should little by little start to realize its activities in accordance with social responsibility and publicly inform. It is estimated that it is a matter of time before they will have to do so because of a pressure from its suppliers or customers. The second recommendation is determined to all the public / customers not to only consider for how much they buy, but also where and from which producer, in order to prefer purchasing goods / services from social responsible companies. This may be the way, how to force the other companies to realize the impacts of their business.

Resources

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3. Kotík Karel: Utilization of drones with thermal vision as a new trend in business

SUMMARY
Main objective: Main objective of this seminary thesis is the evaluation of utilization of drones with thermal vision and original methods on examples from praxis. Partial objective of the thesis is identification of benefits of drones with thermal vision today.
Research methods: Objectives of thesis are presented in the chapter introduction. Then the issue and actuality of the topic is outlined in introduction. In terms of theoretically-methodological part there is, with help of comparison of special literature, processed a background research of literature. For writing of practical part, findings from theoretically-methodological part are exploited and stated objectives of the thesis are fulfilled. Within first (main) stated objective, evaluation of utilization of drones with thermal vision compared to original methods on examples from praxis, the method of comparison is used, by another name comparing current methods of measuring against the original ones. Based on such obtained findings from comparison there is done the evaluation of utilization of drones with thermal vision. Within second (partial) objective of the thesis, identification of contribution of drones with thermal vision today, method of deduction is applied by means of which there are found and specified advantages and disadvantages of utilization of drones today in area of inspection of distribution networks and thermo-graphic building diagnostics. All findings and outputs of the thesis are recapitulated in conclusion of the thesis.
Result of research: There were totally two objectives stated in the thesis (main and partial). First objective was to evaluation of utilization of drones with thermal vision and original methods on examples from praxis. In this comparison there were used two areas: inspection of distribution networks and thermo-graphic building diagnostics. It was realized that opposite the original manners, utilization of drones has brought a lot of advantages, from control of the drone from one place, over acceleration of the entire process to elimination of injury risk. Utilization of drones is fast, cheap and safe. Demands on human resources decreased and employees do not need to drive to many sections but everything can be controlled by one employee from one place. In thermo-graphic building diagnostics it is possible to seek effectively, by utilization of drones, thermal leakage which results into relevant energy losses. Second objective was identification of benefits of drones with thermal vision today. Here it was realized that drones have more advantages than disadvantages. At inspection of distribution networks the safety has increased in high degree which plays during work with high voltage a main role. Drones have enabled performing more frequent controls in this area and thus better avoidance of eventual problems. At the same time, during controls it is not necessary to interrupt supply of electric energy and therefore the drones are preferable also for third parties. In area of thermo-graphic building diagnostics drones enable to obtain exact data due to GPS coordinates, technicians consequently receive information about size of the affected area

where thermal losses occur and detection of badly visible building defects is performed better. As disadvantages of drones can be considered only dependence on meteorological conditions, high initial costs and strict legislation.
Conclusions and recommendation: For utilization of drones in above mentioned areas it is recommended to use qualified personnel because not everybody can correctly read results on the photos obtained from drone and also planning of using drones according to weather forecast in order to decrease risk of damage or destruction of the device. There are many possibilities of utilization of drones and the thesis has shown only two areas from these possibilities. It can be assumed that usage of these devices will be still more frequent and they will be used in many new areas. For sure the way of their utilization will be interesting in case when it happens to manipulate several drones from one place. That would make them even more cheap and more effective. On the other hand drones represent certain safety risk which cannot be totally ignored.

KEYWORDS
Drones, distribution network, thermal vision, innovation, building diagnostics

JEL CLASSIFICATION
O30 General O31 Innovation and Invention: Processes and Inceatives 0 33 Technological Change: Choices and Consequences • Diffusion Processes

3.1 Introduction

Author has chosen as a subject of his thesis Utilization of drones with thermal vision as a new trend in business. Reason for choice of this subject has been that author has devoted his time to recording by drones and possesses photos used in the thesis at his disposal, taken by drones. Choice of the subject has thus not been entirely accidental but author is very interested in this field.

At the same time it is a very interesting subject because today the utilization of drones with thermal vision for commercial purposes becomes very expansive field which brings many advantages in comparison to previous stage. Utilization of drones is wide, from area of agriculture, over military purposes to utilization in civil engineering or forwarding industry.

Originally, drones were used entirely for military purposes. However, soon their usage has expanded also into commercial sphere or to area of user application. The drones have found an important place also in civil engineering where they have been able to discover problems in insulation system, in systems of technical equipment of buildings (heating, air-conditioning, wiring), air-proofness of siding or in localization of places in which condensation of air moisture occurs.

For many companies drones are ideal way for shifting their business one level higher. They are part of various business innovations and moving a lot of fields onwards. there On other hand voices arise in connection with drones which draw attention also to their safety risks linked to their abuse, for example with risks of hacker attacks. This thesis will be partially devoted to this as well.

Main objective of this seminary thesis is the evaluation of utilization of drones with thermal vision and original methods on examples from praxis. Partial objective of the thesis is identification of benefits of drones with thermal vision today.

Both these objectives are focused on area of civil engineering in which utilization of drones with thermal vision represents a huge potential. Building companies therefore can use drones as one of options how to innovate their products and services. It is assumed, that compared to original methods, utilization of drones with thermal vision is more effective, faster and less demanding. Therefore also economically preferable.

Thesis is divided into two parts. First part is theoretically-methodological and second is analytically-practical.

In theoretically-methodological part author devoted himself to the safety problems, utilization of drones for commercial purposes, utilization of thermal cameras in civil engineering etc. Analytically-practical part is more extensive and examples from practical experience are used there. Two areas have been chosen here, namely inspection of distribution networks and thermo-graphic building diagnostics.

3.2 Theoretically-methodological part

Theoretically-methodological part is engaged in background research of special (expert/ technical) literature. It introduces basic terms which relate to drones. It is focused on utilization of drones for commercial purposes, on drones and innovation, on utilization of drones with thermal vision, safety problems which are related to usage of drones in civil engineering. Part of this chapter is methodology of thesis.

3.2.1 Drones

Dron is according to Droneweb (2017) *„pilotless plane (sometimes UAV from English Unmanned Aerial Vehicle or also dron from English drone) is a plane without crew which can be controlled remotely or can fly autonomously via preprogrammed flight planes or via more complicated dynamic autonomy systems.*"

Drones alias unmanned aerial vehicles (UAV) register in last several years exponential growth. Jurová et al. (2016, p. 207-208) mention that drones are foremost a part of almost every war conflict but we can meet them, still more often, also elsewhere. Unfortunately their utilization in civil area, even despite their wide possibilities of application from scientific purposes over civil engineering, commercial or entertainment applications to communication and logistics, constantly interferes with insufficiency and obsolescence of legislative background which until now has governed operation, safety, privacy and personal data protection, as well as wide amount of unfavorable effects and consequences resulting from utilization of pilotless planes.

Rothstein (2015, p. 8) adds that configuration of four-rotor devices is quite recent innovation. First working more-rotor helicopters took off in 20's of last century but minimizing and stabilization of technology has been reached only in last years.

3.2.1.1 Utilization of drones for commercial purposes

Drones find still more utilization in commercial area. As Pilný (2016, p. 90) mentions, deep debates raise for example from possibilities of delivering goods directly home by their means. It is still long way to practical delivery of pizza but company Amazon has been testing delivery of goods quite seriously. Google has been experimenting with project Wing including delivery of goods from height without need of drone landing.
Pilný (2016, p. 91) further says that utilization of drones is possible to see in monitoring of electric wiring or by estate agencies which are using them for taking the photos from air. They are used by film industry as well, drones watch big sport events, they find utilization also in science and research, especially in inhospitable conditions of Antarctica.
Novák (2017, p. 29) shows an example in which company KOMATSU plans their utilization for automatizing of work of dozers and diggers. Drones would scan the environment, create three-dimensional models of terrain and according to those the machines shall work. It is possible to use them in agriculture too where they can identify potential illness in yield on the field or to identify insufficiently nourished parts of the field. With their help it is possible to plant the trees as well. As Pilný (2016, p. 91) mentions, presently utilization of drones is tied to scheme 1:1, that means one drone and one controlling manipulator. However, control is progressively going to be automatized, drones are supplied by GPS, schemes for taking the photos and videos. They are equipped by sensors which enable identifying of targets and keeping away from obstacles or impacts.

3.2.1.2 Drones and innovation

For many companies drones represent extensive innovative possibilities. By using them it is possible to innovate present stage very well. As Novák (2017, p. 29) mentions, breakthrough technologies such as internet, robots, 3D printing as well as drones are using solutions which directly "ask" for innovations. It is possible to utilize them for empowerment of the market or for streamline of company processes. Quite many of new technologic start-ups creates new products and services with drones. Next to forwarding of deliveries, creating of videos and photos from heights the drones, for instance, break into civil engineering.

3.2.1.3 Utilization of drones with thermal vision

Droncentrum (2015-2017) indicates that „*Presently the market with LWIR (Long Wave Infra-Red) systems with thermal vision intended for pilotless planes evolves quite fast. Systems function on principle of contactless temperature measurement.*"
Thermo-visual system, according to Droncentrum (2015-2017), measures intensity of radiance in indicated wave band and that can be used for stating of surface temperature or other features of the surface which the radiance is radiated from.
According to Novotný (2014, p. 119), it is possible to use the drones with thermal vision in civil engineering, for investigating of failure cracks which result into in-leak in insulating system. Exactly thermal vision enables to seek these cracks. It is a particular solution and systemless detection which is necessary to evaluate very carefully and expertly, otherwise terrible with distinctive inaccuracy at interpretation of detected results.

Thermo-visual systems are used the most frequently, as Droncentrum (2015-2017) indicates, for:

- detection of problems with moisture on the roofs,
- monitoring and evaluation of water resources,
- evaluation of problems in area of energy efficiency,
- analysis of environment,
- morphology of lakes,
- examination of population of several species of free living animals,
- detection of coal resources,
- examination of fires of coal mines.

3.2.1.4 Safety problems

Many safety problems are related to utilization of drones. This is confirmed also by Pilný (2016, p. 91) who alerts that growth of number of drones is linked to many safety risks. There is a threat of hacker attacks which can take control over the drones, affect trajectory and target of drone's flight. Risk of illegal watching threatens by using them as well.
As Jurová et al. (2016, p. 208) indicates, area of safety planes comes under Office for civil aviation which devotes to those in air regulation L2, appendix X – Rules of aviation. Main actual problems are:

- registration and license of pilotless plane,
- permit for air works,
- breach of rules or regulations resulting from regulation L2, appendix X
- restriction of utilization in presence of people (min. 50 m), buildings (min. 150 m), densely populated area (min. 150 m), airports (min. 5500 m) and strategically important objects,
- insurance of pilotless planes or insurance of responsibility for damage caused by their operation.

European Union is also engaged in issue of drone operation. As Caa (2011) states, European Union tries to unify the rules for usage of drones in order to ensure safety, protection against illegal actions, protection of privacy and personal data, and at the same time it tries to amend responsibilities and requirements for insurance of damages caused by operation of drones.

3.2.1.5 Utilization of thermal cameras in civil engineering

According to Thermokamery-flir (2017), thermal camera registers intensity of thermal radiance of which it is able to state surface temperature of measured object. Therefore, its utilization it is proper in civil engineering where the temperature is one of main values because it influences thermal comfort and financial costs for operation of building.
In civil engineering thermal cameras are the most frequently used, as indicated by Thermokamery-flir (2017), in these areas:

- thermally-technical issue and control of construction of contact insulating system – thermal cameras are used for:
    - quality control and consistency control of construction of contact insulating system, control of surface temperatures of thermal bridges and the lowest inner surface temperature, localization of places where condensation of air moisture and consequential origin of fungi can occur,

- systems technical equipment of buildings (heating, air-conditioning, wiring etc.) – thermal cameras are used for control of correct function and installation of systems technical equipment of buildings. Wrong usage of these systems is showed by change of surface temperature compared to error-free stage,
- circulation in construction and air-proofness of siding – air-proofness of building is important for decreasing of energy consumption and for assuring of quality ventilation. Air circulation through various leakages has negative consequences both for thermal – moisture regime of construction and for thermal behavior of building.
- Moisture problems – high humidity is decreasing life durability of construction and causes fungi. Thermal camera enables detecting of places where origin of fungi can happen. Next to air moisture condensation, the humidity can occur from these sources: external infiltration (floods, overflows, puddles, snow melting, rain water driven by wind), capillary water, diffusion of water steam, hygroscope of building material, internal leakages and defective sanitary installation (e.g. of water-supply pipeline, waste pipeline, heating water system etc.).

As Novák (2008, p. 58) states, thermal camera is possible to use also for detection of leakages in coat of the building. Here the thermal vision photographing is done mostly from interior at constant base inside of measured building. However, the method can be applied only at sufficient difference of temperatures between inner and outer environment, therefore it is not possible to use it during cold months.

3.2.2 Methodology of thesis

This part of thesis describes by what manner writing this seminar thesis was proceed. Firstly author chose topic of the thesis and next the sources related to the topic were studied and from those the author gained overview for stating of main and partial objective of the thesis. These objectives are presented in the chapter introduction. Then the issue and actuality of the topic is outlined in introduction. Within the whole thesis author also has drawn from his knowledge of the field where he has been active in the long term.

The thesis is then divided into two parts, theoretically-methodological and practical. In terms of theoretically-methodological part there is, with help of comparison of special literature, processed a background research of literature. There have been used Czech as well as foreign literature, borrowed from city library or sought in database of Google Books. Internet sources have been sought via internet search engine Google. Expert text is quoted here and that especially by indirect quotation and Harvard style of quotation.

For writing of practical part, findings from theoretically-methodological part are exploited and stated objectives of the thesis are fulfilled. Within first (main) stated objective, evaluation of utilization of drones with thermal vision compared to original methods on examples from praxis, the method of comparison is used, by another name comparing current methods of measuring against the original ones. Inspection of distribution networks and thermos-graphic building diagnostics are two areas of focus chosen for examples of work experience. The author chose these two areas namely because of his personal experience within these areas and because the numerous applications of his knowledge gained from this experience. Based on such obtained findings from comparison there is done the evaluation of utilization of drones with thermal vision. Within second (partial) objective of the thesis, identification of contribution of drones with thermal vision today, method of deduction is applied by means of which there are found and specified advantages and disadvantages of utilization of drones today in area of inspection of distribution networks and thermo-graphic building diagnostics. The author based all the knowledge gained during his work to identify the benefits factual and objective.

All findings and outputs of the thesis are recapitulated in conclusion of the thesis.

3.3 Analytically-practical part

In analytically-practical part is utilization of drones with thermal vision showed on illustrative examples from praxis. This chapter is situated so that it leads to reaching of the objectives which were stated in the introduction of the thesis.
First sub-chapter concerns of evaluation of utilization of drones with thermal vision against original methods on practical examples. Here two areas are chosen, inspection of distribution networks and thermo-graphic building diagnostics. Second sub-chapter concerns of identification of benefits of drones with thermal vision presently. Also this chapter is divided into inspection of distribution networks and thermo-graphic building diagnostics. Part of this chapter is sub-chapter – solution of the problem. In the whole analytically-practical part author of the text uses his knowledge in this field and own photos taken by drones with thermal vision.

3.3.1 Evaluation of utilization of drones with thermal vision to original methods on examples from praxis

This chapter is devoted to evaluation of utilization of drones with thermal vision to original methods which is one of objectives of this thesis. It is comparing utilization of drones and original methods at inspection of distribution networks (electricity) and at thermo-graphic diagnostics of buildings.

3.3.1.1 Inspection of distribution networks (electricity)

First area in which drones are used still more often is inspection of distribution networks. Drones represent outstanding innovative potential here, which originates from speed of the whole inspection and from manipulation of the drone from one place.
Foremost it is necessary to show the original method. In area of inspection of distribution network it was originally possible to use two kinds of inspection, utilization of high-lift platform and utilization of climbing inspection. Particular deficiencies of both methods are as follows:

- Utilization of high-lift platform – utilization of platform was very complicated and time consuming process. In this case the inspection workers had to come to each distribution network by car and during control of other side of this distribution network to drive to other particular places. They spent a lot of time by such inspection and also costs for consumed fuel were not neglecting. A big disadvantage of this original method was high time consumption. The whole inspection was tedious and therefore it was not performed so often, as it would be desirable with respect to needs of distribution network.
- Utilization of climbing inspection – original inspection method which utilized climbing inspection had similar negatives like in previous case. Climbing inspection is one of methods which is bringing high risk of injury, especially fall risk is very high at this method. In addition utilization of climbing inspection is physically and manually demanding and considerably financially costly. It sets high demands primarily on

human resources. From above mentioned reasons was this kind of inspection performed not too often, as it would have been adequate.

As it is obvious, both original methods bring many negatives. Above all they are time consuming, it is not possible to perform them so often as it would be necessary, they set high demands on human resources, there is a threat of injury and they are demanding also in financial aspect.

By contrast, by utilization of drone with thermal camera it comes to elimination of all mentioned disadvantages and therefore it is possible to speak about great way of innovation of the whole process because by their utilization the original stage has been improved. The whole inspection by utilization of drones is performed from one place whereby the whole process is accelerated and in addition this way has a lot of time savings. Drone has flying range of several kilometers which is one more of its advantages, inspection can be more extensive and also more frequent. On the other hand the operator has to have the device under constant supervision according to legislative and its utilization is dependent on weather.

When comparing original methods and the innovation in form of utilization of drones it can be done definite conclusion that utilization of drones is canceling entire negatives of original methods and their utilization is thus more effective and saving.

During comparison of utilization of drones and original methods by inspection of distribution networks there were discovered following advantages of drones against the original methods:

- acceleration of the whole process,
- operation from one place,
- lower demands on employees,
- manually easy work,
- decrease of financial demands,
- elimination of injury risk,
- possibility of performing controls more frequently,
- operation of bigger amount of distribution networks during given time period.

How the inspection of high voltage wiring looks like is shown in the Attachment 3.

3.3.1.2 Thermo-graphic building diagnostics

Next comparison of utilization of drone to original methods is related to thermo-graphic building diagnostics. Thermal camera, as it can seem at first sight, is not new term in building diagnostics. This kind of diagnostics is already used for several years. However, only presently it is possible to do that kind of work which cannot be performed even by standard high-lift platform, more effectively and from height – only thanks to drones.

There are many advantages of utilization of thermal camera in building diagnostics. Thermal camera for instance enables seeking of thermal leakages which can be caused by, for example, wrongly constructed insulation of the building and that due to financial savings. Such badly performed insulation can result in energy losses. Next one of problem factors influencing building insulation can be, for example, deprived maintenance, climatic effects or life span. All these deficiencies can be discovered by thermal camera in very fast and exact manner.

Main disadvantage of previous diagnostics by thermal vision was the need of building a scaffold next to bigger buildings (e.g. hotels). It was quite difficult process both from

financial aspect and from time aspect. By utilization of drones these disadvantages were deleted, the whole process has become faster, more effective and cheaper.
During comparison of utilization of drones and original methods by thermo-graphic building diagnostics there were discovered following advantages of drones against the original methods:

- acceleration of the whole process,
- manually easy work,
- decrease of financial demands,
- possibility of performing controls more frequently,
- utilization is not dependent on building a scaffold
- elimination of injury risk,
- lower demands on employees.

How a thermo-graphic diagnostics by utilization of drone with thermal camera looks like is visible in Attachments 1 and 2. There it is possible to see places where in-leak into the building occurs and to thermal leakage at cable penetration into the building. From pictures it is obvious how relatively easy it is possible to discover eventual problems on the building which are then possible to solve adequately. Attachment 1 and 2 show common sight on the building and cable penetration. From these pictures it is obvious that inspection without utilization of thermal camera would not be able to discover any eventual problems, especially in case of in-leak into the building.

3.3.2 Identification of benefits of drones with thermal vision today

This chapter serves to accomplishment of next objective of this thesis which is identification of benefits of drones today. Chapter is investigating advantages and disadvantages of utilization of drones in area of inspection of distribution networks and thermo-graphic building diagnostics.

3.3.2.1 Advantages and disadvantages of inspection of distribution networks

There have been found several advantages in area of inspection of distribution networks. Drones have brought elimination of quite many risks compared to original methods. Among main advantages of utilization of drones at inspection of distribution networks belong:

Increase of safety – during work with high voltage, safety is playing a big role, it is the most important factor here. By utilization of drones the safety increased to maximum. Employee does not come to direct contact with voltage and thus does not need any special equipment (isolating gloves, shoes). Quadcopter is manipulated by person from sufficient distance which ensures his safety. So markedly injury risk was decreased and thus increased safety at work.

Possibility of more frequent controls – utilization of drones is in this field a valuable innovation which enables more regularly checking of the poles of HV and HHV and this due to fact that the entire process of control of distribution networks has become much faster and less financial costly. Possibility of more frequent controls leads also to better prevention of eventual problems. It is possible to avoid many kinds of accidents, like blackout, temporary resistance in defective connection, fire due to obsolete or unprofessionally installed connectors etc.

Provision of fluent supply – at inspection of distribution networks with utilization of drones it is not necessary to restrict operation nor to interrupt supply of electric current as it is usual by original methods. On the contrary, it is desirable that the distribution will be standard or operation partially loaded during inspection.

There are also several disadvantages of utilization drones during inspection of distribution networks and they are related to general utilization of drones.

Dependence on meteorological conditions – drones are dependent on meteorological conditions. Namely during windy weather or storm there is a threat of their damage or entire destruction.

High initial costs – drones with thermal vision are very financial costly and therefore they are primarily used for commercial purposes. It is also expensive to obtain a license from the Office for civil aviation.

Strict legislation – utilization of drones is not supported by Czech legislation. It is complicated to obtain the license and legislation for utilization of drones is very strict as well.

3.3.2.2 Advantages and disadvantages of thermo-graphic building diagnostics

At thermo-graphic building diagnostics it is possible to find also many advantages of utilization of drones. In this case it is also possible to find several disadvantages. Among main advantages of thermo-graphic building diagnostics by utilization of drones belong:

- Obtaining of exact data – utilization of drones with GPS system enables handover of exact data to technicians in order to know where thermal losses occur. On the photo are shown GPS coordinates. Thereby the whole process becomes faster and optimized.
- Information about size of the area – thermal difference between dry part and affected part enables to state size of area where thermal losses occur. Temperature can differ depending on measurement before and after sunset when the roof or the object was under sun radiation during the day.
- Detection of badly visible construction defects – by using drone with thermal vision it is possible to detect construction defects which are not visible or would become evident after longer period of time.

Utilization of drones in thermo-graphic building diagnostics has also its disadvantages. Above all they are:

- Dependence on meteorological conditions – as it has already been mentioned, utilization of thermal vision is dependent on meteorological conditions and on time of taking the photos. Problem presents especially its usage in windy weather. Even despite of high technical maturity, the drone is not able to resists against strong wind, in this case then there is a risk of its damage or entire destruction. Elimination of this disadvantage is only possible by careful planning when the diagnostics will be performed, only according to weather forecast.

- Legislation in Czech Republic and financial demands – utilization of drones is not supported by Czech legislation which is covered by Office for civil aviation. Regarding thermal vision, this method is for high financial costs (purchase price 200 – 300 thousand of crowns) used primarily for commercial purposes. For commercial utilization, the pilot has to have license from Office for civil aviation and at the same time the drone has to have registration. To obtain the registration it is necessary to pass written, oral and practical exam which costs several ten thousand of Czech crowns.

3.3.3 Solution of the problem

Utilization of drones in civil engineering brings mainly advantages. At correct application of drones with thermal vision it is an ideal manner how to improve diagnostics and control in this field. It is advised that evaluation of the photos is performed only by experts because otherwise the photos could be evaluated incorrectly which would result in increase of financial and time demands of which elimination is one of primary advantages of drones. The whole process without participation of an expert would be contra-productive.

Next, it can be advised to use drones in relation with weather forecast. Here it is necessary to plan utilization of the device very well in advance, according to weather forecast in order to avoid its damage or total destruction. The device is not allowed to be used especially during storm or windy weather. Correct planning is the key for accurate control of distribution networks and building diagnostics.

Utilization of drones with thermal camera is relatively new domain. Many companies save their financial and time costs using drones. However, to purchase a drone with thermal camera is not a cheap issue and also not an easy one, with respect to necessity of passing the exams for its usage. Before utilization of drone with thermal vision the company should consider whether the purchase will be profitable or the firm will use companies which are engaged in this issue and have a lot of experience with flying the drones and perfectly educated employees.

3.4 Conclusion

The thesis has been focused on topic: „Utilization of drones with thermal vision as a new trend in business".

Utilization of drones is a big trend presently. Especially, possibilities of their utilization for commercial purposes have expanded. We can find their application in many areas and moreover they represent potential for other fields in which the drones are not officially utilized, for example delivery of goods.

Drones have wide utilization also in building industry. They enable fast and cheap discovering of eventual defects which are possible to be repaired more effectively than after the problem would graduate. In civil engineering they are used mostly in area of thermal technical issue and control of execution of contact insulation system, next by systems technical equipment of buildings (heating, air-conditioning, wiring etc.), in area of air circulation in construction and air-proofness of siding, and in area of moisture issues when drones enable to discover problematic places in which there is the risk of growing fungi and thus to avoid this growth.

This thesis showed that utilization of drones, alias unmanned aerial vehicles has quite many advantages and their utilization represents big innovative potential for a lot of fields. Probably the biggest advantages are decrease of financial and time demands of original activities in comparison to utilization of drones. In connection with their usage there are also mentioned safety risks which are presented by the devices. There is a threat of losing privacy or risk of hacker attacks followed by delegation of manipulation of the device onto unwanted person.

There were totally two objectives stated in the thesis (main and partial). First objective was to evaluation utilization of drones with thermal vision and original methods on examples from praxis. In this comparison there were used two areas: inspection of distribution networks and thermo-graphic building diagnostics. It was realized that opposite the original manners, utilization of drones has brought a lot of advantages, from control of the drone from one place, over acceleration of the entire process to elimination of injury risk. Utilization of drones is fast, cheap and safe. Demands on human resources decreased and employees do not need to drive to many sections but everything can be controlled by one employee from one place. In thermo-graphic building diagnostics it is possible to seek effectively, by utilization of drones, thermal leakage which results into relevant energy losses.

Second objective was identification of benefits of drones with thermal vision today. Here it was realized that drones have more advantages than disadvantages. At inspection of distribution networks the safety has increased in high degree which plays during work with high voltage a main role. Drones have enabled performing more frequent controls in this area and thus better avoidance of eventual problems. At the same time, during controls it is not necessary to interrupt supply of electric energy and therefore the drones are preferable also for third parties. In area of thermo-graphic building diagnostics drones enable to obtain exact data due to GPS coordinates, technicians consequently receive information about size of the affected area where thermal losses occur and detection of badly visible building defects is performed better. As disadvantages of drones can be considered only dependence on meteorological conditions, high initial costs and strict legislation.

For utilization of drones in above mentioned areas it is recommended to use qualified personnel because not everybody can correctly read results on the photos obtained from drone and also planning of using drones according to weather forecast in order to decrease risk of damage or destruction of the device.

There are many possibilities of utilization of drones and the thesis has shown only two areas from these possibilities. It can be assumed that usage of these devices will be still more frequent and they will be used in many new areas. For sure the way of their utilization will be interesting in case when it happens to manipulate several drones from one place. That would make them even more cheap and more effective. On the other hand drones represent certain safety risk which cannot be totally ignored.

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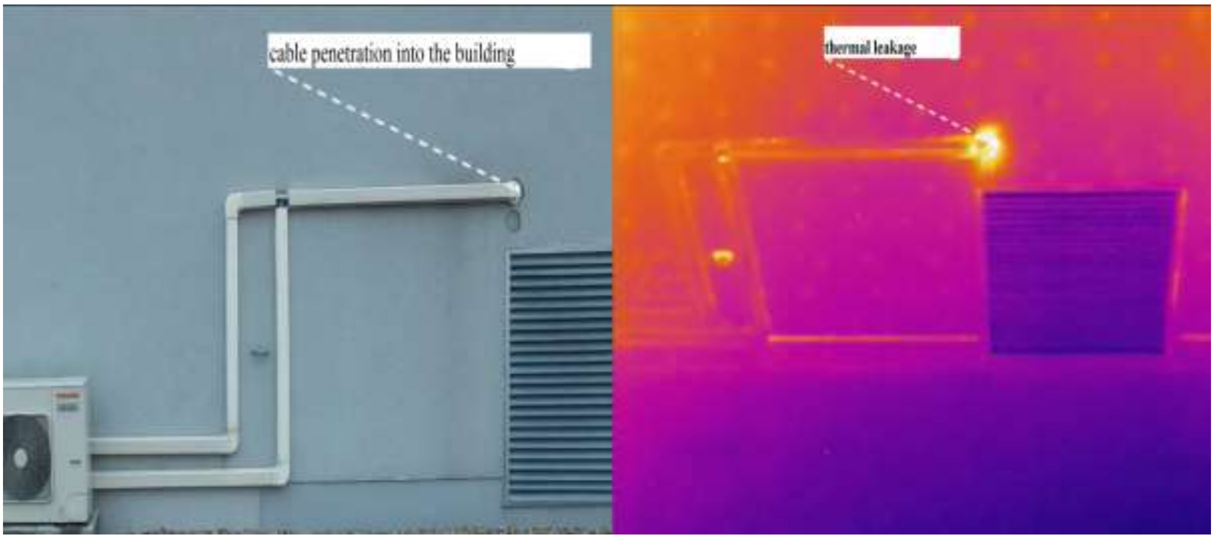
Attachment

Attachment 1 Photo of a building (left) and photo of a building taken by a drone with thermal vision and showing in-leak (right)

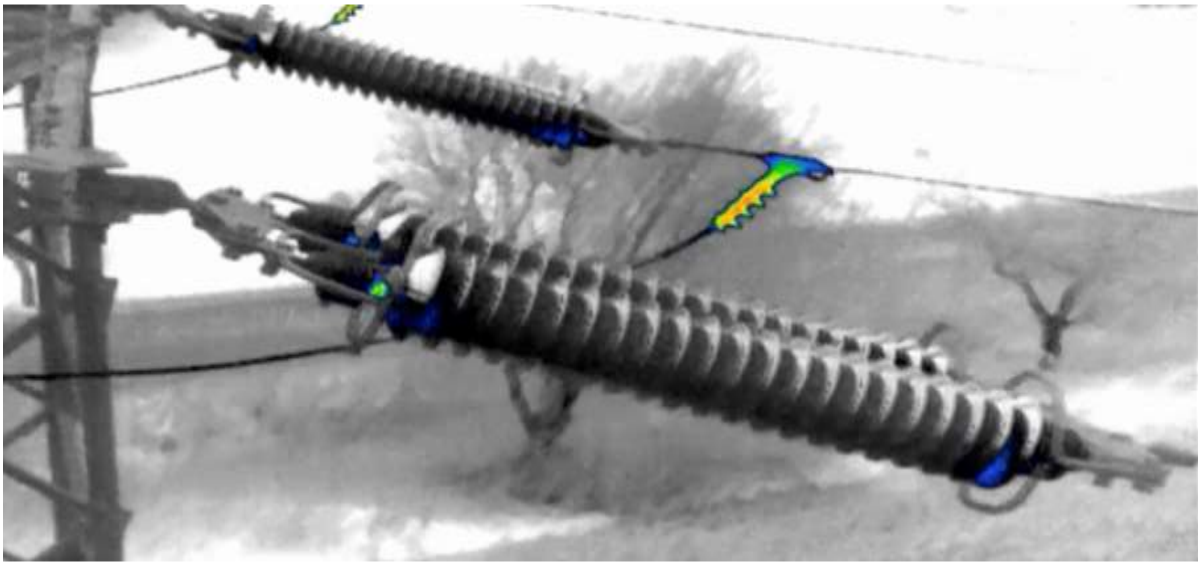
Source: own photo of author

Attachment 2 Photo of cable penetration into the building (left) and photo of cable penetration into the building taken by drone with thermal vision showing thermal leakage (right)



Source: own photo of author

Attachment 3 Inspection of high voltage wiring – photo taken by drone with thermal camera



Source: own photo of author

4. Kutilová Scarlett: The influence of colors on students in advertising

SUMMARY

Main objective:

The main objective is to give a recommendation of how to use colors in students´ targeted advertising. The sub-objective of this article is to find out the influence of colors on students in researched advertisements.

Research methods:

The theoretical part was formed by an analysis of secondary sources in the form of literary review forms. An anonymous survey was carried out between 23rd December 2016 and 2nd January 2017. Three advertising campaigns of the Family brewery Bernard a.s. were downloaded from the website of this company and used for the questionnaire. The questionnaire was created online and was sent to respondents to fulfill on Facebook. First a pilot review was performed to verify the intelligibility of the survey with 5 respondents taking part. The survey comprised 15 questions, 3 out of which were identification questions at the end of the questionnaire. Finally, the questionnaire was fulfilled by 128 people, 15 responses were discarded, so the final number was 113 of respondents. The results of the survey were processed in the Microsoft Excel 2010 program in the table forms used in the practical part.

Result of research:

According to the survey the psychology of colors was mostly confirmed. Red used in the first advert symbolized a variety of emotions. Warm was chosen by 54.9% of the respondents however only 20.4% of the respondents wrote that red looked powerful, 14.2% of them chose the sweet taste. More respondents (21.2%) thought that red symbolized a bitter taste, luxury (26.5%) and elegance (21.2%). In the case of the second advert using green, three mostly ticked emotions were in agreement with the literature (37.2% coldness, 26.5% freshness, 19.5% bitter taste). The third (black) advert gave 56.6% of the respondents the feeling of elegance and 55.8% of them the feeling of luxury, which were two out of three emotions for black according to the literature. Then 30.1% of the respondents ticked warm and a sweet taste (15.9%) too for this ad. The third advert attracted most respondents´ attention at first sight (45.1%) and 54% of the respondents also ticked this advert as being the prettiest one. As the least pretty ad, 53.1% of the respondents chose the second one with a green background. Furthermore 63.7% of the respondents liked the researched adverts because of the overall impression and 21.2% because of colors. Then 45.1% of them disliked those adverts because of the overall impression and 30.1% because of colors. Finally, the fewest respondents (31.8%) would buy the product from the second advert and 50.4% of them from both the third and the first advert.

Conclusions and recommendation:
According to the results of the survey it is clear that when creating an advertisement targeted at students, the Family brewery Bernard a.s. should definitely work with psychology of colors. Based on the answers of the respondents it is possible to say that students are surely sensitive to colors in advertising. The interviewed students were mostly attracted by the adverts with bright colors and their combinations and they also liked these the most. Reversely, the advert using a dark green on the background had a negative influence on respondents and their preferences of purchasing the promoted product. Therefore, the recommendation about using the psychology of colors in the advertisement targeted at students is, that the most important factors to consider are the combinations and shades of the colors used.

KEYWORDS
color, advertising, influence, consumer, psychology

JEL CLASSIFICATION
M30, M37

4.1 Introduction

As the topic of this article the psychology of colors was chosen. The psychology of colors is used in marketing as a part of subliminal advertising. It is necessary to know how the created advertisement affects consumers and so do the colors in it. How colors in advertising affect students will be the point of this article.

The sub-objective of this article is to find out the influence of colors on students in researched advertisements and the main objective is to give a recommendation of how to use colors in students´ targeted advertising.

Theoretical backgrounds of colors in advertising will be described by the theoretical and methodological part. First part of this chapter will focus on the psychological meanings of basic colors for consumers. Further it will describe the influence of these colors and their combinations on consumers when used in advertising. The last paragraph will be given to the methods of effective advertising research. The second part of this chapter will be the methodology of this article.

The next chapter of this article will be the practical part. It will begin with a little introduction of the chosen company and an analysis of the chosen advertising campaigns based on the theory. The main part of this chapter will be the survey researching the influence of colors on students in researched advertisements. The practical part will give the results of this survey based on the answers of the respondents. Finally there will be a comparison of the theory and the survey´s results in the case of each researched advert and the final recommendation. The recommendation will tell the chosen company if and how to use psychology of colors when creating advertisements targeted at students.

4.2 Part on theory and methodology

The theoretical part of this article will first describe the psychological meanings of basic colors for consumers. Then it will focus on the influence of these colors and their combinations on consumers when used in advertising. The next part of this chapter will describe the methods of effective advertising research and the very last one will be the methodology of this article.

4.2.1 Psychological meanings of colors

According to Vysekalová (2012, p. 94) it was Johann Wolfgang Goethe who was a pioneer in a psychology of colors. Goethe divided colors into two basic groups: warm and cold colors. Symbolic imaginings that are affected by colors are very important as well as the relationship of colors and values, like the good, evil, life and death. Vysekalová, Mikeš (2010, p. 70) write that the psychological content of individual colors is dependent on personality with its specific character and emotions, but also experiences. Vysekalová (2012, p. 95) adds that feelings affected by colors are individual, of course, but there is still a way how to determine general meanings of colors. According to Ciotti (2016) it is also not such a precise way to specify emotions that colors are able to evoke. But the key is to consider that mentioned answers about emotions are definitely not a guarantee. It is necessary to look for the practical part of decisions about colors.

Red, green, black
Vysekalová (2012, p. 95) writes that red color means an excitement in positive and negative way. To that Dupont (2009, p. 253) adds another meanings of red color like a heat, sensuality and passion. It is also connected with violence, fire and revolution. According to Vysekalová (2012, p. 95) the red color is masculine thanks to its impulse to conquer. This color also gives the impression of nobility and it is used by Politician world´s powers very often. Dannhoferová (2012, p. 48) adds that this color symbolized law and justice. According to Dannhoferová (2012, p. 50) green symbolizes a nature, hope and friendship mainly. Vysekalová, Mikeš (2010, p. 71) say that it is the calmest color connected with a freshness. Vysekalová (2012, p. 97) adds that a darker green gives a cold and hard feeling but a bright green with an additive of yellow is considered as softer and more adaptive. According to Mohebbi (2014) green color means usually youth, growth, good luck, creative intelligence and health. Black color, according to Vysekalová (2012, p. 99), means a final decision, resistance or death. Dannhoferová (2012, p. 45) writes about positive emotions connected with the black color which are a power, elegance, formality, respect and dignity. According to Mohebbi (2014) is the black color connected to a modernity, unity, sleekness, emptiness and mystery.

Orange, yellow, white
According to Vysekalová (2012, p. 95) orange color symbolizes a richness, sun and causes a feeling of joy. To that Dupont (2009, p. 254) adds that the orange causes a feeling of youth and eagerness. Dannhoferová (2012, p. 47) adds that this color is positively connected with a mirth, fun and energy and negatively with a resistance and caprice. Mohebbi (2014) writes that yellow is related to intelligence, sunlight, earth, optimism, friendship but also greed. According to Dannhoferová (2012, p. 47) the yellow color is connected with a jealousy, cowardice and mistrust. According to Mohebbi (2014) white represents truth, youth, light and sterility. Dupont (2009, p. 259) adds that this color also

symbolizes a silence, emptiness, cold and innocence. According to Vysekalová (2012, p. 99) a white color represents an absolute freedom as well as a blank page.

Blue, Brown, Pink
Vysekalová (2012, p. 96) writes that blue represents rest, water, feminity and loyalty. According to Dannhoferová (2012, p. 49) the blue color is the opposite of the orange color and it is connected with relaxation mainly. Brown color according to Dupont (2009, p. 258) symbolizes heat, comfort, forest and earth. Mohebbi (2014) writes that this color also means tradition, dullness, simplicity and calmness. Pink is according to Dupont (2009, p. 261) a symbol of romance, feminity and familiarity. According to Mohebbi (2014) this color is connected with an admiration, gratitude and innocence.

4.2.2 Influence of colors in an advertising

According to Vysekalová (2012, p. 171) colors in advertising help to identify the object of an advert, attract an attention of consumers and bring advertised objects closer to the reality. Dupont (2009, p. 244, 245) adds that colored adverts help consumers to remember it, create a brand of the company or increase sales. Vysekalová, Mikeš (2010, p. 70) write that colors are connected to specific cultural customs, and so it is very important to know these meanings, because otherwise it could have a bad influence on advertising. It is also necessary to explore the influence of colors on the target group of consumers and individual products.

Red, green, black
According to Dupont (2009, p. 254) using of red in advertising comes from its psychological meaning. So, this color is used to promote products that symbolize a feeling of masculinity. Further the red color helps to promote products that are bought impulsively and all food products. To that Behrens (1991) in Vysekalová (2012, p. 170) adds that if the red color is connected with a product a consumer will have a feeling of heat, fullness, strength, noise and a sweet taste. Behrens (1991) in Vysekalová (2012, p. 170) writes that green color associates a feeling of a fresh, juicy, cold but also sour product. Further Vysekalová (2012, p. 171) says that this color symbolizes a bitter and salty taste for consumers. Dupont (2009, p. 257) adds that food products and the green color gives the customer a feeling of a less caloric product. Dupont (2009, p. 259) says that black is used to increase a contrast of other colors in advertising mainly. According to Mediaguru (2012) this color best helps to promote a luxury and especially men products. The manly luxury which is symbolized by this color is used to advertise luxurious automotive often.

Orange, yellow, white
According to Behrens (1991) in Vysekalová (2012, p. 170) a promoted object is perceived as fragile, intense, warm and close by using orange. Mediaguru (2012) adds that this color can also attract an attention very well. Mediaguru (2012) writes that yellow in advertising can mainly attract an attention of consumers. According to Dupont (2009, p. 255) this color symbolizes also a low price. Mediaguru (2012) writes that white color is mainly used to promote luxurious products. Dupont (2009, p. 261) adds that this color is ideal to highlight other colors.

Blue, brown, pink
Mediaguru (2012) says that blue color is used in advertising mainly by companies which want to promote a quality of their product. These companies also want to advertise without any invasion. According to Dupont (2009, p. 257) customers usually avoid food products

and drinks that are blue. According to Mohebbi (2014) brown is used mainly to advertise bakeries, chocolates and other food products because it stimulates appetite. On the other hand, Mediaguru (2012) writes that the brown color is used in advertising very rarely. According to Mohebbi (2014) pink color symbolizes a sweet taste. Mediaguru (2012) writes that this color is mainly used to promote products for women because it gives a feeling of a love.

Combinations of colors
Dupont (2009, p. 264) writes that it is necessary to know what feeling gives a combination of colors because consumers won´t react to used colors individually but together. According to Vysekalová (2012, p. 99) there are two groups of colors: bright and dull (black, white, neutral grey). Next to the bright colors the dull colors seem to be more intense. Dupont (2009, p. 264) adds that for example the combination of the red and yellow color means a desire for something new and the red with green means a safety and is useful in advertisements for cleaning products.

4.2.3 Research of the effectiveness of an advertisement

Přikrylová, Jahodová (2010, p. 85) write that there are two ways of how to test an effectiveness of an advertisement: pretesting and posttesting. The pretesting is much more cost effective than the posttesting because it can discover mistakes in suggested advertisements. According to Vysekalová (2012, p. 226) pretesting is useful to decide which layout of the advertisement has got the best message or is the most effective for consumers. Přikrylová, Jahodová (2010, p. 86) add that it is also possible to ask respondents which of the tested advertisements would persuade them to a purchase. Vysekalová (2012, p. 227) says it is necessary to choose the right research group of consumers the bigger the more heterogeneous the group is. Vysekalová (2012, p. 228, 229) continues with a list of questions that are recommended to ask during the pretesting. These questions are for example: What did you first notice at the ad? What attracted you to the ad? What did you like about the ad? What did you find out from the message in the ad? What disturbed you in the ad? How did the graphics of the ad affect you? What was your overall impression of the ad?. Questions are modified according to the objective of the testing. After asking these questions respondents shall be asked to choose the best and worst advertisement. The posttesting is according to Přikrylová, Jahodová (2010, p. 86, 87) useful to evaluate current marketing communication and plan next steps in advertising. Methods of posttesting are for example a Starch test, a recall method or an eye-camera research.

4.2.4 Methodology

First it was necessary to find and collect secondary sources for the theoretical part. The literature was borrowed in the library of the Czech National Bank, study hall at the University of Economics and the library at the University of Economics and Management. Also, online sources found on various web sites were used to write the theoretical part.

In the practical part of this article firstly a questionnaire was created for the anonymous survey. The questionnaire was based on the theoretical part. The researched group was students. Then three pictorial advertisements were chosen for the survey researching the influence of colors on consumers. Each of these adverts promotes the same product. The author of this article chose the beer because of its character as a national drink. It is also not a gender - specific product. Then one brand of beer was selected so preferences of consumers are eliminated as much as possible. The selected brand was the Family brewery Bernard a.s. because it is a small brewery which can be attractive for students and allows downloading of their advertising campaigns from their website. Chosen adverts were: Beer as a jewel, Bohemian Ale and Against eurobeer which were selected in conformity with the determined criteria of the survey. The first criterion was a usage of one bold color in the background of the advert. In each one of the chosen adverts a different color was dominant. It was necessary to choose a company that does not use only one brand´s color for all advertising campaigns so the Family brewery Bernard a.s. was ideal. The next criterion was also the simplicity of adverts. It was important to select adverts whilst keeping in mind the objective of the survey. That meant to choose these ones where the most dominant element was the color and not a picture or a funny slogan.

The questionnaire was created online and was sent to respondents to fulfill on Facebook. The survey comprised 15 questions, 3 out of which were identification questions at the end of the questionnaire (appendix no. 5). Disman (2011, p. 148-152) writes, that it is important to create the questions carefully so they are not suggestive and other useful criteria to consider when creating the survey´s questions. These tips were used to create the questionnaire for the survey. Then, as Disman (2011, p. 149) writes, it was necessary to do a pilot review. The pilot review was performed to verify the intelligibility of the survey with 5 respondents taking part. After this pilot review the final survey started. This anonymous survey was carried out between 23rd December 2016 and 2nd January 2017. The questionnaire was displayed 443 times and fulfilled by 128 people. At the end of the survey 15 responses were discarded so the final number of the respondents was 113. The results of the survey were processed in the Microsoft Excel 2010 program in the table forms used in the practical part.

4.3 Practical part

The practical part of this article will begin with a little introduction of the company chosen and with the analysis of the selected advertising campaigns. Further it will focus on basic information about the survey and its results according to the answers of the respondents. The final part will describe the comparison of theory and the survey´s results followed by a recommendation for the company.

4.3.1 Analysis of researched adverts

According to Family brewery Bernard a.s. (2016) this company was established in the year 1991 when Mr. Bernard and his two friends bought an old brewery from the sixteenth century. They started to make a traditional unpasteurized beer using a proper Czech hop. In 2000 the Family brewery Bernard a.s. bought also a malt house and in 2001 a 50% share of the brewery was sold to the Belgian Duvel Moortgat. The motto of this company is "Own way".

The first advertisement in the appendix no. 1 uses mainly a red color in the background with an addition of a black color. Then there is a white text on top and a yellow square showing the award that the Family brewery Bernard a.s. won in 2015. According to Dupont (2009, p. 253) red symbolizes heat, passion, fire and revolution. To that Vysekalová (2012, p. 95) adds that dark red is masculine thanks to its impulse to conquer and gives the impression of nobility. Behrens (1991) in Vysekalová (2012, p. 170) writes that in connection to a product it symbolizes a strength and a sweet taste. Dupont (2009, p. 254) ends by saying that this color helps to promote all food products. To the combination of colors Dupont (2009, p. 264) writes that the combination of red and yellow color means a desire for something new.

The second advert in the appendix no. 1 has got a dark green background and a picture of a beer as a guard. Then there is a big white text in the middle of the advert saying "Against eurobeer". Vysekalová, Mikeš (2010, p. 71) say that green is the calmest color connected with a freshness. According to Behrens (1991) in Vysekalová (2012, p. 170) the green color associates a feeling of a juicy, cold but also sour, salty and bitter product. Vysekalová (2012, p. 97) adds that a dark green seems colder and harder than the brighter one. So according to these authors the green color mainly gives a calm and positive impression but because of using the dark green this advert can be perceived more negatively by consumers.

The third advert in the appendix no. 1 is based on a black color. Black is used in contrast with yellow. At the bottom of the advert is a very small white text. Then there is a picture of a bare woman´s hand wearing a beer bracelet. The idea of this advert is to show a beer as jewelry. According to Vysekalová (2012, p. 99) the black color can mean a final decision, resistance or death. To that Dannhoferová (2012, p. 45) adds that this color can be perceived positively as a power, elegance, formality, respect and dignity. Dupont (2009, p. 259) says that the black color is mainly used to increase a contrast of other colors and Mediaguru (2012) writes that this color best helps to promote a luxury and especially products for men. So according to these authors this advert should attract attention of a consumer and give the impression of luxury.

4.3.2 Results of the survey

The anonymous survey was carried out between 23rd December 2016 and 2nd January 2017. The survey comprised 15 questions, 3 out of which were identification questions at the end of the questionnaire. At the end 113 respondents attended this anonymous survey and among them were 34.5% of men and 65.5% of women. The second identification question was about an age of the respondents. The most of them (58.4%) were between 21 and 25, 18.6% were between 26 and 30, 18.6% were older than 31 and only 4.4% were from the youngest group up to 20. The last identification question researched if respondents were students and a kind of school they study. So 92% of the respondents study a university, 5.3% a high school and only 2.7% a tertiary technical school.

The first question of the survey was about the first thing that affects respondents on the advertisement in general. Respondents could choose one or more answers from these: humor, information, colors, music, celebrity, eroticism; or write another answer. The most respondents (75.2%) answered the humor, 55.8% ticked the music and 24.8% of them chose the celebrity. Only 14.2% of the respondents answered that colors affected them on advertisement. These results can be the proof of that usage of colors in advertising falls into the subliminal advertising and respondents do not realize it´s influence on them.

The following questions were focused on three researched advertisements (appendix no. 1). The second question asked respondents to choose one or none advertisement (from those three) that affects them at the first sight. The most of the respondents (45.1%) answered the black advert, 23.9% chose the red ad, 15.9% ticked the green ad and 15% did not choose any of these adverts. As Dupont (2009, p. 259) said the black color is used to raise the contrast of other colors. The second color in the third ad was yellow which, according to Mediaguru (2012), attracts the attention of consumers. This can be the reason why respondents were mostly affected by the third advert at the first sight.

Questions three to five researched the influence of used colors in the ad on respondents. Each question was about one advertisement. There were nine answers including emotions based on the theoretical part and three of these emotions for each color. Respondents could choose one or more answers. The purpose of these questions was to compare emotions given to each color by the literature with the emotions that respondents chose. Results of these questions are written in the table 1 below. The green fields show three emotions for each advert that respondents should have chosen.

Table 1 Influence of colors used on respondents (in %)

	Sweet taste	Bitter taste	Cold	Warm	Powerful	Heavy	Fresh	Luxurious	Elegant	Other
1st ad	**14.2**	**21.2**	0.9	**54.9**	**20.4**	**14.2**	8.8	**26.5**	**21.2**	8.0
2nd ad	3.5	**19.5**	**37.2**	4.4	10.6	10.6	**26.5**	6.2	8.0	13.3
3rd ad	**15.9**	8.0	5.3	**30.1**	8.8	**8.0**	4.4	**55.8**	**56.6**	6.2

Source: own survey

According to the table 1 above it is obvious that in the case of the second advert using a green color the majority of the respondents answered in agreement with the literature. All three emotions that fit to this color were ticked mostly with 37.2% of the respondents for the coldness, 26.5% for the freshness and 19.5% for the bitter taste. The third (black) advert gave 56.6% of the respondents the feeling of elegance and 55.8% of them the feeling of luxury which were also two of three emotions for black color. The last emotion for this color was a heaviness which was chosen only by 8% of the respondents. Much more respondents ticked warm (30.1%) and a sweet taste (15.9%). The red color used in the first advert symbolized much more emotions for respondents than only those three from the theoretical part. Only the warm was chosen by the majority of the respondents (54.9%). Only 20.4% of the respondents wrote that the red color looked powerful and 14.2% of them wrote that this color gave the impression of a sweet taste. More respondents (21.2%) thought that the red color symbolized a bitter taste. Many respondents also wrote this advert looked luxurious (26.5%) and elegant (21.2%). So the psychology of colors was mostly confirmed. Just the red color affected the respondents in more different ways.

In the sixth question respondents were asked to choose the one that they liked the most. The most of the respondents (54%) ticked the third advert using the black color. The second one was the first red advert with 24.8% of answers and the last was the green advert ticked by 21.2% of the respondents.

The eighth question was the opposite of the sixth one and respondents had to choose the advert they liked the least. In this question 53.1% of the respondents answered that they did not like the second advert using the green color. Then it was the red advert with 25.7% and the black advert with 21.2% of answers.

To know how gender - specific the popularity of adverts is, the table in appendix no. 2 was created. According to this table it is visible, that even when there was 65.5% of women and 34.5% of men in the survey, their answers to questions six and eight were almost the same.

There was no difference between men and women in the case of researched adverts´ popularity. Both men (51.3%) and women (55.4%) liked the third advert the most and then 53.8% of men and 52.7% of women liked the second ad the least.

Questions seven and nine asked the respondents to tick a reason why they did or did not like the chosen advert most. Respondents could choose between: Text, Colors, Overall impression or another reason. According to answers 63.7% of the respondents liked the adverts because of the overall impression and 21.2% liked the adverts because of colors. In the case of adverts, they did not like the most frequent reason was again the overall impression with 45.1% of answers. But this time colors were chosen by 30.1% of the respondents. The reason why the overall impression was mostly chosen but not colors could be again caused by the subliminal influence of colors in advertising on respondents.

Furthermore, the table 2 below was created to show the reason why respondents did or did not like each advert the most.

Table 2 Reasons why respondents liked each advert most or least (in %)

The most likeable advert				The least likeable advert			
	1st advert	2nd advert	3rd advert		1st advert	2nd advert	3rd advert
Text	0.9	3.5	0.0	Text	3.5	5.3	0.0
Colors	**11.5**	4.4	5.3	Colors	7.1	19.5	3.5
Overall impression	10.6	**10.6**	**42.5**	Overall impression	**10.6**	**23.9**	**10.6**
Other	1.8	2.7	6.2	Other	4.4	4.4	7.1
Total	24.8	21.2	54.0	Total	25.6	53.1	21.2

Source: own survey

According to table 2 above the majority of all respondents (42.5%) wrote that they liked the third advert, that it was the most likeable one, because of the overall impression and only 5.3% of them because of colors. In the case of the first ad answers of the respondents were almost half and half when 11.5% of the respondents liked it mostly because of colors and 10.6% chose the overall impression. When respondents chose the second advert as their favorite it was also because of the overall impression (10.6%). Colors in the second advert got only 4.4% of answers. Then the respondents were asked to choose the reason why they did not like these adverts. It was said by the majority that they did not like their overall impression, but in the case of the green advert there were also 19.5% of the respondents who did not like the colors of this ad.

The last questions researched if respondents would buy the product in each advert and the results are shown in table in appendix no. 3. The fewest respondents (31.8%) would buy the product from the green advertisement which was also the least popular one. In the case of the first and the third advert the results are exactly the same. A little bit more than half of the respondents (50.4%) would buy the product from these adverts and 49.6% would not buy it.

4.3.3 Recommendation

Finally, it is necessary to verify the psychology of the colors in practice. To do so the next part of this article is the comparison of the theory and results of the survey for each researched advert. This comparison should answer the question if colors in advertising influence students and how.

Bohemian Ale

According to the results of the survey the respondents´ perception of red differed depending on the shade of this color. When respondents were asked to choose the impression that this advert gave them, they had nine choices in total. For the red color, there was a strength and a sweet taste that Behrens (1991) in Vysekalová (2012, p. 170) connects to this color, and heat according to Dupont (2009, p. 253). The heat was correctly chosen by the respondents most often (54.9%). Then the most frequent answers were a luxury (26.5%), and elegance (21.2%). But even these answers are right because Vysekalová (2012, p. 95) wrote that dark red is masculine thanks to its impulse to conquer and gives the impression of nobility. Surprisingly respondents unlike Behrens (1991) in Vysekalová (2012, p. 170) chose a bitter taste (21.2%) more often than a sweet taste (14.2%). This advert was neither the most (24.8%) nor the least favorite one (25.7%) in the survey. Further there was a question of connection of purchase and the influence of colors in adverts on respondents. In the case of this ad, 50.4% of the respondents would surely or more likely buy this product and 49.6% would not. Because of these results the table in the appendix no. 4 was created to research if respondents prefer the product from the advert they liked the most or least. It is obvious that 67.9% of the respondents who liked this advert the most would surely or more likely realize the purchase and 32.1% would not. But if the respondents liked this advert the least, 82.8% of them would not be persuaded to buy this product. So, the positive meaning about this advert is not as important as the negative one. But this advert was the only one which was preferred by the respondents because of the colors (11.5%) than overall impression (10.6%). This kind of confirms the saying of Dupont (2009, p. 254) who wrote that red color helps to promote all food products. To that Dupont (2009, p. 264) added that the combination of red and yellow color means a desire for something new. So according to this author, when the company used a red background with a yellow award plate, it was useful to promote a new flavor of beer.

Against eurobeer

According to the results of the survey the psychology of colors is confirmed in the case of the second advert. The most respondents corresponded to the emotions that the green color should evoke. However there seems to be a problem because many respondents corresponded to negative emotions. More respondents answered that the colors in this advert seemed cold (37.2%) than fresh (26.5%) and 13.3% of the respondents also wrote their own negative emotions. By these it was perceived as military, boring or inconspicuous. And it was this advert that was the least favorite one when 53.1% of the respondents liked it the least. This was caused mainly by the overall impression, but in this advert also the colors played an important role. There were not so many respondents that liked the advert least because of the colors used as in the case of the green ad. The mistake of this advert can be the shade of the chosen green color for the background. The dark green, as Vysekalová (2012, p. 97) wrote, seems colder and harder than the brighter one. Furthermore, there is a question of the effectiveness of this advert in the case of sales. On the grounds of this advert 31.8% of the respondents would surely and more likely buy the product and 68.1% of them would not. If this is the consequence of the fact that the respondents disliked this advert the most, the table in the appendix no. 4 considered. According to this table it is obvious that there is some influence of the advert´s popularity to the respondents' preferences to purchase. If the respondents (21.2%) liked the second advert the most, 79.2% of them would surely or more likely realize the purchase of this product and 20.8% would not. In the opposite case, only 5% of those who disliked this advert the most would surely or more likely buy this product and 95% would not. So, this shows that this advert had a very negative influence on the respondents and that it was much bigger than the positive one. Since, in view of the fact that the colors had a very important role in the impact of this advert, it is possible to consider that changing the shade of green to a brighter one could turn the negative perception of the respondents.

Beer as a jewel

According to the answers in the survey, colors in this advert were perceived in a positive way. Respondents mostly answered that the colors gave the impression of elegance and luxury. Surprisingly they also ticked that these colors looked warm (30.1%) and evoked a sweet taste (15.9%). Only 8% of them wrote that these colors gave a heavy impression. The main black color probably really worked the way Dupont (2009, p. 259) said, to raise the contrast of other colors. The second color there was yellow which according to Mediaguru (2012) attracts the attention of consumers. This caused that the majority of the respondents (45.1%) was interested in this ad at the first sight. So not all of the psychological meanings of the black color were confirmed but it emerged that respondents had more positive than negative feelings connected with this color. Positive perception of this advert was also visible when the respondents were asked to choose the most favorite advert and 54% of them liked this one the most. Only 21.2% liked this advert the least. The main reason why they liked or disliked it was the overall impression, from written answers mainly originality and simplicity or vulgarity. In the question of preference in sales of the product from this advert respondents were again half and half. However the table in the appendix no. 4 shows that if the respondents liked this advert the most, 68.9% of them would surely or more likely buy the product and 31.1% would not. But if they disliked it the most, only 8.3% would surely or more likely buy the product and 91.7% would not. So again it is visible, that the negative influence of colors or the overall impression of the advert on respondents is much bigger than the positive one.

According to these results it is clear that in the case of creating an advertisement, the Family brewery Bernard a.s. should definitely work with psychology of colors. Colors are one of important instruments used in advertising to influence consumers and it is necessary to use them according to the message of the advert. However, the target group of the survey was students so the recommendation is written for this target group. Based on the answers of the respondents, it is possible to say that students are surely sensitive to colors in advertising. It is also obvious that their preferences were not gender specific. The interviewed students were mostly attracted by the adverts with bright colors and their combinations and so they also liked these the most. Reversely, the advert using a dark green on the background had a negative influence on respondents and their preferences in the case of purchasing the promoted product. Therefore the recommendation about using psychology of colors in the advertisement targeted at students is that the most important factors to consider are the combinations and shades of used colors. Of course if the targeted group is different there will be a different influence of colors on consumers.

4.4 Conclusion

This article researched the influence of colors on students in advertising. The main objective was to give a recommendation of how to use colors in students´ targeted advertising. Its sub-objective is to find out the influence of colors on students in researched advertisements. At first the psychology of colors was researched theoretically from the literature and then practically in researched advertisements. In the practical part the first thing which was performed, was the analysis of three chosen advertisements based on the theory. Each advert was using a different color on the background: red, green and black. Advertisements were chosen from advertising campaigns of the Family brewery Bernard a.s. But the main point of this chapter was the anonymous survey among students. This online survey was attended by 113 students and the results confirmed the analysis of researched adverts carried out before and verified the psychology of colors. In the case of the second advert using green, three mostly ticked emotions were in agreement with the literature (37.2% coldness, 26.5% freshness, 19.5% bitter taste). The third (black) advert gave 56.6% of the respondents the feeling of elegance and 55.8% of them the feeling of luxury, which were also two out of three emotions for black color according to the literature. Many respondents also ticked a warm feeling (30.1%) and a sweet taste (15.9%). The red color used in the first advert symbolized much more emotions for respondents. Warm was chosen by 54.9% of the respondents, but only 20.4% of the respondents wrote that the red color looked powerful and 14.2% chose the sweet taste. More respondents (21.2%) thought that red symbolized a bitter taste. Many respondents also wrote that this advert looked luxurious (26.5%) and elegant (21.2%). The advert using mostly black color (45.1%) attracted respondents´ attention at the first sight and 54% of the respondents ticked this advert as the prettiest one. As the least pretty ad, 53.1% of the respondents chose the second one using a green background. There was no difference between men and women in the case of the researched adverts´ popularity. Both men (51.3%) and women (55.4%) liked the third advert the most and then 53.8% of men and 52.7% of women liked the second ad the least. According to the answers 63.7% of the respondents liked the researched adverts because of the overall impression and 21.2% because of colors. Then 45.1% of them disliked those adverts because of overall impression but 30.1% chose the colors as the reason. When the respondents chose the advert using red color as the prettiest one, then it was for 11.5% of the respondents because of colors and 10.6% because of the overall impression. In the case of the advert using the green background, the colors were the reason of disliking this advert for 19.5% of the respondents. Furthermore there were results of the questions asking respondents about purchasing the promoted products. The fewest respondents (31.8%) would buy the product from the green advert which was also the least popular one. In the case of the red and black advert a little bit more than a half of the respondents (50.4%) would buy the product from these adverts and 49.6% would not buy it.

According to the results of the survey it is clear that when creating an advertisement targeted at students, the Family brewery Bernard a.s. should definitely work with psychology of colors. Colors are one of important instruments used in advertising to influence consumers and it is necessary to use them according to the message of the advert. Based on the answers of the respondents it is possible to say that students are surely sensitive to colors in advertising. The interviewed students were mostly attracted by the adverts with bright colors and their combinations and they also liked these the most. Reversely, the advert using a dark green on the background had a negative influence on respondents and their preferences of purchasing the promoted product. Therefore the recommendation about using psychology of colors in the advertisement targeted at students is that the most important factors to consider are the combinations and shades of the colors used.

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Appendix list

Appendix 1 Researched advertisements
Bohemian Ale:

Against eurobeer:

Beer as a jewel:

Source: Rodinný pivovar BERNARD a.s.

Appendix 2 Link between popularity of each advert and gender (in %)

Most favorite			Least favorite		
	Men	Women		Men	Women
1st advert	28.2	23.0	1st advert	25.6	25.7
2nd advert	20.5	21.6	2nd advert	53.8	52.7
3rd advert	51.3	55.4	3rd advert	20.5	21.6
Total	100.0	100.0	Total	100.0	100.0

Source: own survey

Appendix 3 Preferences in purchasing products in researched advertisements (in %)

	1st advert	2nd advert	3rd advert
Sure yes	3.5	3.5	11.5
More likely yes	46.9	28.3	38.9
Positive answers	**50.4**	**31.8**	**50.4**
More likely no	31.9	41.6	30.1
Sure no	17.7	26.5	19.5
Negative answers	**49.6**	**68.1**	**49.6**
Total	100.0	100.0	100.0

Source: own survey

Appendix 4 Influence of advert´s popularity to respondents' preference to purchase (in %)

Most favorite	1st advert	2nd advert	3rd advert
Sure yes	7.1	8.3	18.0
More likely yes	60.7	70.8	50.8
Positive answers	67.9	79.2	68.9
Sure no	17.9	8.3	11.5
More likely no	14.3	12.5	19.7
Negative answers	32.1	20.8	31.1
Total	100.0	100.0	100.0
Least favorite	1st advert	2nd advert	3rd advert
Sure yes	3.4	1.7	0.0
More likely yes	13.8	3.3	8.3
Positive answers	17.2	5.0	8.3
Sure no	48.3	56.7	50.0
More likely no	34.5	38.3	41.7
Negative answers	82.8	95.0	91.7
Total	100.0	100.0	100.0

Source: own survey

Appendix 5 Questionnaire of the survey

Působení reklamy na spotřebitele

Dobrý den,

věnujte prosím několik minut svého času vyplnění následujícího dotazníku.

Co Vás na reklamě zaujme jako první? (možno zaškrtnout více odpovědí)

- [ ] Humor
- [ ] Informace
- [ ] Barevnost
- [ ] Hudba
- [ ] Známá osobnost
- [ ] Erotika
- [ ] Jiná odpověď

Napište odpověď

Zbývá 100 znaků

Která z těchto tří reklam Vás zaujme na první pohled?

( ) 1. reklama

( ) 2. reklama

( ) 3. reklama

( ) Žádná

Jak na Vás působí barvy užité v této reklamě? (možno zaškrtnout více odpovědí)

☐ Evokují sladkou chuť	☐ Evokují hořkou chuť	☐ Chladně
☐ Teple	☐ Těžce	☐ Luxusně
☐ Silně	☐ Elegantně	☐ Svěže
☐ Jiná odpověď		

Napište odpověď

Zbývá **100** znaků

Jak na Vás působí barvy užité v této reklamě? (možno zaškrtnout více odpovědí)

☐ Evokují sladkou chuť	☐ Evokují hořkou chuť	☐ Chladně
☐ Teple	☐ Těžce	☐ Luxusně
☐ Silně	☐ Elegantně	☐ Svěže
☐ Jiná odpověď		

Napište odpověď

Zbývá **100** znaků

Jak na Vás působí barvy užité v této reklamě? (možno zaškrtnout více odpovědí)

- [ ] Evokují sladkou chuť
- [ ] Evokují hořkou chuť
- [ ] Chladně
- [ ] Teple
- [ ] Těžce
- [ ] Luxusně
- [ ] Silně
- [ ] Elegantně
- [ ] Svěže
- [ ] Jiná odpověď

Napište odpověď

Zbývá **100** znaků

Která z těchto reklam se Vám líbí nejvíce?

- ( ) 1. reklama
- ( ) 2. reklama
- ( ) 3. reklama

Proč se Vám líbila právě tato reklama nejvíce?

- ( ) Text
- ( ) Barevnost
- ( ) Celkově
- ( ) Jiná odpověď

Napište odpověď

Zbývá **100** znaků

Která z těchto reklam se Vám líbí nejméně?

1. reklama

2. reklama

3. reklama

Proč se Vám líbila právě tato reklama nejméně?

- Text
- Barevnost
- Celkově
- Jiná odpověď

Napište odpověď

Zbývá 100 znaků

Po shlédnutí této reklamy byste si propagovaný produkt:

- Určitě koupil/a
- Spíše koupil/a
- Spíše nekoupil/a
- Určitě nekoupil/a

Po shlédnutí této reklamy byste si propagovaný produkt:

Určitě koupil/a | Spíše koupil/a | Spíše nekoupil/a | Určitě nekoupil/a

Po shlédnutí této reklamy byste si propagovaný produkt:

Určitě koupil/a | Spíše koupil/a | Spíše nekoupil/a | Určitě nekoupil/a

Pohlaví

- Muž
- Žena

Věk

- do 20 let
- 21 - 25 let
- 26 - 30 let
- 31 a více let

Jste studentem

- SŠ
- VŠ
- VOŠ
- Nejsem student

Source: own survey, published by Survio s.r.o.

5. Ličmanová Lucie: Employer branding as a modern tool in Talent Management

SUMMARY
Main objective: The main goal of this thesis is to demonstrate the theoretical concept of employer branding shown in the case of a particular company and to suggest recommendations for the company in the context of employer branding.
Research methods: The primary source for the theoretical part was data collected from previously published Czech and foreign literature, articles and various Internet resources concerning employer branding. For the practical part were used semi-structured interview with HR manager of the XYZ company and internal analysis of the company's materials, website and social media associated with the company were used.
Result of research: The XYZ company supports retaining the right talents in the organization as well as searching for new talents. The company uses several internal and external methods of employer branding. All employees in the company are perceived as a talent. There is an individual approach to each employee individually. To keep the right people in the organization, the company sets common vision, mission and values and internal communications. Other internal methods used by the company include creation of an informal friendly corporate culture that fosters employee satisfaction. Apart from financial compensation, the company offers a wide range of benefits that support corporate climate and employee performance. Regarding to external employer branding techniques that relate to recruiting new talent into the organization, the company presents itself on several social networks and websites. The company also wants to collaborate with students that try to educate according to company ideas from the beginning of their careers. Therefore, the company establishes bilateral relations with technical schools.
Conclusions and recommendations: Author of this theses suggest recommendations for improvement of the XYZ company in the context of employer branding based on information from theoretical part and from information about the company in the practical part. One of the recommendations is to propose a separate website which serves only for potential candidates. Because of the fact, that there are more than 4.5 million of Czech population on Facebook, the author proposes to create a Facebook profile that would be designed to show the life in company XYZ. The author also proposes to focus on improving company communication and sharing information inside the company. To strengthen corporate identity and sense of belonging, the author recommends creation of an internal corporate magazine.

KEYWORDS
Employer branding, talent management, brand

JEL CLASSIFICATION
J 24 Human Capital; Skills; Occupational Choice; Labor Productivity, J 28 Safety; Job Satisfaction; Related Public Policy

5.1 Introduction

One of the key factors that makes a significant difference in the competitive environment within the labour market is finding the right talent. Quality presentation of the employer brand serves as a magnet for the right kind of talent for the organization and helps to build a strong employer brand. The way potential candidates generally perceive their employer is becoming central to a company's ability to grow. Employer branding is more important today than ever before, because we live in a time when supply greatly exceeds demand in a number of consumer segments. These new market conditions result in the fact that organizations have to search for new ways and strategies of how to attract talented candidates, because traditional methods of human resources management stops being sufficiently effective. The concept of employer branding helps organizations to be perceived as the best employer internally as well as externally. Employer branding as a relatively current phenomenon should be implemented as a tool of talent management in the context of human resources management.

The main goal of this thesis is to demonstrate the theoretical concept of employer branding shown in the case of a particular company and to suggest recommendations for the company in the context of employer branding.

To begin, the theoretical part describes the theoretical concept of employer branding. The first part focuses on the definition of employer branding followed by the introduction of the concept of talent management. Finally, the last part informs about internal and external methods of employer branding. One part is intended to present the methodology of this thesis.

Secondly, the practical part describes the concept of employer branding at the XYZ company. This part focuses on general information about the company, approach to talent management and its approach to internal and external methods of employer branding. The final part deals with recommendations for the XYZ company in the context of employer branding.

The thesis is logically processed in the form of successive steps. These steps include selection of the topic, selection of information sources, processing of theoretical-methodological part, practical part and recommendation for the XYZ company. The conclusion of these theses contains a summary of gained findings. The XYZ company does not want to be published in the thesis. Author of this thesis use a fictional name "XYZ company" instead of the real name of the company.

5.2 Theoretical and methodological part

5.2.1 Definition of employer branding

The concept of employer branding presents a new dimension in managing the talents of an organization. Employer branding has become a key factor for many organizations in their quest to win the war for talent. Regarding the first definition of Employer branding, it was published by Tim Ambler and Simon Barrow in the year 1996 as the package of functional, economic and psychological benefits provided by employment, and identified with the employing organization (Ambler, Barrow, 1996, p. 185). Another definition of the employer branding is presented by Martin and Beaumont (2003, p. 15): Employer branding is "company‛s image as seen through the eyes of its associates and potential hires". In the Czech literature, Stýblo (2003, p. 18-19) defined employer branding as not just a method for obtaining future workers in the labour market, but mainly as a system of thinking and acting that is oriented not only externally, but also to company itself. Wojtaszczyk described employer branding as a phenomenon that refers to two disciplines: human resources management and marketing (Wojtaszczyk, 2012, p. 47).

5.2.2 Talent management

The brand is perceived as one of the most key and valuable assets of a company in the global war of talents. Employer branding plays important role in finding the right talents (Backhouse, Tikoo, 2004, p. 502). Talents in business practice signify the ability to achieve consistently high standard of performance. Performance is what the business practice requires, measured and valued (Stýblo et al., 2011, p. 624). The first comprehensive reference to talent management appeared in the book "The War for Talent", written by Ed Michaels, Helen Handfield-Jones and Beth Axelrod, a prestigious consulting workers at McKinsey & Company (Michael at al., 2001, p. 6). Authors of the book refer increasing competition in the recruitment and retention of talented individuals in the organization. According to them, war for talents caused formation of new business reality. New business reality brings change in the way of thinking about the people in the company and also philosophy that talented people lead a company to higher performance. Talent management is an essential part of how business should be leaded (Michael at al., 2001, p. 6).

According to Andresen and Nowak (2015, p. 37) talent management strategies differ from organization to organization. Andresen identifies two approaches in talent management. One of them is an inclusive strategy that understands all employees as talents. Employees have the same development opportunities and equal access to talent management activities. On the other hand, exclusive strategy is perceived according to him as a traditional approach that identifies a group of talents within the company. The company provides them with special development and complementary activities, unlike the remaining employees of the company. This includes, for example, development programs, coaching and focus on career growth (Andresen, Nowak, 2015, p. 37).

5.2.3 Internal employer branding

Regarding the talent management, Dewitz (2006, p. 243) claims that the scope of functions of the talent management can be divided between a focus on internal and external talents. In the context of talent management, employer branding should intend to show the career paths to talented employees inside the organization as well as to facilitate career aspirations outside the organization (Schweyer, 2004, p. 147).

Barrow and Moseley (2005, p. 150) divided internal methods of employer branding and created employer brand mix. Employer brand mix consists of many internal factors that influence overall satisfaction of employees. The employer brand mix includes organizational factors and local factors. One of the organizational factors is internal communication (Barrow, Moseley, 2005, p. 150).

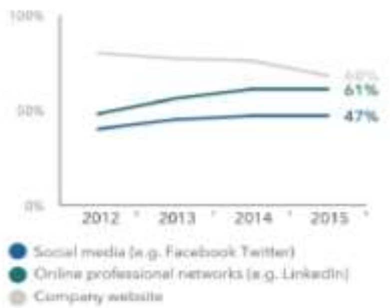
Every employee of the organization is a part of internal communication. Varghese (2012, p. 11) claims that companies need the employees to understand the expectations of the company and what is the meaning of processes within the company. He claims that internal communication formal as well as informal provides common understanding between employees. Other important aspects are values, vision and mission (Barrow, Moseley 2005, p. 150). The same authors claim that formulation of vision, mission and values ensures that everyone have a clear idea about the objectives of the company. Moreover, it facilitates sharing ideas with each other. Other organizational factors are for example reputation of the company, leadership style, CRS and internal measuring system. Local factors include for example organization culture and system of benefits. (Barrow, Moseley, 2005, p. 150).

Hofstede G. and Hofstede G. J. (2007, p. 215) defines culture as the collective programming of the mind which distinguishes the members of one group or category of people from another. Analogously, organizational culture is defined as the collective programming of the mind which distinguishes the members of one organization from another (Hofstede G., Hofstede G. J., 2007, p. 215). As it was mention above, benefits also belong to local factors. Employee benefits are provided to employees in addition to wages, salary, for the major part in indirect connection with their job performance (Pelc, 2009, p. 11). Wöhe (2007, p. 152) sees the importance of benefits as a reaction to increasing competition at the selection and recruitment process of qualified staff. He adds that employee benefits increase work satisfaction at work and improve working climate and work performance. Finally, local factors cover recruitment and adaptation process, team management, evaluation of employees, learning and development of employees (Barrow, Moseley, 2005, p. 150).

5.2.4 External employer branding

There are many ways how the employer can attract the right talents through external tools. According to Talent Solutions Global Recruiting Trends, companies began to depend more on how they present themselves as it was mentioned previously in this thesis (Linkedin, 2016). The use of social media such as Twitter, Facebook and other professional networks has increased. As we can see from the graph (Linkedin, 2016), companies start using social media and online professional networks more frequently. On the other hand, company websites are perceived as less effective.

Picture 1 Employer brand sentiment



Source: Linkedin (2016)

Cooperation with universities

Nowadays many technology oriented companies have trouble in finding technically skilled employees who are very important for the economy (Vaňková, Vaněk, 2012). Therefore, it is necessary to establish partnerships with schools as indicate the same authors. These partnerships are advantageous to both sides: students can help companies deal with various issues and help with work of current employees. Students have the opportunity to become familiar with the company culture and their potential future position after finishing their studies (Janíková, 2014). For example, the famous Czech company Škoda cooperates with more than ten schools. Škoda offers professional lectures, technical aid and various types of internships within the company (Škoda, 2017).

5.2.5 Methodology

The primary source for the theoretical part was data collected from already published Czech and foreign literature, articles and various internet sources within the area of employer branding. The literature was borrowed from the National Library of the Czech Republic. Literature was searched according to the key words that relate to the topic employer branding. Secondary data was primarily accessed through the electronic database of ProQuest and from the internet source books.google.com.

Due to the goal of this thesis, the practical part was based on qualitative research, specifically on semi-structured interview (Pavlica, 2000, s 52). Interview was made with employee from HR department. The semi-structured interview took part on 15th of January 2017. The interview took about 40 minutes and was recorded. Interview includes six questions related to employer branding. The goal was to find out the approach to employer branding at the chosen company. The reason for the choice of this method is the fact that the semi-structured interview serves to understand how individuals interpret certain facts (Pavlica, 2000, p. 52). Pavlica adds that this kind of interview provides deep insight into the logic of thinking and acting of concreate people or concreate processes in organizations. Interview was processed according to recommendations of Hendl who specialized on qualitative research (Hendl, 2012, p. 168-185).

Author of this theses reached information also from analysis of internal materials from the company and materials reached from website of the company and social networks connected with the company. Regarding the internal materials, author worked with the Internal Manual for new employees and a booklet which includes the vision of the company. Regarding the social networks author worked with Facebook and Instagram profile of the company, Linkedin and Proudly profile connected with company.

5.3 Practical part

5.3.1 3.1 About the company XYZ

The company XYZ is young dynamic Czech company that brings a new concept of traveling to the Central European region (Manual for new employees of the company XYZ, 2016). The same source claims that the company XYZ offers more than 24 train lines in the Czech Republic and Slovakia and number of bus connections. Company XYZ is trying to improve the quality of public transport. Passengers can use services like online ticket purchase, access to WiFi, daily newspapers, refreshments or a baby section. Company has also mobile application where you can reserve parking places or place for your bike. They cooperate with companies specialized on car and bike sharing like Uber and Rekola. You can also rent an electric scooter (Manual for new employees of the company XYZ, 2016).

Organizational structure

The whole company is divided into different departments. Every department has a leader who is responsible for specific tasks. These directors are subordinate to the CEO (Manual for new employees of the company, XYZ, 2016).

Operations department

The largest department is the Operations Department, which is responsible for the operation of trains and buses. Their task is preparing, organizing and implementing train and bus connections from the organizational, personnel and technical perspective. They are also in charge of securing and managing the operating system (Manual for new employees of the company, XYZ, 2016).

Technical department

Even the most capable steward, would not be able to offer services without having the proper technical background. Technical department is responsible for proper functioning of trains, buses and for technical equipment for checkouts (Manual for new employees of the company, XYZ, 2016).

Marketing department

A treasure trove of ideas is the marketing department, which comes with new products. They are responsible for the marketing strategy of the company. Marketing department creates the image of the company XYZ through online and offline marketing tools (Manual for new employees of the company, XYZ, 2016).

Business Development department

Business Development Department is looking for new targets, strategies and expanding our network of bus and rail transport. Their mission is creating new products and takes care of the existing ones. They are responsible for sales and thus creating a pricing model, working with corporate customers and create business support for the entire company (Manual for new employees of the company, XYZ, 2016).

IT department

They are working on new programs, sales systems, mobile applications and other necessary gadgets in the era of information technology (Manual for new employees of the company, XYZ, 2016).

Finance department

Finance department cares about the cash flow. Every company must have department who has numbered receipts, invoices, expenses and incomes, in order to be able to save capital (Manual for new employees of the company, XYZ, 2016).

Public Affairs department and Law department

Public Affairs monitors changes in Czech and European legislation, provides contact with the European institutions, key institutions mainly in Prague and with diplomats abroad. They support urban solutions and discussions that allow the development of follow-up door-to-door transport. The main activity of law department is compliance with laws and legislation (Manual for new employees of the company, XYZ, 2016).

Human Resources department

For the operation of the company in such a difficult time the search for quality employees is crucial. The Human Resources department is in charge of this difficult task. HR department not only look for new employees, but also cares about their salaries, training and also about the administration associated with employment. HR department is also responsible for employer branding in general. Their task is to get the right talents as well make comfortable environment for talents inside in the company (Manual for new employees of the company, XYZ, 2016).

5.3.2 Talent management

Regarding to talent management, company has inclusive strategy (Annex). During interview HR manager mentioned that the company perceives everyone as a talent. Every employee has a specific talent and potential to bring added value to the organization. The company wants to develop talents at all levels of the organization. Employees have the same access to development opportunities. Development of each employee is evaluated individually. The company uses this approach to increase employee's motivation and overall higher performance, loyalty, higher solidarity with the organization and higher identification of employees with corporate objectives (Annex).

5.3.3 Internal employer branding

Vision

Company XYZ put together six pillars of vision that characterized their company identity. This vison has been created by the employees themselves (Annex). The company XYZ created brochure that include their vision and also put this vision on the wall at the company building to remind the meaning of employees work every day (Annex). According to the Booklet about vision of company XYZ (2016), the six pillars of vision are mentioned below:

1. desire to connect the world,
2. quality is before quantity,
3. liberty as an engine of grow,
4. contagious satisfaction,
5. do your best,
6. your personality is the key.

Values

Value is what is considered as important and what group or individual believe. They express a general preference reflected in decisions of individuals or organizations (Armstrong, 2007, p. 206). According to the Manual for new employees of the company XYZ (2016), core values of the company XYZ are:

LIABILITY

Liability is one of the characteristics of our behaviour towards customers, employees, investors and suppliers.

ENTHUSIASM

We're going in full throttle! We love what we do and share the joy with everyone else. We all believe in the fact that our work makes sense. Friendly and energetic atmosphere in the company allow us to reach impressive results and achievements.

OPENNESS

Anyone here can talk to anyone and come up with new ideas or suggestions that can work better. It doesn't matter what your gender, age or race is.

Mission

Mission has to answer the main questions "who we are" and "what we are doing" (Mallya, 2007, p. 31). Company XYZ also created their mission and answer these questions.

We run transport, which we want to use ourselves. We offer the best services from Wi-Fi connections to a reading lamp. Quality of traveling means to be able to work on the road, relax and eat well, pay easily and of course have no other worries. Instead of worries we carry joy. Making you happy makes us happy (Manual for new employees of the company XYZ, 2016).

Company culture

According to HR manager (Annex) there is an informal, very friendly, open and innovative company culture. Informal atmosphere encourages satisfaction of employees and friendship through the entire organization. It also gives anyone enough space for creativity, new ideas and other improvements. It is start at recruitment process, where "culture fit" is very important. There are many young and energetic employees that have common characteristics. If someone excel in the specific area career advancement is much easier in comparison to big corporations. The HR manager also said that there are examples like the case of one of the director of finance department. This director started as an intern in the company and now he is responsible for the whole department (Annex).

Benefits

According to HR manager (Annex) the company offer to employee's bride scale of benefits in order to fulfil employee's needs and encourage work life balance. Company offers flexible work conditions like flexible working hours and possibility to work from home. They also offer meal tickets and membership of the program Multisport. Employees can receive special credits for travelling for free in the company network. Every employee can use company mobile plan, where is unlimited calling and other benefits. HR manager also mention that the company encourages healthy lifestyle at the workplace and offer healthy food for free at workplace. There is also a chill out zone, where employees can relax. Company organize various events like teambuilding, grill party, Christmas evening and common dinners to strengthen relationship between employees in the company (Annex).

Internal communication

The company XYZ is a bit different from other companies. According to Manual for new employees of the company XYZ (2016), the company is not a big corporation and there is also no need to become one. Employees can talk with everyone in the organization. It does not matter what kind of position employee has. Communication in the company is direct, fast and targeted. Employees respect each other and the rules that are written in company manual which is designed for new employees. Manual includes rules like that the best solution to deal with issues is to solve it personally with employees who is responsible for the matter. The same rule of contacting only people who are involved is request for writing emails. The main common goal is to maintain a positive and constructive atmosphere in the company. Attachment of the manual is the code of ethics of the company. Every employee has to read that and sign it. The manual also includes information about company in general and some stories of current employees. It gives an overview about company culture to new employee (Manual for new employees of the company XYZ, 2016).

5.3.4 External employer branding

The company XYZ uses various external tools to attract potential talents. The recruitment process depends on the concrete positions, and therefore may differ. External tools also depend on specific target group.

Website

Potential candidates can find general information about the company on their website (XYZ, 2017). Website serves mainly for providing services rather than informing about the company itself. Candidates can see general information about the company, vision and mission. Potential talents can also see career possibilities at the end of the website in the section called "We are finding talents". Job advertisements have a specific and original form. They are written according to the creative pattern. Job offers are written in very informal way to reflect friendly and open company's culture and attract the right talents (XYZ, 2017).

Linkedin page

Linkedin is another channel that the company uses for communicating their brand. Linkedin is the most popular social network for professional recruiting among both recruiters and job seekers, according to HR manager of the company XYZ. Linkedin page of the company XYZ has over 450 followers. It includes only short overview about the company (LinkedIn, XYZ, 2017). HR department uses this social network for addressing candidates mainly for managerial positions or position specialized on IT area (Annex).

Proudly

Proudly is professional career website, where employers present their company. Every company has its own profile where candidates can see many videos and various posts about company culture, people in the organizations and job offers. Company XYZ create their profile in order to present their company culture (Proudly, XYZ, 2017). According to HR manager, the profile serves primarily for attracting students, because they are main users of Proudly (Annex). There is many information about company work environment and approach to employees. Profile is complete with many photos and videos of the workplace and concreate employees. Videos are presented by employees who share their experience with the company. There is also one article that presents one day at work of one employee of the company. Potential candidates have also easy access to company's Instagram, Facebook, LinkedIn etc. There is easy access to free positions as well. Job advertisements are processed in a simple way and have the same design for better orientation (Proudly, XYZ, 2017). HR manager also added that the company uses Proudly also for specific campaign presented on Facebook (Annex).

Facebook and Instagram

The company XYZ has an account at the social networks Facebook and Instagram. Facebook profile is specialized more on highlighting services rather than presenting company culture. It has about 60 000 followers. We can find there different information about services, teasers for special events and various competitions for customers (Facebook, XYZ, 2017). Instagram profile informs more about life inside the company. This profile has about 3 000 followers. There are employees on the photos and also interesting stories from the life of employees (Instagram, XYZ, 2017).

Cooperation with universities

During the interview, HR manager spoke about cooperation with universities. He mentioned that company also represents itself at schools (Annex). He said that large part of employees is formed by students. The philosophy of the company is offering internships and educates young people according to company values. Some employees give professional lectures, which serves to motivate candidate to join the company and also give a little overview what are goals of the company. The main benefit is that candidate can ask questions and meet with current employees. Students get to know what job opportunities the company offers and what types of people are looking for. The company established some partnerships with technical oriented universities (Manual for new employees of the company XYZ, 2016).

5.3.5 Recommendations

Company website

The company is using tools of employer branding according to their target groups. According to HR manager many candidates contact company via their website (Annex). Regarding to their website as one of the external method, author presumes that the website is unable to attract and motivate enough candidates. Information about company and career possibilities is placed at the bottom of the page. There are also not many information that would describe company culture. Author would recommend creating special microsite dedicated only for presentation of the company to potential candidates. This microsite would offer information about mission, vision, values and company structure. Author would include also job advertisements, insight into the workplace of employees and information about benefits. The use of Story Telling is becoming more popular. Authentic stories of employees presented primarily on the video allow looking inside the company and increase attractiveness of the employees (Trézová, 2015). Author would recommend to create videos of employees that would share their experience. Career website has to be accessible in mobile version and design and graphic has to be very professional and able to support image of the company.

Facebook profile

Situation is the same with the Facebook profile. It informs about company's services instead of company culture. Many companies create separate Facebook profile, where employees share actual life of employees in the company. Companies put mostly informal posts from various events to attract candidates. Because of that author would prefer to have two accounts, one for customers and another for potential candidates and internal employees. There will be also presented career opportunities at the second Facebook profile. It should serve as a communication platform and raise awareness about the brand. This page would be a good place to have a conversation with individuals online and answer their specific questions. According to Důjka (2016, p. 16) properly set corporate profile may promote corporate brand very well and attract talents in different areas. He adds that there are about 4, 5 million people on Facebook who can be our potential employees.

Internal communication

Author would recommend creating an internal company magazine to retain talents inside the organization and contribute strengthening the image of the company in the context of internal communication, that mention Barrow and Moseley (2005, p. 150) as an internal employer branding method. Company magazines help to shape corporate identity, feeling of belonging to the organization and the feeling of common achievement of the objectives of the company (Svoboda, 2009, p. 155). The same author claims that for the success of any company it is particularly important for employees to share vision of the company. Thanks to internal magazine employees can meet new colleagues, get an overview about what is new in the company and get to know actual strategies of the company.

5.4 Conclusion

In conclusion, employer branding is crucial for success of the organization. This concept brings benefits to employees of the company as well as for applicants for work. It can be seen as a strategic tool for talent management. Employer branding helps organizations to build trust and the sense of pride in belonging to the organization and helps to find and keep the right talents in the in the increasing global competition for talent (Berthon et al., 2010, p. 156).

The main goal of this thesis is to demonstrate the theoretical concept of employer branding shown in the case of a particular company and to suggest recommendations for the company in the context of employer branding. Theoretical and methodological part based on collecting data from already published Czech and foreign literature, articles and various internet sources in the area of employer branding. Author used semi-structured interview with HR manager and also reached information from analysis of internal materials from the company and materials reached from websites of the company and social networks connected with the company.

The company XYZ encourages retaining the right talents in the company as well as searching for new talents. This company uses various several internal and external methods of employer branding. All employees in the company are perceived as talents; therefore, the company behaves to each employee individually. In the context of the internal employer branding methods the company uses for retention of employees are setting common vision, mission, values and internal communication. For supporting company climate and employee’s performance, the company creates informal friendly company culture and offer various benefits beside financial support.

In case of external employer branding techniques, the company presents itself on several social networks and their own website in order to find new talents for the organization. The company has its own website that is primarily used for selling tickets and providing information about services. The company XYZ is presented at various professional social networks. One of them is LinkedIn, where the company has created a profile and uses this network to search for talents mostly for senior management positions. They have their profile also on Proudly where the company inform about the corporate culture and concrete experience of employees and vacancies in the company. Other tools for building company brand are Facebook and Instagram profile. The company also collaborates with students. Company wants to educate them according to company ideas from the beginning of their careers. Therefore, the company established bilateral agreements with technical schools. Some employees give professional lectures, which aim to motivate students to join the company. Based on these findings, the author suggests recommendations for improvements in the area of employer branding for the XYZ company. Author suggests creating special company microsite and Facebook profile dedicated only for presentation of the company for potential candidates. Author would also recommend creating an internal company magazine to retain talents inside the organization.

Author is aware of the fact that this is not comprehensive overview about employer branding due to the extent of this work. Author would like to go deeper into this topic in my master theses and make a quantitative research in the company XYZ.

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Annex

Semi-structured interview with HR manager, Prague, 2016

Question 1: Who is responsible for employer branding at your company?

Answer: HR department in cooperation with management is mainly responsible for employer branding and issues connected to that area.

Question 2: Can you describe talent management at your company?

Answer: We do not have universal strategy and programs as it is usual in the big corporations. We believe in everyone and everyone is perceived as a talent in the company. We educate our employees according to their needs. We offer specific educational programmes, workshops, trainings. It is depend on concreate employee and the specific needs of the position. Our philosophy is to give people space for their individual needs. Due to that company increase employee's motivation, loyalty, solidarity and their overall performance will be better.

Question 3: How would you describe company culture at your company?

Answwer: I would describe our culture as very informal, friendly, open and innovative. Thanks to this kind of culture, there is very friendly relationship between employees that encourage satisfaction inside the organization. With the informal environment comes bigger space for creativity, ideas and improvements. Culture fit is very important for us when we recruit new employees. Regarding to employees we have many young, ambitious employees. If we see that employees are doing well, career advancement can be very fast when we compared that with big corporations. I'll give you one example. We had one intern, who did internship for three months. He is in charge of the whole financial department after his three months of internship.

Question 4: What kind of internal employer branding methods do you use?

Answer: Our internal employer branding methods are mission, vision and values of the company. Every employee has to know and get familiar with company mission, vision and values. We let our employees in cooperation with our management to create them. We created brochure that include our vision. To make our vision more visible, we put our vision on the wall in our company. Also our internal communication is a part of internal employer branding. I would describe our communication in the company as direct, fast and targeted. We are not a big corporation and everyone is able to talk with management and everyone in the company. We respect each other and also the rules of our manual for new employees, where you can find rules about communication in the company and general information about the company.

Question 5: What kinds of benefits you offer to employees?

Answer: Except salary, we try to give to employees different benefits. We take care of work life balance. Majority of employees have flexible work conditions and can work from home. We offer meal tickets and for our sport oriented employee we have a multisport card. Moreover we enable traveling for free for all employees in the company. Employees have special credits for travelling for free in the company network. Another benefit is company tariff, where is unlimited calling and other benefits. Employees can refresh themselves by fresh fruits for free. To make work environment comfortable we have special chill out zone, where can employees relax. We organize also many informal events like teambuilding, grill party, Christmas evening, common dinners to strengthen relationship between employees in the company. Besides that, we also take care of health and safety at workplace.

Question 6: What kind of external employer branding methods do you use?

Answer: As an external employer branding methods we use our website. You can find there general information about company and of course a place, where you can see career possibilities. Many candidates contact us via our website. We also use social networks Facebook and Instagram. Although our profile serves more for presenting our services, it can also attract new talents for our company. There are more posts related to the life of our employee on Instagram. Another external tool is the professional Network Linkedin. We have our own profile and also use this as a tool for recruiting mainly managerial positions. We also cooperate with the professional website Proudly, where we have our company profile. We use Proudly for attracting students, who are the main users. Sometimes we use Facebook campaign through Proudly. Because we want to cooperate with students and teach them everything according to our methods we cooperate with schools. Our employees give professional lectures and we are offering various types of internships.

Source: Own processing

6. Lišková Adéla: Modern trends in marketing communication on the internet

SUMMARY
Main objective: The main objective of this thesis is to give recommendations for improvement of selected tools of marketing communication on the internet in the particular company. The operational goal is to introduce selected modern tools of internet advertising and PR on the basis of literature review. The sub-objective of this article is to characterize tools of internet advertising and PR, which are used by the particular company.
Research methods: Theoretical part of this thesis is based on review of current professional literature. The Author used professional literature and some current articles concerning the topic published on the internet or in the database of Academy of Sciences. For the needs of the practical part is used the method of semi-structured interview, which was conducted with the marketing director of the particular company in January 2017. Based on the interview and the author's own exploration on the internet are characterized contemporary tools of marketing communication on the Internet, which are used by the particular company.
Result of research: The current tools and their applications in practice were identified on the basis of interview and author's exploration. It was found that the most important tools of marketing communication on the internet in the field of SEO are PPC and Price comparison websites. On the other hand in the field of internet PR the company sees social networks just as a tool for image building. On the basis of author's exploration was found out, how the specific product of the company stands in search engine and Price comparison websites. Profiles of El nino on the social networks were checked. It was found how often the company updates profiles, how many followers the profiles have or what is the content.
Conclusions and recommendation: Recommendations were designed based on the characteristic of current marketing tools from the perspective of the author and marketing director. The following recommendations lead to more effective presentation of the company on the internet in the fields of SEO and PR. The author recommends to maintain the position in search engines and price comparison websites. In the field of internet PR is recommended exploiting the potential of social networks, regularly update the sites on all social networks. The content of posts focusing mainly on news, discounts, competitions. The author recommends to monitor the comments and wishes of followers. To improve the efficiency of viral videos was recommended to hire some young, successful YouTubers and bloggers, shorten the videos and make it as interesting as possible.

KEYWORDS
Marketing, Advertising, PPC, Social Networks, Viral Marketing

JEL CLASSIFICATION
M31 Marketing M37 Advertising

LIST OF ABBREVIATIONS

FB	Facebook
PR	Public Relations
PPA	Pay Per Action
PPC	Pay Per Click
PPV	Pay Per View
SEO	Search Engine Optimization

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6.1 Introduction

Nowadays the Internet is a place, where people can find out everything they need. There is almost nothing impossible in this virtual space. And every modern company should follow the latest trends in advertising and PR on the Internet. This thesis represents a collection of the most used tools of marketing communication on the Internet.

This thesis is divided into two major parts: Theoretical part and Practical part. Theoretical part is based on the review of current professional literature, which describes selected tools of presentation of the companies on the Internet. The attention is especially paid to SEO, social networks and viral marketing. These tools of Internet promotion will be subsequently used in the preparation of practical part. The last section of the theoretical part describes methods of research used in the practical part.

The main goal of this thesis is to give recommendations for improvement of selected tools of marketing communication on the internet in the particular company. The sub-objective of this article is to characterize current tools of marketing communication on the internet in specific company.

The company El nino is characterized at the beginning of the practical part. Current tools of internet marketing communications in the field of SEO and PR are described, evaluated by cost and compared in the other subsections of practical part. The main research method is semi-structured interview. Recommendations for improvement are written at the end of the practical part.

6.2 Theoretical part

The first part of this thesis deals with basic concepts of marketing and marketing communication. Author introduces concepts such as Marketing mix and Marketing communication. Definitions are described on the basis of literature research. The second part of the theoretical part describes specific modern marketing trends in internet communication of the second decade of the 21st century.

6.2.1 Basic concepts of marketing communication

Marketing communication is one of the most important parts of the marketing mix theory. Marketing mix (4P) is understood as the sum of internal factors of companies that allow to influence consumer behavior (Zamazalová, 2009, p. 39). Kotler (2007, p. 70) writes that the marketing mix includes everything what the company can do to influence the demand for their product. According to Kotler and Armstrong (2012, p. 76) the term Marketing Mix was used for the first time by Prof. Neil H. Borden, who got an inspiration to use from Prof. James Culliton. All the above mentioned authors divide the marketing mix on 4 key ingredients:

1. product,
2. price,
3. place,
4. promotion.

This thesis is mainly focused on the last but not less important component of the mix which is marketing communication. Marketing communication informing and persuading the target groups through them companies fulfills their goals (Karlíček, 2016, p. 10).

Over the last years way to promote products has changed thanks to new possibilities which offered especially internet. Advertising is all around and it is not even possible to run away from it. The question is *"Do we really want to hide from advertising?"* Almost everyone in advanced society has a TV, smartphone, tablet, laptop or another device connected to the Internet. Which means that the Internet makes the great opportunity for companies in the field of marketing communication.

6.2.2 Modern trends in marketing communication on the Internet

This article is focused on internet marketing communication. According to Přikrylová and Jahodová (2010, p. 224) the marketing communication on the Internet can take many forms, which differ in their goals. The same authors divide tools for advertising of brand (advertising campaign, on-line PR, microsites, viral marketing, buzz marketing) and sales support (advertising in search engines, e-mail marketing, affiliate marketing). This thesis is focused on selected tools of advertising of brand as well as sales support. Selected tools of marketing communication on the internet such as SEO, PR on social networks and viral videos are described in the next section.

Search Engine Optimization (SEO)

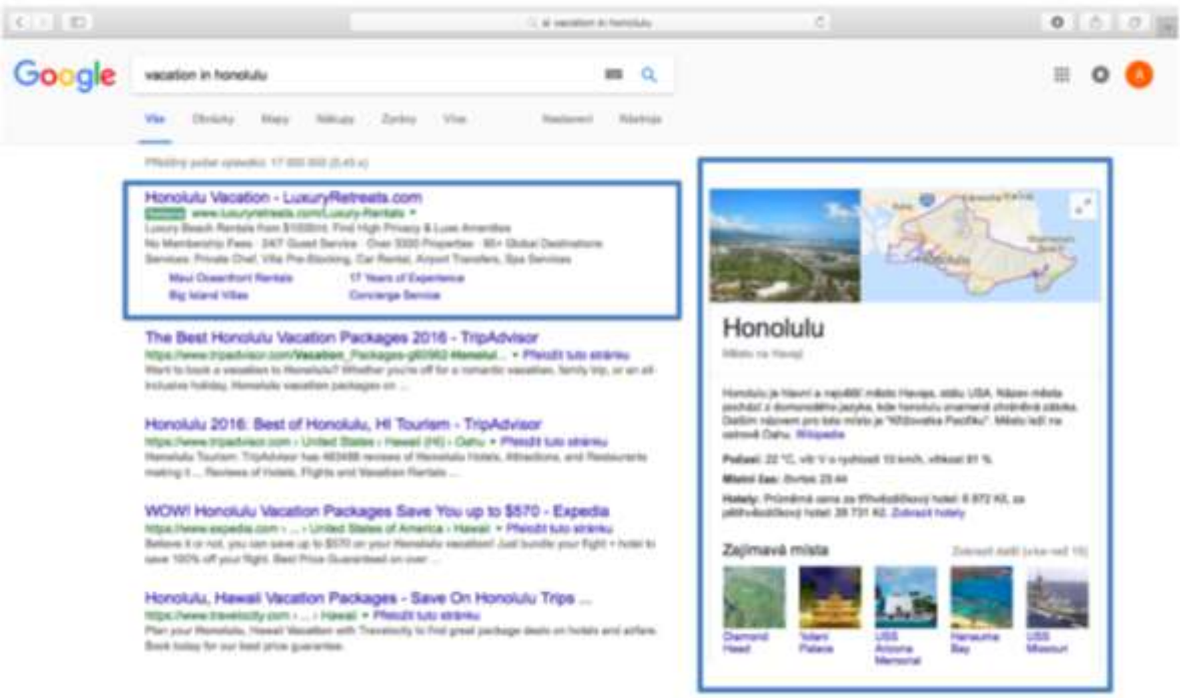
According to Ledford (2008, p. 15) Search Engine Optimization is about the on-page and off-page design strategies which can be used for search engine ranking (tweaking web site, using design elements and content). The same author writes that in most situations, it can also means spending no money at all. Which can be the biggest advantage for everyone.

Domes (2011, p. 9) writes, that the goal of SEO is to push your website in search results in search engines like Google or Seznam to higher place and thus to reach more traffic and potentially greater profits. SEO consists of more parts like site structure, semantic code, attractive texts, backlinks and analysis. The whole process of SEO is very lengthy and demanding. Mitchell (2012, p. 11) divides search engine marketing into two categories. SEO which is according to her organic search listings which are not paid for by advertisers, and paid search listings which are called Pay per Click (PPC) and Cost per Click (CPC). Most of the marketers decide between these two paths, but Mitchell (2012, p.11) thinks that only the combination of these two instruments can achieve success.

Paid Search

According to Mitchell (2012, p. 11) paid search marketing is the process of achieving traffic by purchasing ads on search engines. The Picture 1 shows, where we can find paid search ads.

Picture 1 Paid Search



Source: own processing according to google (2016)

Paid search ads bordered by blue are habitually found at the top or right side of search engine results page. Based on the results of tests potential customer notices these ads at first.

<u>Pay per action</u> (PPA)

This type of advertising works on a pay per customer action. According to Levene (2013, p. 165) pay per action advertising is generally more concrete from the point of view of customers, than PPC, because it is based on their actions as the purchase of an item, downloading a file, filling in a form, sign up for newsletters or any other tractable action which are customers willing to pay. This method of advertising is particularly suitable for online stores.

Pay per click (PPC)

Pay per click means fee for clicks. It is a model of internet advertising, when the advertiser itself determines keywords. Advertiser has an opportunity to reach specific customers, who have entered previously selected keywords. Actual ad in the search engine without subsequent reaction of end users is free, which is one of the biggest advantages of PPC. Ad advert is usually consists of 4 lines related to the user's quarry: headline in bold, information about company, service or product and finally the website. Taylor (2013, p. 58) writes about advantages of PPC as quick results, ability to make changes, local targeting. On the other hand Mitchell (2012, p. 12) found out another advantages like the ability to lead the conversation (have control over keywords), increase coverage, target and measure precisely, variety of Ad types. Mitchell (2012, p. 12) has the same opinion as Taylor (2013, p. 59) about Geo Targeting.

Mitchell (2012-2, p. 17) also states that thanks to paid search marketing, everybody can easily control costs of advertising. On the other side PPC has some disadvantages too. For example the competition is incredibly high and increasing very fast which can means increasing costs.

Social networks

Social networks create places where people can virtually meet, communicate, share pictures, videos, send messages or use applications.

Research of ebizMBA (2016) shows that the most utilized social networking sites are Facebook, YouTube and Twitter. According to statistic created by statista (2016), in the third quarter of 2016, Facebook had 1.79 billion monthly active users compare to year 2012, the number of active Facebook users had surpassed 1 billion. Active users are those who have logged in to Facebook during the last 30 days.

The number of users is still increasing. Picture 2 shows percentage of Facebook users on different continents.

Picture 2 Users of Facebook in the world

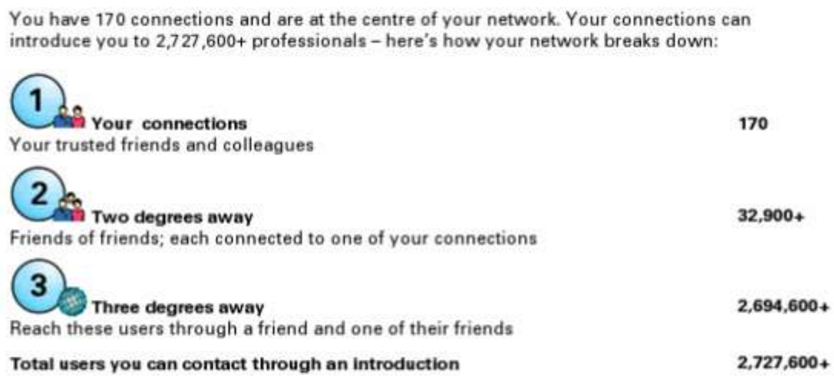
Source: socialbakers (2016)

According to the picture 2, 44.97 % of citizens in the North America are users of Facebook. The second place is occupied by Australian with 42.14 %. Nearly 30 % of Europeans uses Facebook.

Due to aforementioned statistics is clear that social networks have great potential from the marketing point of view. According to Smith, Zook (2011, p.4) thanks to social networks as Facebook or Instagram is easier, cheaper and faster to find out requests or comments of customers. Social media put customers back at the center of the organization and gave marketers a new set of tools to listen to them and to encourage them to with the brand. The same authors write that social media has become the center of many marketing strategies.

On the other side every costumer can get better control thanks to information about products, reviews or ratings. It is useful for both sides. Although not everyone realizes how many professionals can influence us. The next picture shows this problem (Picture 3).

Picture 3 Social networks influence



Source: Smith and Zook (2011)

To make it easy the picture 3 shows a situation how a user of social network who has 170 friends may be introduce up to 2.727.600 professionals. The user is a member of some kinds of social groups, he/she joins some sites and gives likes. Social network is even able to see where this user is right now. Direct marketing via social networks works on this basis.

Viral marketing

The concept of viral marketing is relatively new. Using viral videos can attract potential customers. Many companies are trying to attract customers this way, but it is not as simple as it may initially seems. On the other hand if a company knows how to do it, it is possible to achieve the desired effects, reach a large number of people with relatively low costs. According to Přikrylová and Jahodová (2010, p. 265) viral marketing is a form of communication, when communication with advertising content appears to the recipient so interesting that he or she sends it to others. It means that viral ads can spread very quickly to a large audience. This strategy is similar to word-of-mouth, which involves providing communication from mouth to mouth. This way people share good or bad information about the products. Janouch (2014, p.185) shows, that satisfied people telling good information their family and close friends, but on the other hand when they are not satisfied they tell about it everyone. It can be very tough for seller to influence all kinds of these messages. Viral message can take the form of videos, e-mail, links, text, music, games and more.

Teixeira (2012) with the colleagues from Harvard Business Review made a research on that basis were defined problems why people are not able to concentrate on the viral videos. They used infrared eye-tracking scanners to determine exactly what people are looking at when they watch video ads and then they used a system that analyzes facial expressions to reveal what the viewer's feeling.

Problems are:

1. *Prominent branding puts off viewers* - most of viewers stop watching ad when they recognize the brand who dislike. They resist, when they see a logo. The solution is to create another symbol that potential customers will not dissuade from watching but creates a relaxed atmosphere. Very good example are advertising of Coca Cola.

2. *People get bored* - this problem depends on two emotions: joy and surprise. It is necessary to generate at least one of them from the beginning of ad.

3. *People watch for a while but then stop* - this problem is related to the previous. Scientists found out that constant levels of joy or surprise don't engage viewers for a long time. To maintain viewers is needed to try to change their emotions quickly.

4. *People like an ad but won't share it - viral video must be shared*

Rothman and Miller (2014, p. 350) propose to create a parody of the already popular video as HubSpot does with Gangman Style. But not every parody is successful. Pozin (2014) wrote about qualities to make successful viral video. At first viral should be short. Mindlin (2010) made a survey for New York Times about short attention. The result of the research is that 19.4 % abandon a viral video after 10 seconds, 44.1 % abandon it after 60 seconds. It is important to put the most important, interesting, fascinating, funny or surprising message at the beginning of video. The other thing is, that the video should be upbeat. It is important to be positive and emotional than viewers should feel happy. Viral video must be actual. It is very good to use current events, meme or popular topic. The audience should understand the topic. One of the keys is engaging with viewers can lead to loyalty and interest. Answer the questions of the audience immediately. Viewers are seeking for new information. Be informative is the next way. Everybody wants to learn something new. And the last but not least important is to be inspiring. It means to create some inspiring story then one viewer can inspires another.

6.2.3 Methodology

The methodical part describes in details the methods used for research. At the begging the author chose the theme of Modern trends in internet marketing communication. This concept is quite extensive, therefore she decided to focus only on selected tools of marketing communication on the internet. The author chose tools such as SEO, social networks and viral videos. For the needs of theoretical part the author used professional literature and some current articles concerning the topic published on the internet or in the database of Academy of Sciences. Afterwards the author elaborated gained resources in the form of literature review.

For the purpose of drawing up the practical part of this thesis the concrete company was selected. It is an e-shop with branded cosmetics and perfumes. A large part of its business is concentrated in the online environment which means that the company pays a great attention to internet advertising. That is the reason why this company was chosen.

The company El nino is characterized at the begging of practical part. Information about the company were obtained from its official websites. The following sections are focused on current tools of marketing communication on the internet used by the company. Current tools of presentation are characterized thanks to semi-structured interview with marketing director, author's research and comparison with company's biggest competitors.

As a basic research method was chosen semi-structured interview (Appendix no. 1). The interview was conducted with the marketing director in January 2017. Firstly the marketing director who is responsible for internet advertising and PR was approached by e-mail and then the author visited headquarter of the company and asked director for some pre-prepared questions personally. Some other questions were added during the interview. The interview was conducted in Czech and then the author translated it to English. The main aim of the interview was to find out which tools of marketing communication the company use and how expensive and successful these methods are. The goal of the interview was also to find out who is the biggest competitor of the company. The author based on the interview created the table shows on the scale from 1 to 6 cost of each tool. Tools of marketing communication were ranked from the most expensive to the cheapest.

One of the sub-objectives of this thesis is to characterize current tools of internet advertising and PR. Function of PPC and Price comparison websites were checked based on author's exploration. Firstly, the author chose one of the best-selling products from El nino websites (Elnino, 2017) and then the position of this product was tested in the most popular searching engines. Thanks to interview with marketing director (Appendix no. 1) was found that the company pays for positioning in search engines such as Seznam, Google and Bing. The effectiveness of positioning in Price comparison websites such as Heureka, Zboží and Google/nakupy was checked in the same way (Appendix no. 2). Own exploration was implemented in January 2017. Furthermore, the author examined the company's website on social networks. Thanks to interview with the marketing director was found that the company represents itself on Facebook, Instagram and Twitter. The author focused mainly on number of followers, their reactions, timeliness of posts and content of posts. Identified information was compared with the biggest competitor notino. It was found that the company doesn’t have experience with viral marketing so the recommendations were created according to the literature.

The thesis is divided into four chapters (Introduction, Theoretical part, Practical part, Conclusion). Recommendations for improvement are issued at the end of the practical part.

6.3 Practical part

At the beginning of the practical part the company El nino will be introduced. In this section is described further development of the company from its inception to the present. The second part of the practical part is focused on methods of advertising on the internet. Tools of advertising and PR on the internet are described according to the semi-structured interview with the marketing director and author's exploration. Recommendations for improvement are summarized at the end of this thesis.

6.3.1 About the company El nino

According to the company’s website (Elnino, 2016) El nino started own business as an eshop in 2005. The company is headed by two directors from the beginning. The company is focused on wholesale and retail activities in the field of buying and selling branded perfumes and cosmetics. Products are selling thanks to websites and drug stores. The company takes place among the largest East European wholesales of branded perfumes and cosmetics. Products are stored in the stock which is more than 10,000 square meters large and is still growing. El nino is medium-sized enterprise employing approximately 150 employees. All products offered by the company on its website are in stock. Brand new goods arrives 3 times a week. All goods are delivered to the customer within 24 hours. The aforementioned information was processed according to the company website.

6.3.2 Characteristics of marketing communication tools on the Internet

El nino is an online store, which means that internet advertising and PR should place particular emphasis. The company obtains the most potential customers thanks to the presentation on the Internet. According to the marketing director (Appendix no. 1) company tries to use the most of online advertising formats such as PPC, Remarketing, and different kinds of Price comparison websites. Nowadays the ordinary company probably can not operate without a presentation on social networks. Among the other tools of marketing communication on the internet are e-mail marketing, affiliate marketing and link building.

It is clear that company has to invest considerable funds into internet advertising and PR. The Table 1 shows, which tools of marketing communication on the internet the company used and how much money the company put into these ads on a scale 1-6.

Table 1 Tools of marketing communication on the Internet

Method	Description	Expensiveness
PPC	Sklik, AdWords, Bing, remarketing	1
Price comparison websites	Heureka, Zboží.cz, Google/nakupy	2
Social Networks	Facebook, Instagram, Twitter	3
Affiliate programs		4
Link building	the obtained backlinks	5
Banner Campaign		6

Source: custom processing according to the semi-structured interview with the marketing director

Company invests the most in PPC advertising and Price comparison websites. But the largest investments does not ever mean the biggest success. According to the marketing director (Appendix no. 1) the best resource of performance marketing are Price comparison websites, PPC and Affiliate programs. That can be in contradiction with investment in PR on social networks. Despite investing more finance in social networks, they make just image of the company.

The next part of the practical section shows how selected forms of online communication look. Attention will be focused on the three most expensive tools of advertising and PR which the company used: PPC, Price comparison websites and Social Networks.

Paid Search-PPC

The company pays for the positioning in the three most popular engines on the Czech market. Czechs are mostly looking for products on the search engines of Seznam, Google and Bing. The company El nino adapt Czech internet users and therefore invests in Sklik, AdWords and Bing (Appendix no. 1). The author put one of the best-selling perfume of El nino (Elnino, 2017) in the windows of individual search engines. Pictures 5-7 in Appendix no. 2 show the positioning of product in search engines.

The red rectangle in the picture 5 Appendix no. 2 indicates the position in search engine of Google. In this case, the company pays for the highest position.

As well in the case of Seznam (Picture 6, Appendix no. 2) the wanted product appeared among the three paid ads on the top.

In Bing (Picture 7, Appendix no. 2) product occupied the fifth position, which is not bad at all. Author’s exploration showed that the company really strives for the top position in all these search engines.

Price comparison websites

Presentation in Price comparison websites is one of the most expensive and successful tool of advertising on the internet for the company El nino (Appendix no.1). The company pays for positioning on Heureka, Zboží and Google PLA. Pictures 8-10 (Appendix no. 2) show the positioning in Price comparison websites for one of the most selling goods of El nino (Elnino, 2017).

Picture 8 in Appendix no. 2 shows, that El nino did not appear among the top quality shops on Heureka. Position of El nino product appeared at lower level.

Position of product El nino is very good according to the picture 9 in Appendix no. 2. The good appeared on the third place right after competitors MALL and Parfemy SP.

According to searching on google/nakupy (Picture 10, Appendix no. 2). The product of El nino is on the fourth position.

Own research of author confirms that the company El nino pays for positioning in Price comparison websites. But the positioning of product is not ever on the first place.

Social networks

The company El nino presents itself on Facebook, Twitter, YouTube and Instagram. The marketing director (Appendix no. 1) in the semi-structured interview says that the company uses social networks just only for image building. But there are more opportunities in management of social networks according to the literature. This is not just about image. Proper management of social networks can bring a large profit, especially thanks to direct marketing.

<u>Facebook</u>

Nowadays many companies present themselves on Facebook. This is the most popular social network all over the world (socialbakers, 2016). Even El nino is not far behind others. Potential customers can find the main information about the company from FB profile of El nino (Picture 4). The attention is paid to different kinds of competition for customers, news or discounts. Information is supplemented with attractive product images. The profile of the company is updated every day. Followers react to post frequently. Almost 170.000 users follows this page (Facebook, Elnino, 2017). The number of followers is comparable with the biggest competitor notino (Facebook, Notino, 2017).

Picture 4 FB profile

Resource: custom processing according to Facebook (2017)

Twitter

Twitter is not among Czech internet users as successful as Facebook. Even though, it is necessary to highlight the company here as well. Profile of El nino on Twitter is followed by only 196 users (Twitter, Elnino, 2017). The profile is updated every month. Followers usually don't react to post. Unfortunately the response to the publication of posts is not so high. Creation of posts for Twitter is based on a different basis than it is on Facebook.

Instagram

Instagram has become among Czech internet users increasingly popular. Compare to Facebook its users are bit younger. Which means that even a profile should be focused mainly on younger audience. El nino.cz has approximately 2 300 followers (Instagram, Elnino, 2017). The page is focused on product images and their description. The profile is updated every week. The competitor notino has 18 200 followers which is much more (Instagram, Notino, 2017).

If the company uses social networks only for its image improvement, it stands well. Nowadays is possible to extract much more profits from social networks. Some suggestions for improvement will be described in the last section of practical part.

Viral marketing

According to the marketing director of the company (Appendix no. 1) they have just a very few experience with viral marketing. They tried to make some own videos on YouTube in the past. But they weren't successful. Hiring the agency for creating viral concepts is expensive. Even though the company has a profile on YouTube, which also presents on its website. Katty, counselor in skin care, makeup artist and YouTuber, has represented the company on YouTube since May 2016. Videos have an average of 8.000 views (YouTube, Elnino, 2017). The average length of video is 13 minutes, which is according to the literature too much. Most viewers can't pay attention for so long. Video is monotonous. Video content is focused on the evaluation of specific products or makeup tips. That's a field where is a high competition on YouTube. Viewership of the most well-known Czech YouTubers in this field is up to 150.000.

6.3.3 Recommendations

In this subchapter the author suggests recommendations for improvement in internet communication of company El nino. Recommendations are designed on the basis of the comparison of theory with current practice, author's exploration, comparison with the company's competitors and evaluation of semi-structured interview with Marketing director.

According to the marketing director (Appendix 1) the most influential channel of internet marketing of the company is PPC. Based on author's exploration was found out that the company strives for a good position. It is recommended to maintain this position in the future. In Price comparison websites is recommended to strengthen the positioning on Heureka and maintain the position of the other Proce comparison websites such as Zbozi and Google/nakupy.

The author recommends exploiting the potential of social networks. Social networks may not be just a tool for building image. The more followers, the higher profit. It is recommended to regularly update the sites on all social networks. The content of posts focusing mainly on news, discounts, competitions. The author recommends to monitor the comments and wishes of followers.

It is very difficult to create an attractive viral video. But our country is getting full of young people who know how to do it. The success of viral videos can ensure cooperation with young generation of YoutTubers and bloggers. It is recommended to shorten the videos and make it as interesting as possible. Then promote the videos on all social networks and thus get the most views.

6.4 Conclusion

The topic of this thesis was modern trends in marketing communication on the Internet. Author of this thesis chose the company El nino for processing the practical part. Business of this company is based on the selling branded perfumes and cosmetics in the internet environment.

The main objective of this thesis was to give recommendations for improvement of marketing communication on the internet in concrete company. Sub-objective of this thesis was to characterize selected current tools of marketing communication on the Internet. Current tools of marketing communication were characterized according to the semi-structured interview with marketing director and author's exploration. It was found that the most effective methods are PPC and Price comparison websites. On the other side the company sees social networks just only as a tool for image building. The viral marketing so far has not paid much attention from the point of company's view.

Based on the description of existing tools the series of recommendations were propose. The author recommended to maintain the highest position in the PPC and Price comparison websites, especially to strengthen the position on Heureka. It was recommended to find potential in social network - work on regular updates, get more followers and the content of posts focusing mainly on news, discounts and competitions. To improve the efficiency of viral videos was recommended to hire some young, successful YouTubers, bloggers, shorten the videos and make it as interesting as possible.

In the case that the company follows the above recommendations, it will reach high competitiveness in its field. The company will acquire more customers and thus increase its profit.

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Appendix list

Appendix 1 Semi structured interview

<u>Semi structured interview with the marketing director of El nino</u>

Question 1: Which tools of internet advertising do the company El nino currently use?

Answer: We try to use the most of online advertising formats as PPC, Remarketing, different kinds of Price comparison websites, social networks, e-mail marketing, affiliate marketing, link building.

Question 2: Do you pay for advertising in browsers? (PPC)

Answer:

Yes - in accordance with the highest costs as follows:

PPC (Sklik, AdWords, Bing, Remarketing)

Price comparison shopping (Heureka, Zboží.cz, Google PLA etc.)

Social Networks (Facebook, Instagram)

Affiliate programs

Linkbuilding (the obtained backlinks)

Banner Campaign

Question 3: How would you evaluate these channels in terms of success? Which channel affects the largest number of customers?

Answer: The best resource of performance marketing (direct orders) are Price comparison websites, PPC and Affiliate programs. Then direct traffic to our website (costumer enter domain into the command line).

On the other hand social networks are just for our image, than performance character. As well as link building. Partner links don't directly earn, however, influence and reflected in higher position references in full-text search engines (SEO)

Question 4: Do you have some experience with viral marketing?

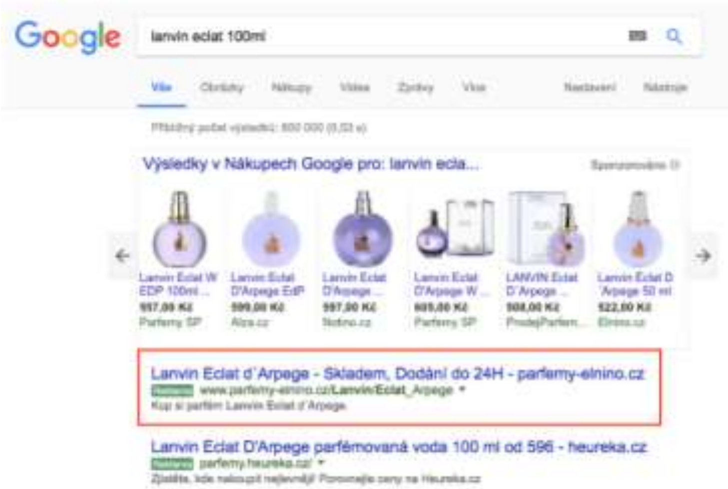
Answer: Just a very few. We tried to make some own videos on YouTube but we weren't successful. We have even demanded the agency for creating viral concepts in the past. But it wasn’t implemented because of high costs.

Question 5: Who do you think is company’s the biggest competitor in your field on the internet?

Answer: Our biggest competitor is definitely the company Notino. We have been competing with this company for many years. My aim is to strengthen the position of marketing communication on the internet and thus prevail over our competitor, at least in online environment.

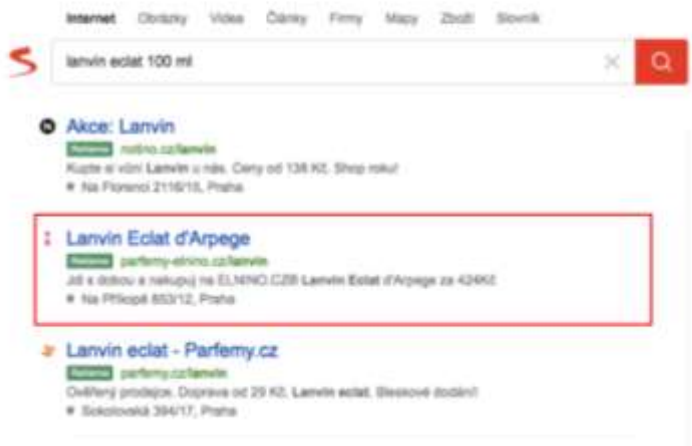
Appendix 2 Pictures

Picture 5 Advertising on Google



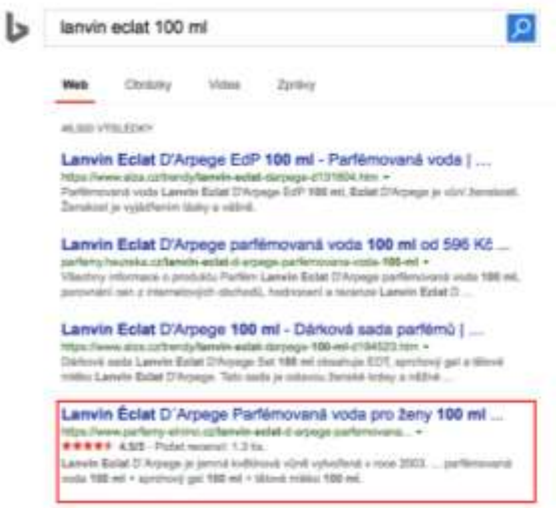
Source: custom processing according to Google (2017)

Picture 6 Advertising on Seznam



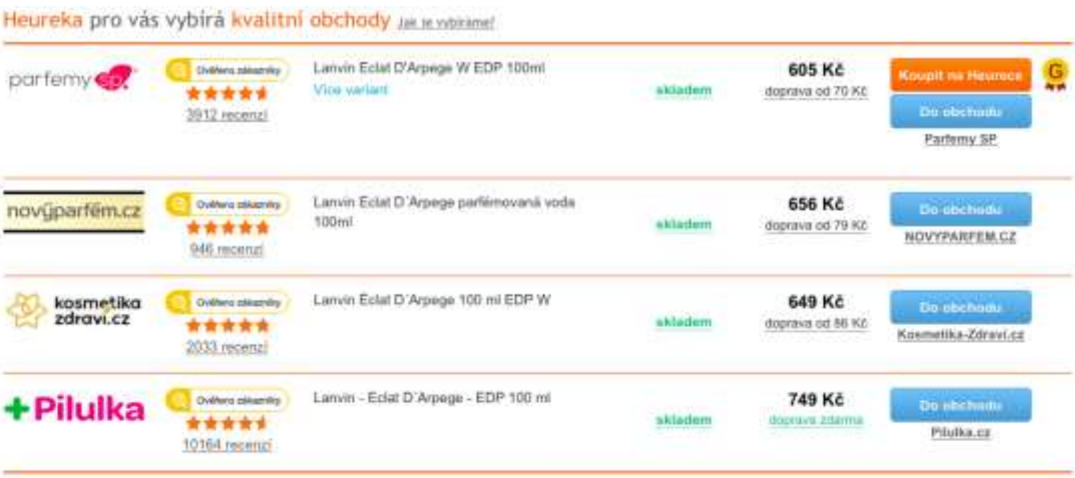
Source: custom processing according to Seznam (2017)

Picture 7 Advertising on Bing



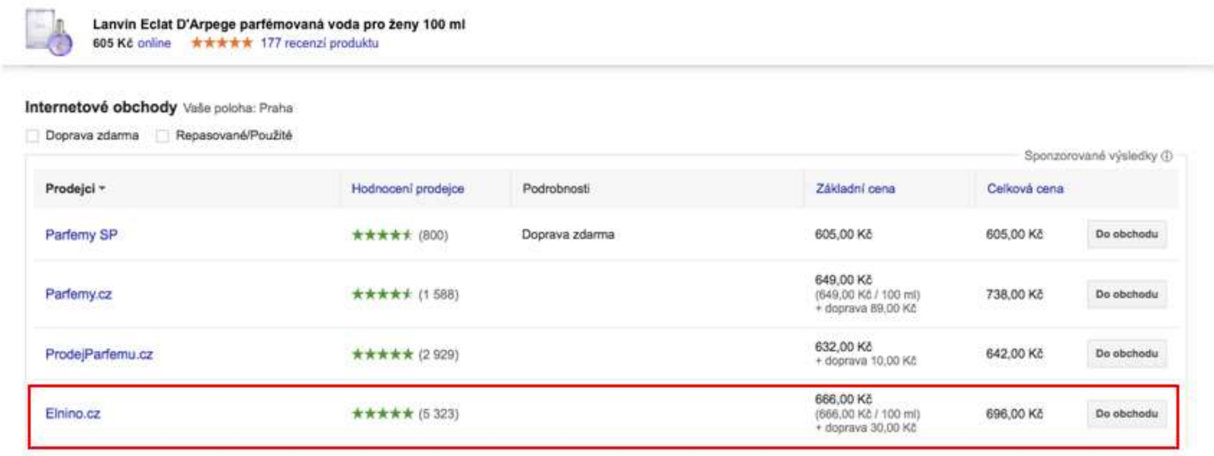
Source: custom processing according to Bing (2017)

Picture 8 Positioning on Heureka



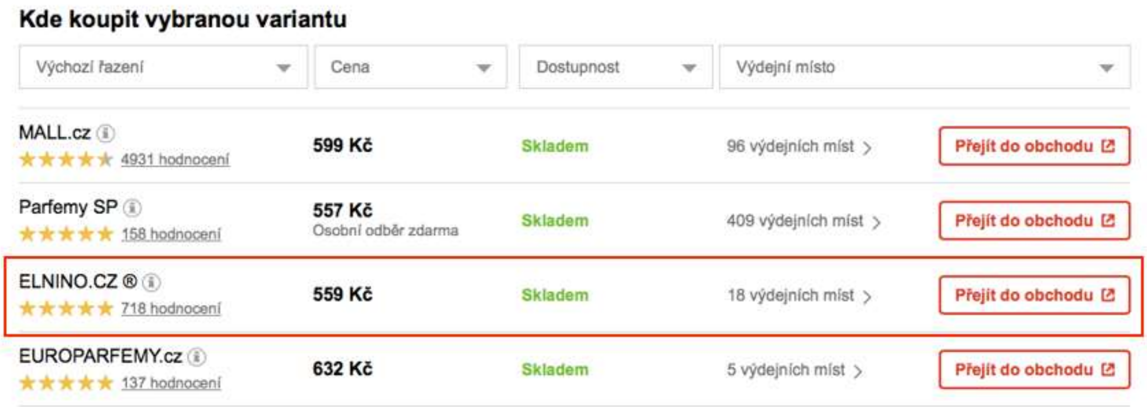
Source: custom processing according to Heureka (2017)

Picture 9 Positioning on Zbozi



Source: custom processing according to zbozi (2017)

Picture 10 - Positioning on Google/nakupy



Source: custom processing according to Google/nakupy (2017)

7. Matsiuk Dzmitry: Out-of-home advertising and its perception by Czech consumers

SUMMARY
Main objective: The main goal of the article is to determine how Czech consumers perceive out-of-home advertising and to capture their key attitudes regarding it. Partial aims are to determine with the help of specific examples, whether the representatives of Generation Y are an appropriate segment for out-of-home advertising and to develop recommendations for the sponsors who are thinking about the usage of out-of-home techniques.
Research methods: In theoretical part of the article, research around current literature was used. The practical part was based on qualitative marketing research in the form of in-depth interviews. Another method used was the comparison which was used for comparing the survey results with the avaliable research conducted in this area.
Result of research: In the case of primary research the participants of an in-depth interview had for out-of-home advertising techniques either a positive or neutral attitude. Most representatives of Generation Y liked creative out-of-home campaigns which were created with the help of new computer technologies. According to the total results of a primary survey it can be said that in general the representatives of Generation Y are an appropriate segment for out-of-home advertising.
Conclusions and recommendation: According to the results of a primary survey most of all the respondents are bothered by out-of–home materials installed on public transporation stops; describing them as really annoying and irritating. Furthemore according to the primary research out-of-home techniques matter less to women than to men. Also outdoor advertising is better recalled by male respondents. Further research results show that in most cases the respondents liked and paid attention to advertising campaings that featured new computer animation technologies and original text. The results of the survey show that modern consumers aren’t intrested in traditional outdoor materials, they want to see something new and original, even unusual, that’s why the author of the article recommends Czech market start-ups try to be original and unique, combine fresh new ideas with new technologies and think carefully about their market segment at the most suitable setting for their out-of-home construction.

KEYWORDS
Out-of-home advertising, billboard, digital dispalay, MB Ticket Poster, personal attitude.

JEL CLASSIFICATION
M30 - General M31 - Marketing M37 - Advertising

ABBREVIATIONS

LCD	Liquid crystal display
OOH advertising	Out-of-home advertising
POP	Point of Purchase

7.1 Introduction

Outdoor advertising works very well for promoting different products in specific geographic areas and is very effective for both big and small-business owners. It provides a wealth of opportunities to the seller and can create a unique signature for each. Out-of-home methods allow companies to increase their market exposure very quickly and effectively: billboards, digital displays, banners, vehicle advertising, and many other are excellent mediums to capture customers�because attention and build their loyalty. According to available research, most customers prefer and are fond of outdoor advertising, stating that this type of communication is less annoying than, for example, TV or radio ads.

Outdoor advertising is suitable for a wide variety of different products and services: restaurants, perfumes, fashion, banks, schools etc. All use it to promote their products and to achieve leadership positions in local and global markets. That is why this article focuses on key out-of-home advertising techniques.

In the Czech Republic, outdoor advertising is one of the most popular and preferred kinds of advertising. First, it’s not particularly expensive for sellers and not too annoying for customers. Some marketing research shows that most Czechs are loyal customers and do not mind being exposed to outdoor advertising.

The article describes some emerging modern trends which are used by outdoor advertising creators in Czech, British and New Zealand markets and, with the help of specific examples shows whether they might be interesting for chosen groups of respondents or not.

The main goal of the article is to determine how Czech consumers perceive out-of-home advertising and to capture their key attitudes regarding it. Partial aims are to determine with the help of specific examples, whether the representatives of Generation Y are an appropriate segment for out-of-home advertising and to develop recommendations for the sponsors who are thinking about the usage of out-of-home techniques.

7.2 Theoretical-methodological part

The theoretical part of this article describes the most important concepts related to the issue of exploitation of out-of-home advertising. Then it focusses on psychological advertising effects and describes how out-of-home techniques can influence customer’s attention and personal attitude.

7.2.1 Definition of out-of-home advertising

Shimp (2010, p. 56) introduces **out-of –home (OOH)** or **outdoor** advertising as the oldest form of advertising, with origins dating back literally thousands of years. According to the same author, OOH is also the most progressive kind of advertising…one which is rapidly growing in the global marketplace.

Jurášková, Horňák et al. (2012, p. 199) defines "outdoor" as a complex of advertising forms or promotional tools which are placed in locations with high frequency and intensity of public gathering (streets, boulevards, public transport etc.). The same authors categorize these places according to their mobility into: **movable** (advertising boards, posters, banners in city transport or air transport); and **stable** (in the form of billboards, bigboards, LCD screens etc.).

7.2.1.1 Functions of out-of-home advertising

Like all types of advertising, OOH has three main functions (Vysekalová, Mikeš, 2010, p. 20):

- to inform,
- to persuade,
- to sell.

All these functions are used during different stages of the product life cycle, but the main OOH function is to **capture** customers' attention and to stimulate impulse buying – the buying of goods without planning. Stimulators and motivators in the OOH market belong to various materials and information presentations of services or products (banners, posters, displays and many others).

7.2.1.2 Types of outdoor advertising

There are a lot of different types of outdoor advertising around us. All of them are unique and original but in this article the author focuses on such media as: **billboard and bigboard, MB Ticket Poster** and **digital screens in public transport vehicles.**

Billboard- poster or board of special design which are usually constructed near roads and trails, parks, bus stops etc. Billboards are a part of the outdoors and their usual size is of 5,1 x 2,4 m. (Jurášková, Horňák et al., 2012, p. 34). It is one of the oldest types of outdoor advertising and its main function is to capture the customer's attention very quickly and promote the recall of a particular brand (Masařová, 2014, p. 59).

Bigboard is known as a large advertising board or poster which is different from billboard by its' bigger size (9,6 x 3,6 m. or 8x3 m.) and the fact that they are usually constructed near highways (Jurášková, Horňák et al., 2012, p. 34).

In the Czech market, an increasingly popular format of OOH advertising is known as the **MB Ticket Poster.** This new form has been created and launched by the prominent Czech advertising company Mobilboard (Mobilboard, 2015).

MB Ticket Poster was launched in 2015 and can be defined as an advertising poster which is placed on both sides of ticket machines and whose average size is 28 x 27 cm. (Marketing & Media, 2016, p. 23). Currently, they can be found in 9 Czech towns – Brno, Zlín, Olomouc, Hradec Králové, Liberec, Ústí nad Labem, Karlovy Vary, České Budějovice and Pardubice.

In addition, they have been placed in selected bus and tram stops, especially in and around old town streets and squares (Marketing & Media, 2016, p. 23).

Mobilboard (2015) states that the MB Ticket Poster is not only a new product in the OOH market but also it provides an excellent opportunity to measure the estimated interference, since the exact number of realized transactions is known for every single ticket machine.

As far as **digital or LCD display** is concerned, it can be placed both inside and outside the vehicle, which creates the very strong possibility that it will be visible and will capture the customer�となる attention very quickly (Marketing & Media, 2016, p. 23).

7.2.1.3 Advantages and disadvantages of outdoor medias

Like all the other types of media, out-of-home advertising has its own advantages and disadvantages. According to Karlíček (2016, p. 56) the **advantages** are the following:

- outdoor allows the marketer to reach a broad segment of the public,
- it operates and influences customers' attention 24 hours a day,
- it allows for specific targeting activities.

Masařová (2014, p. 52) states several more OOH advantages:

- diverity of OOH forms,
- new and creative opportunities,
- wide range and high frequency of interference,
- large number of locations and geographical flexibility,
- effectiveness.

As for the **disadvantages** of OOH advertising, Masařová (2014, p. 52) considers the following items:

- limited information,
- the lack of selectivity,
- long time execution,
- limited availability of certain OOH types (notes, lows).

7.2.2 Psychological advertising effects. Definition of perception and personal attitude

Effectivness of OOH as well as any other type of advertising can be examined in different ways. Advertising creators pay attention to the following things: finding out information of product; analysis of its popularity and sales; or, for example, analysis of the personal attitude of a particular product in a local market. All this information can be discovered with the help of various marketing researches or through special experiments. Marketing practices also use differentt econometric methods. As far as psychology is concerned, advertising specialists use a very popular method referred to as *emotional measurement*. This method describes primarily such psychological terms as **perception** and **personal attitude.**

Scott, Hiatt (2016, p.1) defines **perception** as individual activity driven by the human mind and nourished through the senses, given expression in as many ways as there are people.

Another important term while talking about psychological effects of advertising should be mentioned is *personal attitude.*

Ricketts (2011, p. 494) defines **attitude** as: *"a strong belief or feeling towards people, things and situations".* According to the same, it can be either a positive or a negative feeling and is not changed easily.

Every sensation is completed by subjective factors and perceptions. Here the psychologists are talking about analytical, synthetic brain activity which can be described as a process where emotions, interests, attitudes etc. are involved (Jurášková, Horňák et al., 2012, p. 237).

In advertising, it means that producers should create a psychological image of the entire advertising message.

7.2.3 Czech customer and his personal attitude to advertising in general

According to the research of Ppm Factum organization, in general the Czechs are loyal to advertising. Factum (2016) states that most Czechs are bothered and are irritated by TV advertising which by their own words usually interrupts their favorite shows or series. This fact bothers more than 80% of the population. Furthermore, the same source states that 36% of Czech people don't like internet advertising and conversely prefer different techniques of POP materials. As far as outdoor is concerned, in general, they don't care about it and are not particularly bother by it (Factum, 2016).

Another research concerning OOH problematics was organized by STEM/MARK agency in 2016 (Simar, 2016). The research was realized with the help of online internet surveys and the total number of respondents was 511 people from the age category 15-59 years. The same sources state that, according to research, most Czechs don't like and are bothered by OOH materials in the most crowded places, for example, squares (59%) and public buildings (55%). More than 50% of the respondents admitted that they are bothered by OOH materials near highways. According to Simar (2016) least of all, Czechs care about outdoor advertising on the outskirts of the city (32%), vehicles and public transport (27%) and private lands (26%). Furthermore, the research results show that OOH techniques matter less to women rather than to men. The paradox is that, in most cases, outdoor advertising is mentioned by highly- educated male respondents and that younger respondents are a more loyal and acceptable segment for OOH (Simar, 2016).

As it is evident from the above- mentioned information, in general the Czechs are neutral to OOH advertising, but nonetheless there are some public places where different OOH materials are not accetable by Czech people (squares, walls of public buildings, OOH materials along highways).

7.2.4 Generation Y and its characteristics

Jandourek (2012, p. 94) defines *generation* as a large group of people who have more or less the same preferences and live their lives in the same cultural and historical conditions.

In marketing practice belonging to a particular generation is a very important factor for consumer behavior and determining buying behavior (Vysekalová et al., 2011, p. 236).

The first global and the most attractive generation for marketing creators is Generation Y. Kotler, Keller (2013, p. 257) describes Generation Y or Millennials as the first "global" generation of group of young people born between 1979- 1994.

It's the first generation which has grown up in stable economic conditions and which was surrounded by all modern technologies (Vysekalová et al., 2011, p.261).

General characteristics of Generation Y

Kocianová (2012) states the following characteristics of Generation Y: *self-confidence, higher standards of living, feeling of more social security, the importance of family relationships.*

Kopecký (2013, p. 224) adds that Millennials are also very active, enjoy various challenges and are not afraid of life obstacles. For marketing creators, this generation is attractive because the Millennials are very independent and easy manipulated (Kotler, Keller, 2013, p. 258).

7.2.5 Methodology

In the theoretical part of the article, research around current literature was used. The theoretical part also contains an analysis of secondary sources, which are prepared by literary research. The actual text of the article mainly was created by using such sources as publications and monographs. The most important authors whose publications have been utilized are: Jurášková, Horňák, Kotler, Keller, Karlíček, Masařová. Other sources include gathered available information from already existing research on the topic of out-of-home advertising and its perception by Czech consumers, for example, marketing research by Ppm Factum and STEM/MARK agencies. The results of this secondary research are used for benchmarking the results of the primary survey, which is introduced in the practical part of this article.

The practical part was based on qualitative marketing research in the form of in-depth interviews. The methodology of the in-depth interview has been chosen by the author mainly because it is one of the most universal methods which is used for comparing qualitative data in a short period of time. Also it provides a very good opportunity to find out personal opinions and respondent's attitudes concerning a particular issue. By Feinberg, Kinnear (2013, p. 219) *depth interview* is defined as an unstructured personal interview that uses extensive probing to encourage a single respondent to be openminded, to feel free and to express detailed beliefs and feelings on a topic. The same authors state that the main purpose of this technique is to transcend the respondent's personal emotions, discovering more reasons underlying the respondent's personal behavior and attitudes.

The respondents were addressed by personal email. In total, there were **8** respondents: 4 women and 4 men of the age of 20-30 years of age agreed to participate in the in-depth interview. All the respondents are college graduates and are members of Prague dancing school "Jazz Hand". The interview was conducted in the following manner: each of the respondents were shown 4 videos with different OOH advertising campaigns launced in the Czech, British and New Zealand markets ("Real-time weather reports" by a New Zealand MetService company; "Child Rescue Alert for Missing People" by a famous British charity organization; "Prima Fresh" by Czech OOH producer Bus TV; "MB Ticket Poster" by the Czech agency Mobilboard). Each video was shown once, after which the interview was conducted. The answers were recorded on a dictaphone.

7.3 Practical part

The main goal of the practical part is to leverage the qualitative method of in- depth interviews to determine how the Czech consumer perceives outdoor advertising and what attitudes this perception takes. Partial aims are to determine with the help of specific examples, whether the representatives of Generation Y are an appropriate segment for out-of-home advertising and to develop recommendations for the sponsors who are thinking about the usage of out-of-home techniques.

The respondents were divided into two age categories: *Category 1 (20-25 years of age) and Category 2 (25-30 years of age).*

Research questions:

Q1: What is the attitude of the respondents towards advertising in general?

Q2: How do the respondents perceive out-of-home advertising?

Q3: What is the personal attitude of the respondents towards new trends and techniques which are becoming more and more popular in the global OOH market?

7.3.1 Information Summary

For the implementation of the in-depth interview, four questions were selected. The following text describes and analyzes in-depth interview results.

Answers to the questions

Q1: What do you think about advertising in general?

Answers

Age category 1 (20-25 years of age)

According to the results of in-depth interviews in general, the respondents of this age category toward advertising are very receptive to it. This can be explained by the fact that they are surrounded by a great number of ads from their very early childhood. In most cases, they see advertising as a common aspect of modern life and are not bothered by it. In response to the above-mentioned question, all four respondents admitted that, in general, they don’t have any negative emotions and are not opposed to it.

Age category 2 (25-30 years of age)

Older respondents are, on the contrary, more skeptical towards modern advertising messages and general communications with the customer. While answering this question, two men admitted that they are super- saturated from modern advertising and very often find it stupid and not sexy. According to other personal answers, women are more receptive towards advertising than their male counterparts. One lady said that she likes and is fond of advertising campaigns which are present in the Czech market these days. As an example, she admitted that advertising campaigns of such brands as T-mobile, McDonalds and Mercedes Benz are well done. The other woman said that she doesn’t have an opinion about advertising at all.

In most cases, the respondents of both age categories were talking about TV and print advertising. During the interview, none of the respondents mentioned outdoor advertising at all.

Results

The above-mentioned information leads to the following conclusions: the respondents of both age categories are quite open and receptive towards advertising. Older respondents are more skeptical and critical than their younger counterparts. Women from both age categories are less critical towards advertising then men, finding it quite interesting and perceiving advertising as commonplace in modern life.

Q2: What is the first thing that comes to your mind when you hear the word outdoor or out-of- home advertising?

Answers

Age category 1 (20-25 years of age)

All the respondents of this group, at least once in their lifetime, have heard the word outdoor (some of them saw it in different magazines, newspapers or on the internet; others have heard it from their friends, relatives or work colleagues). While answering the above-mentioned question, most of them first mentioned or started to talk about the following OOH types: billboards and bigboards near roads or highways. One respondent (male) was talking about posters and banners on the walls of buildings or blocks of flats, at bus or tram stops and in metro stations. No one mentioned digital screens or LCD displays, which was quite surprising and unexpected for the interviewer. Women's answers were more detailed. Men's replies were very brief, as in "one word" answers, such as "poster", "bigboard", and "banner".

Age category 2 (25-30 years of age)

The respondets of this age category were more concrete than their younger colleagues. Most of them started to converse about new advertising technologies like: LCD displays or digital screens in public transport. One man mentioned digital billboards and digital banners. Women in most cases mentioned OOH techniques in public transport; mentioned that from their point of view it is a really good idea from the advertising creators' side. This could make trips more interesting and help to "kill" their travel time. One woman (30 years of age) has never heard about OOH advertising and didn't have any idea about it.

Results

The above-mentioned information shows that more or less all the respondents from both age categories have a correct impression about OOH advertising. The most known outdoor types among them are: classical billboards and banners and, in the case of older respondents, such new OOH tecqniques as LCD displays, digital screens in public transport, and digital billboards. One respondent has never met with the term of outdoor and had no idea about this type of advertising.

Q3: Which of the videos do you like the most and why?

Answers

Age category 1 (20-25 years of age)

With this age category, most all of the respondents liked video no 1 (an OOH advertising campaign entitled "Real-time weather reports" by a New Zealand MetService company). Both women and men enjoyed the creativity of this campaign and liked its principal idea of "making simple things original". Everyone remembered the simplest idea of billboard "empty screen" (see Appendix 2, picture 1). All the respondents mentioned this video as the best one. In second place, there was a tie for most creative and interesting video advertising between OOH campaign no 2 "Child Rescue Alert for Missing people" by a famous British charity organization and campaign no 3 "Prima Fresh" by Czech OOH producer BusTV (see Appendix 2, pictures 2 and 3). Here, women mostly mentioned the "Prima Fresh" campaign and its interactive digital screens in public transport. This can be explained by women's higher interest in gastronomy in general. Men conversely enjoyed the British campaign of "Child Rescue Alert for Missing people"; in their mind, this social advertisement is a really good example for advertising creators and many companies on how to make very good, effective and, by the way, useful advertising which will evoke positive emotions, feelings and attitudes.

As the less interesting and least effective OOH campaign, according to this age category, was "MB Ticket Poster" campaign no 4 by the Czech agency Mobilboard (see Appendix 2, picture 4). Three of four respondents mentioned this advertising campaign as being useless and ineffective, quite annoying and not sexy. From their point of view, MB Ticket Poster won't be successful in the Czech market with customers. They don't think that this campaign will be accepted by the Czechs and make profit for the producers. One woman stated that on the whole the idea of "MB Ticket Poster" is quite interesting and that it is something new in the Czech market, but she also agreed with her colleagues about its' ineffectiveness among the Czech customer. She added that she also doesn't believe that it will be a success.

Age category 2 (25-30 years of age)

All the respondents of this age category chose, as the best advertising campaign, that of campaign 2 "Child Rescue Alert for Missing people" (see Appendix 2, picture 2). Both women and men cited its' creativity and deep sense of the message. Second place was given to the OOH campaign of "Real-time weather reports" by New Zealand MetService company (see Appendix 2, picture 1). Like their younger colleagues, the respondents found the creativity and originality of this campaign to be refreshing. Everyone liked the main idea of its'message of "making simple things original". Also, was mentioned campaign no 3 "Prima Fresh" by Czech OOH producer Bus TV (see Appendix 2, picture 3). Here, both women and men mentioned the "usefulness" of this advertising. No one liked the idea of campaign no 4 "MB Ticket Poster" by Czech Mobilboard. All of the respondents found it to be the most annoying and by the way "useless" of all the advertisements viewed.

Results

Most of all the respondents liked and mentioned new outdoor technological trends which make classical advertising campaign more attractive and sexy. They also liked the idea of "making simple things original", as is seen very well from the example of the empty billboard screen from "Real-time weather reports" advertising campaign launched by New

Zealand MetService company. Another thing which the respondents liked is the use of computer technologies in advertising companies' services (for example "Prima Fresh" campaign by Bus TV in collaboration with Prima TV channel). From both age categories, the respondents indicated that they don't like posters at bus or tram stops and think that it will not be a good idea to put posters on ticket machines, as was suggested and already executed in some Czech towns by the local company Mobilboard. Both women and men from both age categories are sure that it is too much and, in addition, very annoying to Czech consumers. Also, from the above-mentioned information, we can see that most of the respondents respect and are interested in social advertising campaigns. This fact is confirmed by their positive reaction to "Child Rescue Alert for Missing people", a social OOH advertising campaign by a famous British charity organization.

Q4: What do you think: which OOH market (British, New Zealand or Czech) is more attractive, interesting and sexy?

Results

The respondents' answers to the above question were almost the same; therefore, the interviewer decided not to describe in detail the answers of each respondent. All the respondents gave their preferences to the British or New Zealand OOH markets, saying that they are more interesting, sexy, attractive and fashionable. From their point of view, Czech advertising creators should follow advertising campaigns from their colleagues from abroad, try to cooperate with each other, and try to be more original and creative.

7.3.2 Summary and Recommendations

As mentioned in the theoretical part of the article (see p. 4) according to the secondary research of Ppm Factum organization (2016): in general, Czechs are loyal to advertising. As far as outdoor advertising is concerned, in general, they don't care about it and are not particularly bothered by it (Factum, 2016). In the case of primary research the participants of an in-depth interview had for OOH advertising techniques either a positive or neutral attitude. Most representatives of Generation Y liked creative OOH campaigns which were created with the help of new computer technologies.

According to other research organized by the STEM/MARK agency in 2016, most Czechs don't like and are bothered by OOH materials in the most crowded of places (Simar, 2016). According to the results of a primary survey most of all the respondents are bothered by OOH materials installed on public transportation stops; describing them as really annoying and irritating. Furthermore, according to the primary research OOH techniques matter less to women than to men. Also, outdoor advertising is better recalled by male respondents.

Further research results show that in most cases the respondents liked and paid attention to advertising campaigns that featured new computer animation technologies and original text. Modern consumers aren't intrested in traditional OOH materials like billboards or banners on building walls. Rather they want to see something new and original, even unusual, that's why the author of the article recommends Czech market start-ups follow these rules when thinking and creating their OOH advertising campaigns:

1. be original and unique,

2. combine fresh new ideas with new technologies,

3. make simple things original and unforgettable,

4. think carefully about your market segment and the most suitable setting for your OOH construction.

Following these simple basic rules will make your OOH advertising campaigns more attractive and will capture your customer’s attention quickly; helping you take a leadership role in the market.

7.4 Conclusion

Outdoor advertising works very well for promoting different products in specific geographic areas and is very effective for both big and small-business owners. It provides a wealth of opportunities to the seller and can create a unique signature for each.

Out-of-home methods allow companies to increase their market exposure very quickly and effectively. It is suitable for a wide variety of different products and services: restaurants, perfumes, fashion, banks, schools etc. All use it to promote their products and to achieve leadership positions in local and global markets.

In the Czech Republic, outdoor advertising is one of the most popular and preferred kinds of advertising. First, its not particularly expensive for sellers and not too annoying for customers.

The main goal of the article was to determine how Czech consumers perceive outdoor advertising and to capture their key attitudes regarding it. Partial aims were to determine with the help of specific examples, whether the representatives of Generation Y are an appropriate segment for out-of-home advertising and to develop recommendations for the sponsors who are thinking about the usage of out-of-home techniques.

In the case of primary research the participants of an in-depth interview had for OOH advertising techniques either a positive or neutral attitude. Most representatives of Generation Y liked creative OOH campaigns which were created with the help of new computer technologies.

According to the results of a primary survey most of all the respondents are bothered by OOH materials installed on public transportation stops; describing them as really annoying and irritating. Furthermore, according to the primary research OOH techniques matter less to women than to men. Also, outdoor advertising is better recalled by male respondents.

Further research results show that in most cases the respondents liked and paid attention to advertising campaigns that featured new computer animation technologies and original text.

Modern consumers aren’t intrested in traditional OOH materials, they want to see something new and original, even unusual, that’s why the author of the article recommends Czech market start-ups try to be original and unique as much as it is possible, combine fresh new ideas with new technologies, think very carefully about their market segment and the most suitable setting for their OOH construction.

According to the total results of a primary survey it can be said that in general the representatives of Generation Y are an appropriate segment for OOH advertising.

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Appendix 1 In-depth interview

Question 1: What do you think about advertising in general?

Age Group 1 (20-25 years of age)

Answers:

Respondent 1 (female): I don't care about advertising. I take it as a part of our life. Sometimes advertising can even assist me in some ways and in most cases I believe in it. I think advertising in our country is developing. Nowadays there are quite a lot of really good and creative adverising campaigns around us.

Respondent 2 (male): I'm not bothered by advertising. In most cases I'm ignoring ads, but I'm not against them. If they show us something interesting and attractive, for example on TV- why not?

Respondent 3 (female): My personal attitude to advertising is positive. I don't think we should care about it. Advertising is just a part of our life. I think we should care about more global serious problems like: war, killing of animals, homeless people etc.

Respondent 4 (male): I'm not against smart advertising, but I really hate stupid and disgusting ideas.

Age Group 2 (25-30 years of age)

Answers:

Respondent 1 (female): I'm not against creative and smart ads and in general I'm not bothered by advertising. I think it is just a common thing of our everyday life. Some of ads are really good and interesting the others are just stupid and disgusting. We always face with "white" and "black", good and bad things in our life. The same can be said about advertising business, I think.

Respondent 2 (male): In my opinion, most Czech advertising campaigns are really exaggerated, disgusting sometimes even stupid. I don't believe in them. I always care about advertising content.

Respondent 3 (female): I'm really intrested in advertising. I'm always intrested to know about things that are new and up to date and I usually stay very close to new things or different inovations. Advertising campaigns always help me to get information about new products and I really like it. In my opinion, these days there are quite a lot of really good and creative ads in the Czech market. I appreciate the ideas and creativity of T-mobile, Mcdonalds and Mercedes Benz campaigns. They are just amazing!

Respondent 4 (male): I will be very critical. To my mind, in our country advertising is really stupid, disgusting, not sexy and sometimes even immoral. Another thing is British or Scandinavian advertising. I travel a lot and I have something to compare. That's all, thank you for your question.

Question 2: What is the first thing that comes to your mind when you hear the word outdoor or out-of- home advertissing?

Age Group 1 (20-25 years of age)

Answers:

Respondent 1 (female): I've heard this term from my friend who is studying advertising at University. She explaned me what types of advertising it includes and described the whole process a little bit. If to speak about my own association, the first thing which is coming to my mind when I hear this term is a billboard or huge bigboard near the road or highways... like in American movies, you know (laugh).

Respondent 2 (male): Billboards and bigboards near roads.

Respondent 3 (female): I've read somewhere about out-of-home advertising... It was in a book or in a magazine... Actually it doesn't matter now. I remember that it includes such advertising types like: billboards and bigboard, banners... something like this.

Respondent 4 (male): I have an association with different banners and big posters on the walls of buildings.

Age Group 2 (25-30 years of age)

Answers:

Respondent 1 (female): Well, the first thing that comes to my mind is probably that digital screens in our public transport. These days they become more and more popular: a lot of busses and trams are equiped by them. I must admit I like it very much. It makes my trip more enjoyable and actually faster.

Respondent 2 (male): With "outdoor" I have the following associations: LCD displays and digital screens in public transport.

Respondent 3 (female): Sorry, but I don't know what it means.

Respondent 4 (male): For me "outdoor" is associated especially with billboards in the cities and digital banners.

Question 3: Which of the videos do you like the most and why?

Age Group 1 (20-25 years of age)

Answers:

Respondent 1 (female): Most of all I liked the idea of that New Zealand company about "Weather reports". Their "empty screen" idea is so simple, but very interesting and original. Also would like to admitt "Prima Fresh" campaign- very nice idea, to my mind. Like every woman or a girl I'm interested in cooking and for me this campaign will be very usefull. That "Missing Child" or "Missing someone"... I don't remember the exact name of this campaign is also very good. Social ads are also good and very emotional. MB Ticket Poster... Maybe a good idea and some people will like it, but don't think it will have success in Czech market. To me it's quite annoying.

Respondent 2 (male): I liked videos no 1 and 2: "Weather reports" from New Zealand and that British one about "Missing children". Simple things sometimes lead to the main possitions and MetService company demonstrated this once again on the example of really "cool" campaign. Campaign about missing people is very "deep" and serious. I appreciate such ideas, I like social advertising. MB Ticket- no. Didn't like it at all. This campaign is irritated and annoying.

Respondent 3 (female): Campaigns about weather reports and our "Prima Fresh" are really good. I like them very much. The idea of Prima TV is very nice, especially for us-women (smile). Also it can make our trips more interesting and enjoyable. Advertising about "Missing People" is very nice with perfect plot and idea. MB Ticket idea is not for me, quite stupid I think. It won't be successful in our country.

Respondent 4 (male): Most of all I like "Missing people" or "children" idea; weather idea (that video no 1) is also very nice. I like quite simple things they are not disgusting and are not disturbing. Prima's screens in public transports are also quite interesting. Posters on ticket machines are not my cup of tea.

Age Group 2 (25-30 years of age)

Answers:

Respondent 1 (female): I think that social British advertising about missing children is the best one. It has deep sense, creative idea, nice picture. My no 2 is New Zealand campaign about real weather reports: creative, simple, sexy. Must admit "Prima Fresh" campaign, Think it could be very usefull for both women and men. MB Ticket Poster?- No, very annoying!

Respondent 2 (male): I like all the campaigns except MB Poster. If I have to choose the best one, definitely it will be the British charity campaign. It's Amaizing!

Respondent 3 (female): My top is the following:

1. "Missing people" campaign,
2. "Weather reports" ad,
3. "Prima Fresh",
4. "MB ticket Poster".

The first and the second one are just amaizing! Love them! Prima Fresh- not bad. MB Poster... I don't know actually.

Respondent 4 (male): I like social ads so for me the best one is that British charity campaign. Deep sense, interesting, sexy. "Empty" screen idea from New Zealand is also very nice. Our "Prima Fresh"- not bad, could be useful for all the passengers. MB Ticket Poster? - "No" from me, very borring.

Question 4: What do you think: which OOH market (British, New Zealand or Czech) is more attractive, interesting and sexy?

Age Group 1 (20-25 years of age)

Answers:

Respondent 1 (female): I think fifty-fifty. To my mind, all British, New Zealand and Czech OOH markets are quite interesting and attractive.

Respondent 2 (male): In my own opinion, British OOH campaigns are the most sexy.

Respondent 3 (female): British campaigns are more attractive and sexy, but I must admit that Czech OOH market is also developing these days and is becoming more and more interesting. That campaing from New Zealand you've shown is also really good.

Respondent 4 (male): British advertisings are definitely better than ours.

Age Group 2 (25-30 years of age)

Answers:

Respondent 1 (female): I think all (Czech, New Zealand and British) OOH markets are quite good and interesting.

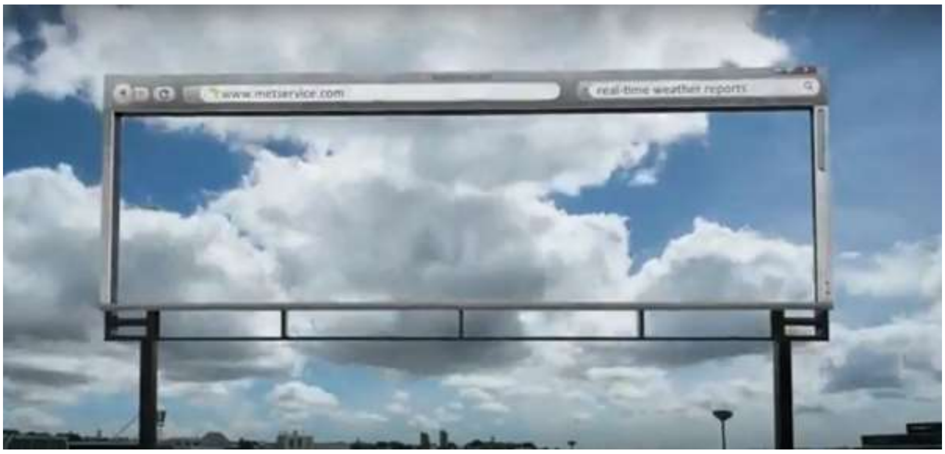
Respondent 2 (male): Definitely British OOH campaigns.

Respondent 3 (female): I think British OOH campaigns are more fashionable, sexy and interesting than ours. New Zealand are also sexy.

Respondent 4 (male): British OOH campaigns are the best in Europe!

Appendix 2

Picture 1 Real-time weather reports



Source: MetService (In: YouTube, 2013)

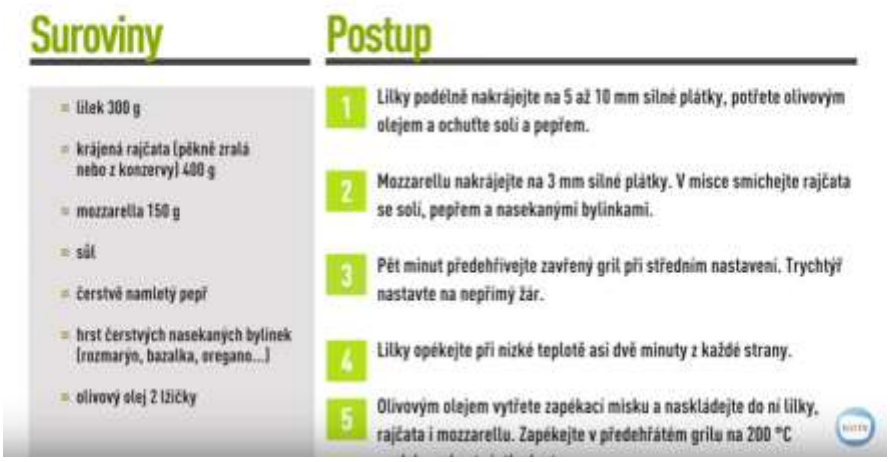
Picture 2 Child Rescue Alert for Missing People

Source: Missing People (In: YouTube, 2016)

Picture 3 MB Ticket Poster

Source: Mobilboard (In: YouTube, 2015)

Picture 4 Prima Fresh recipes



Source: Bus TV (In: YouTube, 2015)

8. Medlenová Martina: Business innovations in selected company XY

SUMMARY
Main objective: The main goal of this paper is to offer recommendation of selection devices for the new picking method on the picking department. One of the main requirements for these devices are to be cost efficient, the realistic productivity and the accuracy of the operators.
Research methods: The basis for this seminar paper was the collection of data from foreign and domestic literature sources. The author used internal documents to obtained the knowledge of new picking method, the future strategy and plans and the market researched around order picking technology to be able to did the preselection of the devices. She created a test of devices, which took 10 working days. For the test was selected 12 picking operators. The test aimed to test the productivity of operators and their error rates of used of preselected devices. The author was able to analysed the results and data and used these results to provide recommendation of the new devices.
Result of research: After an in-depth market research and with the help of consulting company that specializes in Order picking technology has got shortlisted 3 devices. Essential criteria of selection were simple option of integrating in-house system to these devices. Also, one of selection criteria was user friendly device for operators to be able to keep maximum performance and to be able improve accuracy during picking process, easy way for training of new workers and temporary users, next one ergonomic standards for operators and the last one cost per devices. The Cost of devices was provided by business partners. Devices for the test were RF Handled terminal Motorola 9290, WT41N0 RF handled terminal, Vocollect Talkman A730. The test took place over a period of two working weeks (10 days) and during two shift operation. The test attended 12 selected operators, who tested these devices during daily operation, but devices were prepared by IT specialist to work in testing environment for new in-house system. The results of the test were following: **RF Handled terminal Motorola 9290** have had a result of 191 units per hour from the test. The disadvantage of the device was shown that the operators do not have free hands during picking process and equipment to constantly laid on pick trolley. Whereas during the process must scan each barcode on picked products and their error rate was at 0,2% of the total picked units. The price of one device is 1100 Euros and in purchasing the required 40 units for the whole department would pick expense amounted to 44,000 Euros. In terms of future growth strategy and brand requirements of 141 devices, the total cost amounted to 155,100 Euros. **WT41N0 RF handled terminal** have had a result of 196 pieces per hour. Error rate was calculated at 0.05% of the total picked units. As one of disadvantage appears to be the weight of locking sleeve placed on the pickers forearm and the second one is solution for

cleaning method of the locking sleeve. Weight of devices is 300 grams including batteries. The cost of device is 1,850 Euros and 40 for the number of required equipment, the total cost 74,000 Euros. In terms of future growth strategy and brand requirements of 141 devices, the total cost amounted to 260,850 Euros.

Vocollect Talkman A730 have had a result of 201 units per hour. Unfortunately, voice method of picking rates will be reduced if the operator has to conduct too much dialogue with each transaction, if the check digits at the bin location are too long, if data capture is required, or if poor slotting is in place. It is precisely for these reasons in test scores higher error rate and the 0.3% of the total picked units. The cost per unit is 3890 Euro and the required number of 40 devices, which means that the total costs amount to 155,600 Euros. In terms of future growth strategy and brand requirements of 141 devices, the total cost amounted to 548,490 Euros.

Conclusions and recommendation:
The author created following recommendation based on all these aspects for the distribution centre XY. Recommendation of selection devices for new picking method is device with name RF Handled terminal Nokia 9290 with additional Bluetooth finger scanner. Author recommended this device because the cost of combination these 2 devices still lower than others tested. The cost of devices is 1,770 Euros. Results of productivity were not very good, but author`s advice is to add Bluetooth fingers scanner and used these devices together. The average of productivity is 191 units per hour. The author thought, that the combination of these devices could probably hit the average of productivity more than 196 units per hour. Also, accuracy of operator will be better, if they will have free hands. Current error rate is 0,2% from total picked units. Author tries to show benefits of new devices for order of picking technology for the company and it was the reason, why author was personally involved of this innovation.

KEYWORDS

Innovation, technological change, choice of technologies, innovation processes

JEL CLASSIFICATION

O330, O310

8.1 Introduction

Nowadays, the world can be considered much faster than in the past. Everything is developing at a fast pace, especially in the fields of science and technology. Services and products have higher quality than ever before. People have different requirements in terms of the product quality and services offered. They want different products and other services, still expecting something new, better, surprising, but mostly different. What currently leads companies to the same point of view is not only focus on maximizing profit strategy, but also to find new ways to stay competitive on the global market. If competitiveness depends on the ability to adapt and develop or adopt new technology, products, services, processes, understand the dynamic nature of industrial innovation, change is essential for survival and success.

Companies are interested in investing in technology to improve the productivity and accuracy of a selected distribution centre. One of these investments is building a new distribution centre and implementing a new in-house management system into this new distribution centre. These changes raise questions regarding new order picking technologies. The new system will allow the use of 2 different types of picking methods and based on the choose picking method the distribution centre will also need to choose a device.

The main goal of this seminar work is to offer recommendation of selection devices for the new picking method on the picking department. The distribution centre has certain requirements that will help to author to meet that goal. One of the main requirements for these devices are to be cost efficient, the realistic productivity and the accuracy of the operators. The author will use internal documents to obtain the knowledge of new picking method, the future strategy and plans and the market research around order picking technology to be able to do the preselection of the devices. After the preselection, tests for each device will be created and notes of the results of these tests made. The author will then be able to analyse the results and data and use these results to provide recommendation of the new devices.

The seminar work is split on to 4 parts: Introduction part, Theoretical and methodological part, Analytical and practical part and Conclusion.

The first part focuses on the treatment of theoretical knowledge gained by studying literature. The author uses basic definition of innovation, splitting of innovation and the method of implementing the innovation to the business. The Analytical and practical part focuses on the introduction of the company and the explanation of the differences between the current picking method and the new picking method. Following this step the author describes the tests results of the selected devices and based on the results, he creates a recommendation. The Conclusion is the last part of the seminar work and here the author evaluates and explains the results.

8.2 Theoretical and methodological part

8.2.1 Definition of Innovation

Today, innovation is often inflected concept and is often referred to as an absolute necessity to allow the company to move forward and survive. Karlgaard (2014, p. 2) literally describes this situation as "Upgrade or Die". For businessmen, it is important to remember that innovation should not be just a one-off exercise but a continuous process, otherwise the company will not be successful, or figuratively speaking "die". According to Drucker (2010, p. 35), innovation is the specific tool of entrepreneurs, the way in which they can use change as an opportunity for new products. Innovation can be considered as a discipline that can be learned and practiced. Entrepreneurs should try to look for sources of innovation and opportunities for innovation. Drucker (2010, p. 35) also mentions that innovation is the source. Any "thing" can`t work as a source, unless it can`t be somehow used, and thus shows the economic value. Innovation is a specific business tool, create resources with the potential to create wealth. Weiss and Legrand (2011, p. 306) are of the opinion that innovation is applied creativity that create value for society. However, it is necessary to strictly divide between creativity and innovation, since it may not always lead to innovation and can be counterproductive.

Weiss and Legrand (2011, p. 306) are concerned with innovation as a process, but mention the fact that many authors see innovation only as a result. Muller-Prothmann (2014, p. 7) argues that creative ideas or new findings are far from innovation. Innovations arrive from ideas only when these ideas are realized in the form of new products or processes to use and are able to penetrate the market. Innovate means to generate new ways of using the previous knowledge and ideas.

8.2.2 Splitting of innovation in the business

Current knowledge about the innovation presented in various literary sources distinguish four basic types of innovation, but Novotný and Suchánek (2007, p. 172) supplement this list with combined innovation that characterizes as a combination product and process innovation. It is to be understood that the introduction of a new product is associated with the introduction of new technologies.

Product innovation - Bessant and Tidd (2007, p. 462) define it as a positive change, which is aimed at creating an entirely new, or improving already existing product. This change affects the performance characteristics that the product contains. Ar and Baki (2011, p. 176) named as product innovation as conducting minor changes to existing products in the interest of customer satisfaction.

Process innovation - Ar and Baki (2011, p. 172) argue that this type of innovation includes new and significantly improved production methods or supply and distribution systems. Franková (2011, p. 142) involves significant changes in specific techniques, equipment or software that are designed to improve quality, efficiency and flexibility of production, supply activities or to reduce the environmental or safety risks.

Organizational innovations - Tiwari says on the online link (2008) that it means the introduction of a new organizational method in business practices and other organizational changes in the company. The aim of such innovation can reduce transaction and administrative costs and reducing supply costs.

Marketing innovation - based on Franková (2011, p. 142) the introduction of new or significantly improved designs or sales methods to increase the attractiveness of the product or service or enter on the new markets. Marketing innovations include significant changes in the way trade in goods and services, including design changes and packaging.

8.2.3 Business Process Innovation

The company XY mentioned in their internal procedures (Company XY, 2016) the 2 main possibility of used method for implementation of innovation in the Distribution centre. One of the method has composed of 5th phases.

Košturiak and Cháľ (2013, p. 55) are of the opinion, that this process can be defined as a set of activities, which change the inputs and outputs. In this innovation type is very important to process a customer order in the company as quickly as possible with minimum cost.

The longer the order is delayed in the business processes, the more the cost increases, and the longer customers wait for the ordered product or service, the later the company will receive the payment from the. Therefore, the aim of the business processes is to get the product or service to the customer: in due time, quality, quantity and with reasonable costs. Tureková and Mičieta (2010, p. 111) complement this idea that process innovation is a manifestation of purposeful human seek and the positive changes in methodology and process innovation is divided into basic stages. Each stage of the process consists of the basic steps of the process. The individual steps are described activities that are performed in a certain sequence. Košturiak, Boledovič, Krišťák and Marek (2010, p. 16) specify **the preparation phase**, which includes the choice of the object solutions, provision of research team and eventually the collection of information. **In the analytical phase** with sufficient precision the objective to be achieved. First is to analyse structure and parts of the object, the result of this analysis is the shared vision of team members about the object, its structure and links to elements and systems. The next step is to analyse the functions and results of the analytical phase an in-depth knowledge of a subject to find out what the purpose of the different elements of the whole. Tureková and Mičieta (2010, p. 111) define **innovative phase** in the creation of new solutions through creative thinking team, and the result of **evaluation phase** is to create the best options and determine the optimal variant being tested and to analyse its feasibility. Finally, according to Košturiak and Chál' (2013, p. 56) **the implementation phase** is the final step in the process of innovation to implement the optimal solution. This phase consists of the preparation and presentation of the team, a decision on the implementation of the chosen solution and the actual implementation.

It means the innovation process goes through all stages of the process in case of major innovation changes. On partially innovative changes it might happen that the innovation process is purposefully reduced to phases, which are necessary to ensure relevant specific innovation. Similarly, the specific conditions in which an ongoing innovation process may lead to a reduction or vice versa, to expand the contents of some of them. Also, there is an effort to accelerate the innovation process, for example, through organizational aspects of the process, allowing for a maximum overlap of the different phases in time.

8.2.4 Methodology of work

The basis for this seminar work was the collection of data from foreign and domestic literature sources. The results of collection had become familiar with the current state of issues solved. The data was selected and sorted based on a selection and synthesis, that was used in the theoretical and methodological part. The object of the investigation is a selected company XY. Since 2004 the company is operating in the Czech Republic. The main activity of company is distribution of fashion clothing to stores, other distribution centres or to the final customers. The company owns a large number of fashion brands and each brand is located in Europe, in its own distribution centre. The seminar work is focused on the recommendation of the new devices for the picking department in the new distribution centre. First step of the work was to observe the different markets, to be able to select the best few. These devices have to match all the requirements of the distribution centre. For the ability to be able to do the pre-selection of devices, author used knowledges, which she obtained of studying of internal company documents and procedures. The author was also in close contact with the business partners of the distribution centre, who helped with this pre-selection. The business partners specialize on order picking technology and they, based on the special requirements of the distribution centre, have selected 3 devices. A few of the requirements to take into consideration were: easiest way of integration with the in-house system, to be a user-friendly device for the operators, to keep the ergonomic standards for operators and finally the cost of the devices. These devices were tested in the distribution centre. The author selected 6 picking operators for the test from 2 shifts, that means in the total author used 12 picking operators. The shifts were schedule as the morning shift from 6 am till 2 pm and the afternoon shift from 2 pm till 10 pm. 6 of the selected devices have been used to run the test, that took 2 working weeks. In total was taken to the consideration 10 working day times 2 shifts. The shift represented 7,5 hours, that means the author was able to collect data during 75 hours per picking operators. Every selected picker used each testing devices during 25 hours of testing period. Each testing picking operator used his User ID and this allowed the author to track and collect the data from the in-house system. Each picking operator had to log in to the in-house system and had to assign picking orders to his virtual card. The data from the in-house system contained the total number of picked units per operator. Team leaders from picking department helped to track devices per operators in the excel file. This excel file helped to create combinations with data from in-house system and used devices. The author used the data for the calculation of the productivity of each operator per devices. The focus of the test was on the productivity and accuracy of the operators. For the calculation of the accuracy the data has been collected from the packing department. Every picked unit from testing picker had to be audited on the packing department. The in-house system tracked all the picking errors for each carton used for the testing and these errors were linked back to each picking operator and testing devices. After the testing period the author created an overview of the data, collected during the testing, in an excel table. Author based on the data was able to do calculation of average pick units per devices and also to do calculation of error rates. The author created another excel table, which contained cost per device and the total number of required devices. The data regarding cost of devices were received from the business partners.

The author used the excel tables for form a conclusion for each device. The author, based on results from the test and the obtained knowledge of each device, created the recommendation for the selection of the new device for the new picking method on the picking department. This recommendation covered all the requirements from the distribution centre.

8.3 Analytical and practical part

8.3.1 Introduction of company

The Company XY, which became the subject of this innovation is an international corporation with a large number of its branch offices around the world. It deals with the production and sale of some world-famous fashion brands. The author of the work will focus on the part of the company that is engaged in the distribution. To help with the distribution of its brands, the company has strategically spread around the world, to make it possible, in the shortest possible time, to meet the needs of customers. Some distribution centres, through their capacity, have the possibility to distribute several smaller brands. In Prague, the company has a distribution base for five of its brands and operates in two distribution centres. The company has been operating in the Czech Republic for more than 13 years and has built a strong base here, not only market position, but its employees as well. The distribution centres ship 38 million units a year. The increasing demand for the brands resulted in one of the distribution centres began to have capacity issues. Based on the company's strategy, each of the fashion brands will grow over the coming years and the dispatched number of units per year will reach 34 million for one of the brands (Company XY, 2016). Therefore, the company is developing one of its most modern distribution centres in Europe. The company will also integrate the new technology with a new in-house system. The new in-house system is called Pick ticket management system as mentioned in the internal documents and provides new opportunities for some departments within the distribution centre. The picking department is one of the departments that will be affected by the in-house system change. The picking department is one of the largest departments in the distribution centre and specifically this distribution centre, which shipped 19 million products of one fashion brand. As mentioned in the internal documents 70% of the processed orders flow through the picking department, this adds up to the amount of 13.3 million units of shipped products (Company XY,2016). Outbound cartons are processed on Picking department which means 950 000 cartons a year if you count 14 products per carton on average.

The fashion brand in this distribution centre is focused on shoes, so the processing requires a greater amount of storage space like is written in the internal procedures. These storage areas within the picking department are called picking locations. Each product is located in a picking locations on. The brand produces 52,000 different products, these products are split in 3 different categories, as follows: Shoes 80%, 14% Apparel and 6% Accessories. Assigning a pick location to a product is possible only once, the system doesn`t allow multiple products in a single location. Replenishment of these locations is triggered based on customer orders (Company XY,2016).

8.3.2 Description of the current picking process

The internal procedures described the process of incoming orders from customers. The orders are entered into the companies host system by the brands customer services representative and then transferred to the in-house system. Individual cartons are created for customer orders during transmission. The system takes into account the special requirements of each customer. This may be a size of the cartons used to despatch the good in, a special assortment per carton, the maximum number of products in a box and of course the weight limit for each carton. The cartons are printed out using the in-house system on individual pick notes. All information needed for the expedition is included on the pick note, as well as data necessary for the physical creation of the carton. Each pick note consists of 3 parts: Carrier label, Shipping label with delivery addresses and Content label. The content label contains information about the picking location, product name, quantity of products and size of the outbound carton (Company XY, 2016).

The picking operators work on cartons for individual customers based on the information from the pick notes. Based on internal documents, there are 20 fixed and 10 temporary operators working over 2 shifts. If required, the number of fixed operators can be reduced to 10 during the night shift. Overall the department operates 50 fixed operators and 20 temporary operators (Company XY, 2013). A batch of pick notes is assigned to each picker's name and processed sequentially. Their work is simplified by the organization of products on the pick notes depending on the sequence, but it is each picker's choice on how to sort the manual pick note sequencing. This type of picking method is called manual picking and during picking the picker doesn`t use any equipment. Benefits for the picker are only the picking trolleys, on which they are bringing cartons close to the picking location and from which you can easy pick products into the individual cartons. Each picker can have up to 3 cartons in progress at the same time per picking trolley. The cartons are completed when the picking operator filled the carton with all required products from the pick note. A finished carton is sealed with adhesive tape and transferred by a conveyor belt to a separate station on the Packing-Audit department. Based on internal documents on this department there are 10 fixed and 5 temporary operators working, over 2 shifts (Company XY, 2013). If required, the number of fixed operators can be reduced to 5 during the night shift. Overall the department employs 25 fixed employees and 10 temporary workers like is mentioned in the internal documents (Company XY, 2013). This department checks the accuracy of the products in each carton. This step is completed using the system. The packing operators open each individual carton and scan the contents of the cartons using the system. They scan each barcode on each product. In case of an error, the system displays an error messages to the packer This can happen in case of scanning an incorrect barcode, an unexpected item or a missing item. If the carton is correct the system will display the message 'Carton complete and closed'. Correct cartons are ready for to be dispatched to the customer. Cartons with mistakes are returned to the picking department via the conveyor belt and they need to be corrected depending on the error found. After correction, the cartons are sent back to the Packing-Audit department to be checked and scanned again.

8.3.3 Description of the new process of picking

The picking process will be changed from manual picking (pre-printed pick notes) to RF picking or Voice picking like is mentioned in the internal procedures. The new picking method is dependents on the device chosen by the company as the most suitable for its needs. The difference between RF picking and Voice picking is not only the device used, but also the details of the picking process. RF picking is scanning the barcodes on each product piece by piece and Voice picking is picking a certain amount of units from one location, scanning the barcode of only one of the products and confirming the total number of units by voice The new in-house system has brought these new ways of picking. Either of these new picking methods speeds up the overall process time and also helps to avoid mistakes during the picking process. Pickers will continue to use picking trolleys, on which outbound cartons will be placed, however they will now be able to assign cartons on their fictitious system ID cards and in turn during the picking process the system will navigate them on the quickest route to the products and thereby increase their productivity. This means, that the picker's movement between picking locations is based on the systems selection of sequence. Inserting products into outbound cartons is also directed by the system. After inserting the last product into the carton, the carton is flagged as complete and the picker has to seal the carton and send it to separate expedition by a conveyor belt. At this stage cartons are in fact ready for expeditions and no longer require additional checks previously done by Packing-Audit department (Company XY, 2016). At the Packing-Audit department only random checks will be conducted or cartons that the conveyor marks for additional checks. For the random checks cartons are selected based on the certain system's criteria. Based on the internal documents the conveyor will allocate 20% of the cartons from the total quantity of outbound cartons for additional check. There are 12 fixed and 2 temporary operators working over 2 shifts. The transfer represents 13 fixed operators between departments and reductions of temporary workers. This change will mean the transfer of the fixed operators from the Packing-Audit department to the Picking department, thereby increasing overall productivity of the distribution centre. At the same time there are increased requirements for new equipment that will be used during the new picking process (Company XY, 2016). Requirements for the new installations is 36,but possible damages should be taken into consideration. IT specialist recommended to increase requirements of equipment by 10%. The overall needs for the Picking department is 40 new devices to cover the existing volume of the orders for the distribution centre needs. In case the company wants to prepare for their internal strategy, it would need to take into account that on the pick department there will be 91 fixed operators and 50 temporary workers employed. All these operators should have 155 new devices available (Company XY, 2013).

8.3.4 Testing results of new devices for picking process

After an in-depth market research and with the help of consulting company that specializes in Order picking technology has got shortlisted 3 devices. Essential criteria of selection were simple option of integrating in-house system to these devices. Also, one of selection criteria was user friendly device for operators to be able to keep maximum performance and to be able improve accuracy during picking process, easy way for training of new workers and temporary users, next one ergonomic standards for operators and the last one cost per devices. The Cost of devices was provided by business partners. Two devices were borrowed from business partners for a period of one month to be subjected for two weeks testing directly in distribution centre and one device is already used in the distribution centre, but at the moment for operations other than the picking, this device has been moved to picking department from another department. For 6 pieces of equipment were available for testing from each type. The test took place over a period of two working weeks (10 days) and during two shift operation. The detail information has been already mentioned in methodology of work. The test attended 12 selected operators, who tested these devices during daily operation, but devices were prepared by IT specialist to work in testing environment for new in-house system. After 2 weeks, data from the test were obtained from an in-house system on the basis of names of test operators. This is possible since each operator works using his User IDs and any operation that systematically carried in stock are recorded in the system history. In-house system has provided us excel sheet with testing data for each day, which served as a source of data on the overall results.

The test focused mainly on the results of operator productivity and operator accuracy, devices for the test:

- RF Handled terminal Motorola 9290 picture no.1 in the attachments
- WT41N0 RF handled terminal picture no.2 in the attachments
- Vocollect Talkman A730 picture no. 3 in the attachments

RF Handled terminal Motorola 9290

The device is already used in the distribution centre, but is used for other operations and therefore, the test operator learned to work with them very quickly and thus simplified the training process. The disadvantage of the device was shown that the operators do not have free hands during picking process and equipment to constantly laid on pick trolley. That influence slowed down pickers and had negative impact on results of picked units per hour. RF Handled terminal have had a result of 191 units per hour from the test, attachment Chart no. 1. Whereas during the process must scan each barcode on picked products and their error rate was at 0,2% of the total picked units. The error rate was also affected by constant postponement equipment on picking trolley and so were a few exchange of products in shipping boxes. The price of one device is 1100 Euros and in purchasing the required 40 units for the whole department would pick expense amounted to 44,000 Euros. In terms of future growth strategy and brand requirements of 141 devices, the total cost amounted to 155,100 Euros, attachment Chart no. 2.

WT41N0 RF handled terminal

Equipment is similar to the first testing device for its handling. The advantage is locating on a scanning device on the operator's finger. So, his hands are empty during picking process. Based on the benefits of free hands is the result of testing 196 pieces per hour, attachment Chart no. 1. The testing result is 196 pcs per hour because of the free hands benefit. Other advantages are that the operator has to scan each product and thus the error rate results are very low. Error rate was calculated at 0.05% of the total picked units. As one of disadvantage appears to be the weight of locking sleeve placed on the pickers forearm and the second one is solution for cleaning method of the locking sleeve. Weight of devices is 300 grams including batteries. After a day using this device a test operators complained about the weight of the device. One of possible solution for cleaning of locking sleeve could be having cleaning things on the department or if it will not be enough, the company will need to buy extra locking sleeve for each operator. It will mean extra cost for the company. The cost of device is 1,850 Euros and 40 for the number of required equipment, the total cost 74,000 Euros. In terms of future growth strategy and brand requirements of 141 devices, the total cost amounted to 260,850 Euros, attachment Chart no. 2.

Vocollect Talkman A730

The device is quite difficult in the initial setup and causing problems to testing operator and at the same time before each start of picking need to upload the voice that will operate with device in order to fully utilize the device. This represents a loss of time at the beginning of each working shift. Voiced directed pick result from the test is in average 201 units per hour, attachment Chart no. 1. Clearly this is faster than RF picking method. Unfortunately, voice method of picking rates will be reduced if the operator has to conduct too much dialogue with each transaction, if the check digits at the bin location are too long, if data capture is required, or if poor slotting is in place. It is precisely for these reasons in test scores higher error rate and the 0.3% of the total picked units. At the same time, the cost and time needed for this device are the highest from all testing devices. The cost per unit is 3890 Euro and the required number of 40 devices, which means that the total costs amount to 155,600 Euros. In terms of future growth strategy and brand requirements of 141 devices, the total cost amounted to 548,490 Euros, attachment Chart 2.

8.3.5 Evaluation of testing and recommendation

The author is proposing following solution for the distribution centre based on the acquired knowledge regarding to the picking methods use on the Picking department, the results of the testing devices and acquired knowledge regarding the testing devices. The most suitable device has been Vocollect Talkman A730 based on the employee productivity test but the test error fared worst, as fashion brand products have complex names and operators in the dialogue with the device often confuse the products in shipping boxes for backward formulation of this description. And thus, this device is not an appropriate option, since the company plans to eliminate an additional control of the cartons and carry out only spot checks. At the same time this device has a high cost which several times exceeded the other tested devices. Therefore, the author does not recommend choosing of his device. RF terminal handled WT41N0 was on second place of the productivity test results. Productivity was at the edge of a respectable and author believes that productivity within a few months of use could further increase and thereby compare the results of the first device. In the results of error, this device was placed on the first place. Big help in this result is scanning products with scanning devices placed on the operator`s finger avoiding confusion products in outbound boxes. From the perspective of product price was placed on second place but it should be noted that the costs could increase a little because of the extra cost for cleaning material or extra units of locking sleeves, in which the operator wears a device attached to the hand. Despite these excellent results author also this device is not recommended because of the Ergonomics standards. In the long term due to the higher weight of the device could damage health operators, who permanently work on department Picking. RF Handled terminal Motorola 9290 was on third place of the productivity test results. Operators during testing reached the weakest outcomes with regard to productivity, and their error rates are rising as a major cause of reported themselves constantly moving devices to picking trolley. This caused a slight delay with picking units and also exchange of products in outbound boxes. From the perspective of price ranges, this product appears to be the most advantageous option. The author has come based on this knowledge to recommendations and proposed solution to the distribution centre to purchase last of the mentioned devices RF Handled terminal Motorola 9290 for the department Picking. However, supplement this device with Bluetooth fingers scanner which is part of RF terminal handled WT41N0, would help operators reduced movements with device during picking. After consulting with business partners the Bluetooth finger scanners have affordable cost. The cost of this device represents 670 Euros. So, the final price of the device would be increased from 1,100 Euros to 1,770 Euros. When you purchase 40 pieces of required by the cost of devices amounted to 70,800 Euros and looking to the future strategy of the company by costs amounted to 249,570 Euros. The author has opted for such solution, in terms of flexible use of this device on the other departments in the distribution centre. Devices RF handled Nokia 9290 terminal operators would be fixed on the picking trolleys, this will help operators to keep free hand during picking. The author thinks, that this solution can help to increase operator productivity and also conversely reduce the error during pick.

8.4 Conclusion

The work focus on innovation in selected company. Company builds new distribution centre and implements new in-house system, so it was looking for new technology. Innovative part of this work focused on picking department and the order picking technology. New in-house system opened possibilities with picking method and company needed to select new device for one of this method.

The author obtained knowledge from the markets, which are specialist of order picking technology and they helped select 3 devices for new picking method. Business partners provided him cost of devices. She borrowed 2 devices from the list for the distribution centre and 1 device from the list borrowed on different department in distribution centre. Then she selected 12 operators and they helped her with tests of devices. The test took 2 working weeks. After test she created overview of results from the test and he added the results of calculation regarding cost of devices. Overview consisted from the results for productivity of operator and the results for accuracy of operator per devices. She took into account to his recommendation also feedback from testing operators regarding the devices. The author created following recommendation based on all these aspects for the distribution centre.

Recommendation of selection devices for new picking method is device with name RF Handled terminal Motorola 9290 with additional Bluetooth finger scanner. Author recommended this device because the cost of combination these 2 devices still lower than others tested. The cost of devices is 1,770 Euros. Total cost for 40 required devices will be 70,800 Euros. This device is already used in the distribution centre on different departments. So, flexibility of use this device is higher than others and training of the operators will be very quick, because they have already some knowledge with the device. Results of productivity were not very good, but author`s advice is to add Bluetooth fingers scanner and used these devices together. The average of productivity is 191 units per hour. This result potentially will grow up, because will be minimalize double handling with device. The author thought, that the combination of these devices could probably hit the average of productivity more than 196 units per hour. Also, accuracy of operator will be better, if they will have free hands. Current error rate is 0,2% from total picked units.

Contribution of the work is a recommendation of selection device for new picking method for picking department based on special requirements from distribution centre. Author tries to show benefits of new devices for order of picking technology for the company and it was the reason, why author was personally involved of this innovation.

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Attachment 1

RF Handled terminal Motorola 9290

Picture 1 of the device: RF Handled terminal Motorola 9290

Source: Internal documents (Company XY, 2016)

Attachment 2

WT41N0 RF handled terminal

Picture 2 of the device: WT41N0 RF handled terminal

Source: Internal documents (Company XY, 2016)

Attachment 3

Vocollect Talkman A730

Picture 3 of the device: Vocollect Talkman A730

Source: Internal documents (Company XY, 2016)

Attachment 4

Overview of total picked units during the test

Chart 1 Summary of average picking units

	Total no of pickers	Total picked units	Working hours per operator	AVG productivity of device
MC9290 RF handled terminal	12	57373	25	191
WT41N0 RF handled terminal	12	58949	25	196
VOCOLLECT TALKMAN A730	12	60312	25	201

Source: Internal documents (Company XY, 2016)

Attachment 5

Cost evaluation of selected devices

Chart 2 Overview of cost evaluation for devices

Name of product	Cost per unit/Eur	Total no of units	Total cost/Eur	
MC9290 RF handled terminal	1100	40	44000	70800
Bluetooth fingers scanner	670	40	26800	
WT41N0 RF handled terminal	1850	40	74000	
VOCOLLECT TALKMAN A730	3890	40	155600	
Name of product	Cost per unit/Eur	Total no of units	Total cost/Eur	
MC9290 RF handled terminal	1100	141	155100	249570
Bluetooth fingers scanner	670	141	94470	
WT41N0 RF handled terminal	1850	141	260850	
VOCOLLECT TALKMAN A730	3890	141	548490	

Source: Internal documents (Company XY, 2016)

9. Mnatsakanova Yuliya: Social media marketing

SUMMARY
Main objective: The aim of this paper is to determine how companies could increase people interest through social media marketing. Secondary aim is to research how chosen companies use social networks.
Research methods: Theoretical part of the thesis was based on gathering the information from worldwide literature focused on social media marketing. The practical part was compiled based on research and comparison of chosen companies' profiles on social networks. Author observed three companies, research was conducted on social networks as Facebook, Instagram, YouTube and Twitter.
Result of research: Social media marketing is a great opportunity for company to increase consumer interest. SMM tools allow company to focus on their customers, monitor changes in customers behaviour and track customers reactions which in it's turn generates good results such us product and service improvement, customer satisfaction, trustful long-term relationship.
Conclusions and recommendation: Social media marketing helps to develop two-way communication between company and customers what enables companies to develop long term relationship with their customers, increases brand loyalty, attracts new customer and partners, enhances company image and reputation.

KEYWORDS
social media, social media marketing, Facebook, Twitter, YouTube

JEL CLASSIFICATION
M31

9.1 Introduction

Nowadays internet is an open platform where millions of people could connect with each other. Availability of so many gadget devices and access to high speed internet get information exchange process to high level. More and more consumers prefer to use social media networks such as Facebook, Twitter, Youtube and Instagram, that giving great and new opportunities for marketers.

The aim of this paper is to determine how companies could increase people interest through social media marketing (SMM) and to research how chosen companies use social media networks.

In the theoretical part author of the paper will define the term of social media based on research of scientific literature. Next step of the paper is to describe tools of social media marketing and provide possible benefits and limitations based on literature research.

In the practical part author will research, describe and compare using of social media marketing tools on example of chosen companies.

9.2 Theoretical part

In this part author will define the term of social media marketing (SMM), describe tools of social media marketing and provide possible opportunities and threats based on literature research.

9.2.1 Social media

There are a lot of different definitions of social media. Scott (2010, s. 38) in his book mentions two terms that sound similar: „social media‟ and „social networking‟. By Scott (2010), social media is the superset, it's different media that individuals use to communicate online in a social way. According to the author it may include blogs, wikis, video and photo sharing, and much more. Social networking is a part of social media, social networking takes place when people create a personal profile and interact to become part of a community of friends and like-minded people to share information (Scott, 2010).

Another defintiton gives Sterne (2011), social media it's all forms, which helps anyone communicate with evrybody. For Janouch (2010) social media is online media, where content created and shared by users.

According to Janouch (2010) SMM is a way to influence or convince a certain group of people to accept, change or leave certain ideas, behavior or approach using social media.

9.2.1.1 Tools of social media

Sterne (2011), Scott (2010) and Janouch (2011) have several basic categories of social media:

Forums, review and opinion sites

Sterme (2011) says that usually it's discussion groups where people can ask a question or submit an opinion and others can offer up an answer or an reaction. These can happen through e-mail or can be hosted privately, semi-privately, or publicly.

Social Networks

MySpace, LinkedIn, and Facebook are communities for online connecting. By Sterne (2010) social networks help people to develop a community of friends and share different information.

Blogging

Blog - personal web site written by somebody who is passionate about a topic, it is posting person's opinion about that topic to the world and attracts readers who provide comments on the author's posts (Sterne, 2010). By Janouch (2010) blog comes from short form of web log, could be in the form of personal diaries or Professional blogs. Another type is video blog, such blogs content only video posts (Janouch, 2010).

Microblogging

By Janouch (2010) microblogging is usually used by certain group of people. This group of users are often friends, colleagues a etc., they discuss different news, comments, articles in a form of short messages.

According to Zarrella (2010) it is a form of blogging that limits the size of each post. For example, Twitter updates can contain only 140 characters or less, it’s suitable for mobile devices. Twitter had become popular in the first half of 2009 as a result of high-profile celebrity members and a mention on Oprah show (Zarrella, 2010).

Media Sharing

By Scott (2010) YouTube, Flickr, and Vimeo simplify a lot the process of sharing and commenting on photos and videos. By Janouch (2011) all videos could be posted by everyone and everywhere, it is enough to copy link and put it on blogs and different web sities. Author states that interesting, unusual and funny video will have great success in social media. Companies have big interest in Youtube, because it provides easy way to present their products and company‘s image by creating their own channels (Janouch, 2011).

YouTube is the most popular video sharing site (Janouch, 2011), according to the YouTube statistics (2016) it has over a billion of users.

9.2.2 Benefits and limitations of social media marketing

Scott (2010) considers the best way to think about social media is not in terms of the different technologies and tools but, rather, how those technologies and tools allow you to communicate directly with your buyers in places they are get together right now. Social media gives everyone - consumer brands, consultants, nonprofits, churches, and colleges - a tremendous opportunity to reach people and involve them in new and different ways (Sterne, 2010).

According to Janouch (2010) forums, review and opinion sites is a great tool to determine customers‘ thoughts about company‘s products. Using forums and opinion sites company may influence customer opinion, affect negative opinion or review about product or can initiate dispute to collect new ideas, topics or concepts (Janouch, 2010).

Social network website as Facebook (2016) gives people the power to share and make the world more open and connected, it helps people to be in touch with friends and family, to discover what’s going on in the world, and to share and express what matters to them. According to Facebook statistics on average for September 2016 they have 1.18 billion daily active users and 1.79 billion monthly active users. For businesses, organizations, artists, celebrities or brands Facebook gives a great opportunity to build connections, share content and to communicate direct with interested users (Facebook, 2016). According to Qualman (2011) having followers and build relationships with them is the most important thing, because business needs them more then opposite way around.

Companies use blogs to have conversations with their potential clients and customers, brand building and to convey product knowledge. According to the technorati survey

(2013), in which took part more than 1,200 consumers, blogs were found to be third-most influential (31%) when making overall purchases after retail sites (56%) and brand sites (34%). Blogs were found to be the fifth-most trustworthy source for overall information on the internet (technorati.com, 2013).

According to Zarrella (2010) microblogging is easy to use, requires very little investment of time and can quickly prove worthwhile in increased buzz, sales, and consumer insight. Author says that companies can use Twitter to announce offers or events, promote new blog posts, or keep your readers in the know with links to important news stories.

According to Parr (2009) in IRMA (2015) many companies including Comcast, Southwest Airlines, and Starbucks have Twitter accounts to assist customers, apologize for mistakes, share specials, and interact with their public. Next author says that using social media in such a manner helps to create transparency which can increase trust from consumers. By using Twitter as a customer service platform, these companies are able to successfullypromote a positive brand image and solve customer problems often with lesscost than call centers or email services.

By Janouch (2010) social media marketing is a tool for two-way communication with customers. Customers communicate with each other, compantes, leave their feedbacks and opinions about products - it’s great opportunity to support good image of company and to find way to satisfy customers through communication. But on other hand (Janouch, 2010) customer can check all information that company provided and to share their opinion with others. It’s difficult to control what will customer say or write about company or product. Loss of control can lead to negative consequences (Janouch, 2010).

Next big risk of social media marketing by IRMA (2015) is account hijacking. Loss of private information could damage control, ruin customer trust and lead to financial losses.

9.2.3 Methodology

Theoretical part of research paper draws on the knowledge acquired from worldwide literature borrowed from CNB library and looked online on Google Books. In theoretical part were presented basic definitions like social media and tools of social media. Based on literature research author determine possible benefits and limitations of SMM.

The practical part was compiled based on research of chosen companies’ profiles on social networks. Author observed three companies from similar industry: Starbucks, Costa and Illy. Study was conducted on social networks as Facebook, Instagram, YouTube and Twitter. Author researched what types of content companies present to attract public and tracked customers’ reactions as likes, comments, feedbacks on certain companies' content. Also, was traced companies’ reaction on their followers’ comments and the way companies present it.

9.3 Practical part

In this part author of the paper will research how chosen companies use social media to engaging customers’ attention. For research were chosen companies as Starbucks, Costa and Illy.

9.3.1 SMM in companies

Starbucks company is one of the best examples of using social media marketing. Starbucks (2016) is one of the most popular coffee shops that has more than 24,000 retail stores in 70 countries. Their mission (Starbucks, 2016) is to inspire and nurture the human spirit – one person, one cup, and one neighborhood at a time.

Starbucks uses Twitter, Facebook, Instagram, LinkedIn, Pinterest, YouTube channels to connect their costumers, they have their own community – „My Starbucks Idea".

When Starbucks has special offers, discounts, new flavors of coffee or special desserts they always inform their followers. They post photos and videos of their new product on Facebook pages. For example on 9 december 2016 Sturbucks posted a video of their new flavor coffee for winter holidays - Spiced Sweet Cream Cold Brew. It's a 30 seconds video in which barista shortly describes the coffee in friendly and open way. Video has over 4 million views, 3 thousand comments and near 4 thousand reposts.

On more thing that increases Starbucks popularity on Facebook is their active participation in discussions. They not only answer on people comments, they make dialogs with their fans. They answer questions, give recommendations, describe product, give locations and other. Starbucks answers almost all comments, answers address personaly to the author of a comment in a very friendly, lively manner. It makes a feeling that you „chit chat" with your friend.

All this and of course attractive, well done, colorfull, testy photos and videos of Starbucks products attract followers, tempt to like them and share this photos with friends, what leads to greater popularity of the brand.

On Twitter account (2016) Starbucks coffee shop twitts their recent news, features and interesting stories. They ask customer to share their stories and new ideas.

There a lot of twitts from users on Starbucks page. They twitt their suggestions, wishes, positive and negative feedbacks and Starbucks responds to them. It shows to customers that Starbucks cares about them, that they are important to them.

Especially important the reaction to the customers dissatisfaction, trying to resolve their issues, Starbucks shows their concern. In the end fixing a customer problem or even shown effort brings people loyalty to the brand.

Starbucks use simple hashtags, for example #RedCups, #FindCheer and etc., that makes easy to find interested topics and participate in it. Starbucks sometimes retweets most intersting tweets of their fans. By that company demonstrates it's support for users, which also affects customers positively.

On the Instagram Starbucks mostly places images of their products, as well pictures of their coffee shops, shots of work process and employees. Using this shots Starbucks introduces the company to customers from the inside view. On other hand customers share their happy moment shots related to the Starbucks or share their own cups design.

YouTube is also on of the platform that company uses to introduce it's image. All videos that company has on YouTube (2016) are divided into several folders, in each folder there are short documental type video series. For example about „our coffee" folder provides customers information about types of coffees, shows where and how coffee beans grow, coffee beans harvest and coffee beans roast process. In „Strabucks jobs" video folder employees and partners of Starbucks tell customers about their work, how they fill to be a part of Strarbucks, about the atmosphere in the coffee shops. „Meet me at Starbucks" are beautiful video series about people, about their connection, memories, relationships, interests and happy moments that they spent in Starbucks coffee shops.

„My Starbucks Idea" (Starbucks, 2016) is a blog where followers can send their own ideas how to make Starbucks coffee shop better. People can share their ideas about products, involvement and experience. All followers can join discussion and vote for ideas they like.

This separate blog helps to observe customers' taste and future trends. Additionally it provide great opportunity to distinguish potential customers according to their consumer preferences. Customers can write directly what they want and what they need. For example how to make atmosphere in coffee shop better, how to make ordering-payment process easier, ideas of food and coffee recipes and other. In „Ideas in Action" company employees give responses to customer suggestions. It inspires customers and makes them the part of the Starbucks decision making process.

Starbuck was recognized as one of the „Most Admired Companies in America" by Fortune from 2003-2015 and one of the „World's Most Ethical Companies" by Ethisphere from 2007-2015 (Starbucks, 2015).

Next positive example of using social media marketing is Costa. Costa is one of the biggest and fastest growing coffee shop from UK (Costa, 2016). Company use different social networks as Facebook, Twitter, YouTube, Instagram and other to communicate with their customers.

On Facebook (2016) company post their offers and support company activities. For example on Tuesday 23rd February 2017 they posted - bring us your empty cups – even if you did get it from another coffee store (we won't judge, promise!) to support their recycle used paper takeaway cups program. After 13 hours post had over 600 likes and 135 comments, Costa actively answered customers questions and comments.

Of course same as Starbucks company posts their food and beverage offers accompanied by colorful and "tasty" photos. Also company shows good reaction to customer issues. If customer faces issues with service, unhappy with food taste or even has problem with costa coffee app company tries to support customer and suggest ways to resolve problem. Costa often holds contests for its followers which allows to draw public attention and encourage them to share their own content.

On YouTube channel (2016) company has two video folder - „Our coffees", in which different baristas provide customer stories about types of coffees in Costa and „Sweet food" in which shown process of sweets prepare. Company also post funny videos as „never a dull cup" videos, „Boss vs Barista" or „My First Job" videos with UK celebrity George Shelley.

Same as on Facebook company use Twitter to inform their followers about their new drinks and foods offer, support company environment protection program and help to follow company events. Costa coffee fans publish their photos and share their happy moment using short emotional messages. Costa actively answers on their fans tweets.

On Instagram (2016) company place a lot of photos of their coffee beverages, seasonal cakes, sandwiches on which fans post comments and share their opinion about tasted products. Also, fans post photos of their most favorite company products.

Illy company has worldwide chain of Italian-style coffee bars, designs espresso machines and present collection of cups produced by art’s contemporary masters (Illy, 2016). Company has more than 160 cafes in the main cities of 34 countries (Illy, 2016).

Illy has account on Facebook (2016), but in compare with two previous companies Illy does not support its coffee bars on Facebook. Company mostly places photos and videos of their coffee machines, designed cups or new products for sale in stores. Almost no information about coffee bars, no photos of coffee and no information about special offers or events. Companies Facebook page shows poor reaction from public. The same pattern is observed on Illys’ Twitter account, both on Twitter and Facebook company use more official "dry" style to answer followers’ questions.

On YouTube (2016) company has great amount of videos. Illy divided videos in 16 folders, in which they share information about company's values, innovation and their coffee stories. In other videos company teach how to use their coffee machines and share coffee recipes. Some videos were made inside of coffee bars, in these videos visitors tell their stories related to Illy and share their experience.

On Instagram company post their products photos, especially eye catching are new Illys’ art collection made by Emilio Pucci.

Company has own community – “stay connected with Illy”. In this community company share recipes of different types of coffee, coffee cocktails and food recipes. They place video recipes with attachment of accurate instructions and lists of ingredients.

Through community company inform their fans about events, person just need to select country and choose event he interesting at. Community section "Coffee Surfing" contains inspiring personal stories records of Illy coffee lovers worldwide made by photographer Gabriele Galimberti with Illy cafe.

To better understand people's interest in companies, social media author indicate companies social network metrics such as followers, likes and views on the table below.

Table 1 Companies metrics in social networks

		Starbucks	Costa	Illy
Facebook	Followers	34,9 mill.	1,5 mill.	588 246
	Likes	36,6 mill.	1,6 mill.	593 318
	people talking about this	149 096	7 153	770
Twitter	Followers	11,9 mill.	222 091	13 264
	tweets	89 052	152 276	4 783
	likes	10 301	1 621	1 411
Instagram	subscribers	13,1 mill.	206 000	77 000
	publications	1 331	607	1 300
YouTube	subscribers	128 913	5 911	7 125
	videos	506	109	404
	views	50,8 mill.	7 196 597	9,8 mill.

Source: Facebook (2016), Twitter (2016), Instagram (2016), YouTube (2016)

According to the table above Starbucks has millions and thousand fans all over the world on social networks they use. To attract potential consumers company place very colorful and attractive photos and videos, using this content company present their products, history, introduces employees and coffee shop environment. Appropriate content is one of the important thing to draw people attention to the company brand and products. Using different contest and events company encourages their fans to interact with company. Fans post their own photos and videos, share it with their frinds and family and paticipate in it discussion. Starbucks permits to publish their video and photo content anywhere on the web, which evoke interest in company non-fans.

Unlike Illy, Starbucks and Costa not afraid to show emotions in communication with costrumers. They often use emojis and such interjection as "woahhhhhh", "ohhhhhh", "waaah". Answering to questions or comments companies always refers directly to the authors of the message by emphasizing author name. This gives good result, even if Costa or Starbucks can't resolve issue at the moment or can't give correct answer they show their concern in customer issue, they assure that customer has been heard. Seeing this emotional and friendly answers others not afraid to communicate with Starbucks and Costa, which leads to more likes and followers.

Illy shows lack of content on their Facebook and Twitter pages, one other hand company place a lot of videos about their company, coffee shops and Illy coffee lovers on their YouTube page. As a result Illy has more subscribers and views on YouTube compared to Costa.

In the end of this paper author could say that, Starbucks and Costa show that proper and good quality content could increase interest of potential consumers. By posting photos on different channels companies can acquaint consumers with their products, services and places. Using video content companies can introduce themselves - videos about company mission, workers or product making process will present company to consumers from the positive side. Photos and videos with participation of real customers will raise possible consumers trust. On the other side by posting photos of new products or videos of recent updates companies can support interest of their regular customers. Also using SMM companies have opportunity to share and spread information very fast.

Interaction with customers also helps to keep interest in a company and influence customer attitude to it. By active participation in dissacasions companies can motivate customers to post and share new and new feedbacks, opinions and recommendations. On Starbucks and Costa examples it's seen that for communication with customers is better to use non official language style, that will make customers feel more comfortable. Two-way communication let companies to know their customers better. Based on followers feedbacks, suggestions and ideas companies can improve their products or services what will lead to customers satisfaction. Satisfied customers in their turn will share their positive experience on their social network accounts what will attract new followers.

Customers own content is another thing that maintain interest of public. Live photos or videos of customers happy, funny or life important moments attract people. So it is important for companies to motivate their customers to share their own content by holding different contest or event.

Another great example to attract customers interest gives Starbucks. Its blog „My Starbucks Idea‟ is a great way to show importance of the customers. Using this blog company involves customer to a decision making process, what makes customers feel like part of the company.

Participation in discussions, fast reaction on votes and feedback, interest in customers‛ ideas and active communication with customers will help companies to gain such great results as Starbucks and Costa. It is not enough just to place attractive content, companies need to build two-way communication with their customers what in the end will establish great customer relationships and attract more new followers.

9.4 Conclusion

Such an open platform as internet gives great opportunity to evoke people interest in company brand and products. Companies have a lot of different ways to attract possible consumers or even keep regular customers using SMM. For this aim, companies can use one channel or mix different channels as Starbucks, Costa or Illy. Properly implementing content and active interaction with followers help not only increase potential consumers interested, but also maintain interest of regular customers. SMM could help company to monitor mood of their customers, track their reaction on updates and influence them. Social media makes it easier for company to listen customers, respond on their discontent and monitor changes. Using different social media networks as Facebook, Youtube, Twitter, Instagram and other enable companies to inform their customers about news, events, products in high speed and in a short time without using high cost advertisement. Social media marketing helps to develop two-way communication between company and customers what enables companies to develop long term relationship with their customers what as result increase brand loyalty, attracts new customer and enhances company‛s image and reputation.

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10. Rada Marek: Protection of site against adblock

SUMMARY
Main objective: To determine the security status on the 4th January 2017 of selected site advertising against Adblock and suggest the findings an appropriate method of security with regard to visits.
Research methods: In the theoretical part were presented basic definitions of following terms: program, software, script, browser extension, banner, PPC advertisement, pop-up window, effectiveness, optimalization and adblocking software. Were explained how the adblocking software work and some examples of them were given. Based on the identified informations the Adblocking software were chosen. In the practical part data from NetMonitor - SPIR - Gemius & Mediaresearch (2017) were taken and at theirs base webpages were filtered by the set criteria. Next the selected websites were visited and all ads on the homepage were counted. They were divided into next cathegories: *„banners,"* *„PPCs,"* *„Pop-ups*" and *„Advertisement before willing content."* After the AdBlock plus was installed, activated and the pages were visited again. The page was checked up as well as the blockator – does the user use the adblocking program. This measurement was called „Recognition of AdBlock." The another measurement called „Admision to the page with AdBlock" was checking if the page allowed enter with this program or not. After all those pages were visited again and the number of banners, PPCs, Advertisement before willing content were counted again in the same way. Then this identified data and visits data from the NetMonitor - SPIR - Gemius & Mediaresearch (2017) were put togehter and by the comparation, deduction, observation from the various view were used to find out find security status on the 4th January 2017 of site advertising against Adblock and which appropriate method of security with regard to visits.
Result of research: The most visited sites had fewer advertisements than the least visited ones. The top 5 visited web sites were not optimalised well for the Adblock and it could be the reason why they were so popular. Type of advertisement with the largest total number after enabling ABP was a banner with 25 points. Web sites with the most ads before enabling ABP had more visits in average in coparison to pages with the least ads. The ABP protection was not widely used. Pages using the ABP protection were held at average positions. Only 7 sites from 26 displayed advertisement after enabling the ABP. Site which optimalised advertisement had fewer visits then a unoptimalised ones.

Conclusion:

From the view of the site advertising protection

Investigated sites were not well protected because only 7 of them displayed advertisement after enabling the ABP. Only 2 sites were using the ABP protection which forced users to turn it off and the ABP user could enter all sites of the research. Pages with the smallest number of ads were less efficient in the ads protection than the top ones.

From the view of visits and ads

The most visited sites had fewer advertisements than the least visited ones. That small amount of advertising could be one of the reasons why the sites were so popular. The fact supported the result of optimalised web pages where the sites with optimalised advertisements were less visited the others. On the other hand it was not a rule because the top 5 pages with the most ads had more visits in average than the others. The sites which were using the ABP protection window had the average number of visits.

Recommendations for the security of site ads before adblocker

For the security of the site advertising should be used for example a pop-up window which alerts the visitor about using of adblocking software, because according to this research the pages which using this form of protection held at the average positions from the view of visits.

Nex step to secure site advertising is use the banners, because it is form of the advertising which is the most displayed after enabling adblocking software.

KEYWORDS
Adblock, internet advertisement

JEL CLASSIFICATION
M37

10.1 Introduction

According to The PageTair team (2015) Programs and browser extensions that blocking internet advertisement are very popular and their user base significantly grows every year. Dogtiev (2016) ad the number of the ABP users tripled in the last 9 months and in the end of the 2016 year 70% of internet users were blocking or were interested in blocking ads.

Due to this fact many sites with free content could have serious problems. In some situations the websites could be closed or their content could be charged.

However some adblock developers are aware of the problem and that is why they allow their software users to display the ads. There is one condition – the advertisement has to meet their criteria which are available on their websites.

This research will show how well are the selected czech sites optimalised for adblock users, it means how many advertisements are displayed with disabled and enabled adblock to the visitors. To accomplish this task a comparation between number of advertisements displayed before enabling ad blocking software and after will be used.

10.2 Theoretical part

In this part some key words used in this research will be explained. In the second part the adblocking software will be described, how it works and some examples will be given.

Program - Oxford University Press (2017) defines the program as series of coded instructions to control the operation of a computer.

Software - Techopedia Inc. (2017) describes it as a set of computing instructions for specific tasks.

Script - Cambridge University Press (2017) defines it as *„a type of language for programming computers that is used for finding and showing websites on the internet*"

Browser extension (add-on) - Google Inc. (2017) describes extensions as small software programs that can modify the functionality of the browser using web technologies such as HTML, Javascript and CSS. It has almost no user interface which would contain only one icon. Windows inc. (2017) adds: This class of extensibility might be installed by users to enhace their browsing experience.

Banner - Halada (2015 p. 22) describes it as a method of advertising on a website focusing on capturing visitors' attention to its graphic design and content which mostly consist of an advertising message. He adds that it can have several forms: a rectangular image or an animation that occures on the edges of the page: It is often divided into static, dynamic, animated and non-animated surfaces. It is one of the best known and oldest forms of advertising on the Internet.

PPC advertisement - Halada (2015 p. 74) From the English phrase „pay per click" it is a text or an image that has the form of sponsored links in search engines or website.

Pop up - Halada (2015 p. 74) Also one of the oldest ways of advertising. Pop-up windows spawn to a visitor while he is viewing the Web page in order to get his attention. Mostly with advertising messages and since they annoy users quite a lot special filters have been created to block them.

Effectiveness - Oxford Advanced Learner's Dictionary (2017) defines it as a *„fact of producing the result that is wanted or intended; the fact of producing a successful result".*

Optimalization - Oxford (2017) defines it as the action of making the best or more effective use of a resource

Definition of adblocking software - There is no generic definition of adblocking software according to many authors. For example Bathelot (2014) It is a small software or browser extension add-on which blocks the display of the online advertising banners, pop-up windows and other formats of internet marketing. Another source Techopedia Inc. (2017) describes it as a program that removes different kinds of advertising from a web user´s experience online. These programs target certain kinds of ads, such as pop-ups, banner ads and other common forms of online advertisement, allowing users to surf on the web without seeing any ads. Last source Oxford University Press (2017) definition is very simple: *„A piece of software designed to prevent advertisements from appearing on a web page".*

These definitions altogether describe adblocking software as a program or browser extension which blocks advertisement on the internet pages.

Kolowich (2015) First a user sends his request to visit a website. While the webpage is loading, adblocking software is comparing the loading content to the database of advertising scripts which was built to block and if it finds some, it blocks them. EYEO GmbH (2017) The client sends a message to the server, then the server returns a response message to the client. Its response contains information about the request and may contain the content requested by the client in its message body. When the internet browser begins to download an element of the webpage, the adblocker compares the source address to a list of known advertisement addresses and makes a decision on whether to download. Walbesser (2011) ads: The advertisements are not truly blocked, because the computer simply does not download them. In general These programs are based on filtering loading content

10.2.1 Examples of Adblocking software

Adblock

Official website of adblock (2017) claims it is the most downloaded extension for Google chrome and Safari and it runs on more than 40 million devices. Michael Gundlach from the USA who created AdBlock in 2009 stands behind this software. The software is completly free and there is no way to buy whitelistening your advertisement.

AdMuncher

AdMuncher (2014) adblocking software which was founded and developed by Murray Hurps from Australia and Jeffrey Cole from the USA in 2000. They created not only extension but the whole program which blocks advertisements on multiple browsers and as a result users do not have to install it on every single browser.

To use the program each user had to pay a tax, official websites claimed over 100,000 users had bought their services and after it developers decided to give it to people for free since 2014. Companies have no chance to buy whitelistening of their advertisement.

AdBlock plus (ABP)

According to official adblock plus websites (2017) over 100 milion devices including desktop computers, mobile phones and tablets run on. Rosso (2013) says it is the world most popular adblocking software. Behind the ABP German Eyeo GmbH company stands.

The software is completely free for users and it is financed from users´ donations but the main income comes from whitelisting services for large advertising companies. The ABP claims around 90% of licences are given for free for small entities. Every whitelisted advertisement has to meet the requirements and there is no way to buy a spot on acceptable ads list.

Methods

This part presents the solution procedure that was used in the preparation of the research and shows adblocking problematics from website owner´s view.

In the theoretical part were presented basic definitions of following terms: program, software, script, browser extension, banner, PPC advertisement, pop-up window, effectiveness, optimalization and adblocking software. Were explained how the adblocking software work and some examples of them were given. Based on the identified informations the Adblocking software were chosen.

In the practical part was selected adblocking software visits data from NetMonitor - SPIR - Gemius & Mediaresearch (2017) were taken and at theirs base webpages were filtered by following criteria:

- Joined NetMonitor - SPIR - Gemius & Mediaresearch
  All data were collected from NetMonitor database and it is possible that some websites are missing owing to the fact that they did not joined in. This database has been selected owing to the fact that its collecting data system which eliminate inaccuracies arising from deleting cookies and delivers the actual number of visitors.

- Sites owned by czech owners
  This research is focused on czech internet servers with czech owners only. For this reason some popular web pages in the Czech republic are missing in this research. One of examples can be youtube.com and many others.

- Over 1 million visits in the 2016 year
  Every site had to reach over 1 million visits in the 2016 year.

26 websites out of 36 fullfilled all the criteria. Next the websites were visited and all ads on the homepage were counted. They were divided into next cathegories: *„banners,*" *„PPCs,*" *„Pop-ups*" and *„Advertisement before willing content.*" All ads which the user has to see before he reaches his willing page were counted and the ads were called „Advertisement before willing content." „Total" means total add up of points from banners, PPCs, Pop-ups and Advertisement before willing content cathegory.

Selection of adblocking software

To accomplish this task the adblock plus will be used because it is the most used ad blocking software and because of allowing whitelist advertisements under its criteria which are available on its official site.

After the AdBlock plus was installed, activated and the pages were visited again. The page was checked up as well as the blockator – does the user use the adblocking program. This measurement was called *„Recognition of AdBlock.*" The another measurement called *„Admision to the page with AdBlock*" was checking if the page allowed enter with this program or not. After all those pages were visited again and the number of banners, PPCs, Advertisement before willing content were counted again in the same way.

10.2.2 Measurement and points

1 web site banner equals 1 point, when a huge banner that fills the whole web page behind the content with head and both sides is counted for 3 points, when it has only side banners

it is counted for 2 points. PPC banners are counted 1 point per banner area not for numbers of offers shown in the banner. Every single pop-up window is counted for 1 point. Advertisement before willing content was counted on the page with article or video or photogallery or game due to which a visitor came at the site adn were counted for 1 point per each commercial. In the category „Recognition of AdBlock" were monitored only if the web server recognized a visitor that was using adblocking software. To accomplish this task the web page had to inform the user about it and if it did „YES" appeared in the chart if it did not there was „NO" there. Admission to the page with the AdBlock" was monitored in case the user of the adblocking software had to turn the program off before he could enter the site. If he had to turn it off in the chart there „NO" appeared, if he didnt have to turn it off „YES" appeared.

To complete main task the collected data were put into a chart. In the chart this data were from various points of wiev compared and based on the comparasion were set conclusions in the end of the research.

Average was counted in the Microsoft Excel 2016 by using function „*Průměr*." Median was counted in the same way but with function „*Median*." Modus was counted with the Excel too by using function „*Mode.SNGL*" Maximal by „*Max*" and minimal by „*Min.*"

Observation proces

Followin seteps to complete main task were taken to fulfill the main task:

1) Find web pages that had over 1mil visits in 2016
2) Visit them and count every banner, pop-up windows, PPCs, find if visitor has to see advertising commercial before he gets to the content for he came
3) Find the most popoular adblocking software
4) Install adblock and visit these pages again
5) Find out if the server recognizes the adblock enability
6) Try if the server lets the user enter the content with adblock enabled
7) Count how many banners, pop-up windows and PPCs
8) Find if the visitor has to see advertising commercial before he gets to the content for he came for
9) Compare the results
10) Summarize results
11) Formulate recommendations

10.3 Practical part

In the practical part 26 web were compared pages from various points of wiev. First Top 5 most visited and least visited sites, next Top 5 pages with most ads and least ads without ABP and Most optimalised web pages compared to average of other pages. In the next part the sites that recognize adblock user and allow to use this software at their web pages will be shown and closely looked. In the last part other results from the research will be shown.

10.3.1 Top 5 most visited and least visited sites

In this comparison were compered 5 most visited with least visited sites in folowing parameters: visits, displayed ads with and without ABP were compared. Results from this observation can be seen in chart 1 down bellow.

Chart 1 Top 5 most visited and least visited sites

Position	Site	Total visits in 2016	Number of displayed ads without AdBlock					Number of displayed ads with AdBlock				
			Banners	PPCs	Pop-ups	Advertisement before willing content	Total	Banners	PPCs	Pop-ups	Advertisement before willing content	Total
1st	loupak.cz	78,560,602	3	0	0	0	3	0	0	0	0	0
2nd	horoskopy.cz	57,607,982	2	1	0	0	3	0	0	0	0	0
3rd	duelovky.cz	37,195,406	4	0	0	0	4	0	0	0	0	0
4th	karaoketexty.cz	34,993,606	3	0	0	0	3	0	0	0	0	0
5th	hry.cz	18,659,554	1	0	0	0	1	0	0	0	0	0
…	...	...	...	...	...	...	...	...	...	...	...	...
22th	alik.cz	1,548,421	0	0	0	1	1	0	0	0	0	0
23rd	abicko.cz	1,092,542	2	0	0	0	2	0	0	0	0	0
24th	filmserver.cz	1,087,851	6	0	0	0	6	1	0	0	0	1
25th	spark-rockmagazine.cz	1,087,712	13	0	0	0	13	13	0	0	0	13
26th	lamer.cz	1,046,953	2	0	0	0	2	0	0	0	0	0
average of the top 5		45,403,430	3	0	0	0	3	0	0	0	0	0
average of the bottom 5		1,172,696	5	0	0	0	5	3	0	0	0	3

Source: Own research based on data from NetMonitor - SPIR - Gemius & Mediaresearch (2017)

Most visited sites in section „fun and games" is loupak.cz with 78,560,602 visits, has 3 banners only. The Second place is occupied by horoskopy.cz with 57,607,982 visits and has 2 banners and one PPC advertising. The third place 37,195,406 visits duelovky.cz has 4 banners on its homepage. The fourth place belongs to karaoketexty.cz with 34,993,606 visits has 3 banners. Next one hry.cz has only 1 advertisement banner. When adblock plus is enabled none of these pages has advertisement shown. On the other hand least visited site in this research is lamer.cz with 2 banners, visited by 1,046,953 people 0 ads when ABP is enabled. Second place from the bottom spark-rockmagazine.cz with 1,087,712 visits and 13 banners with and without enabled ABP Which is the highest value of this measurement in banner cathegory. The third place from the bottom belongs to filmserver.cz has 1,087,851 visits and 6 banners after enabled ABP only 1 were shown. Fourth place from the bottom abicko.cz 1,092,542 visits 2 banners after ABP 0. Fifth place front he bottom belongs to alik.cz with no banners, ppcs and pop ups only 1 advertisement before willing video or gallery after enabling ABP last one disappears.

Average number of total advertisement of top 5 most visited is 2.8 with ABP off and 0 on. Which is less in comparison to 4.8 and 2.8 of the least visited ones.

Conclusion of the top 5 most visited and least visited sites

This result shows that the most visited sites have fewer advertisement than the least visited ones. The next thing to consider is that top 5 web sites are not optimalised well because every add after adblock filtering vanished on the other hand the ones at the bottom are better optimalized because they have only by 2 advertisements less by average. This optimalising inefficiency can be one of the reason why these web pages are so popular.

10.3.2 Top 5 pages with most ads and least ads without ABP

In this comparison 5 pages with most ads and least ads without ABP in folowing parameters: visits, displayed ads with and without ABP were compared. Results from this observation can be seen in chart 2 down bellow.

Chart 2 Top 5 web pages with most and least advertisement without AdBlock

Position	Site	Total visits in 2016	Number of displayed ads without AdBlock					Number of displayed ads with AdBlock				
			Banners	PPCs	Pop-ups	Advertisement before willing content	Total	Banners	PPCs	Pop-ups	Advertisement before willing content	Total
1st	spark-rockmagazine.cz	1,087,712	13	0	0	0	13	13	0	0	0	13
2nd	hrej.cz	7,086,151	11	0	0	0	11	0	0	0	0	0
3rd	kinobox.cz	9,019,937	7	1	1	1	10	0	0	0	0	0
4th	bonusweb.cz	13,528,740	5	2	0	0	7	2	0	1	0	3
5th	zing.cz	5,837,693	6	0	1	0	7	0	0	0	0	0
…	…	…	…	…	…	…	…	…	…	…	…	…
22th	raketka.cz	5,306,857	2	0	0	1	3	2	0	0	0	2
23rd	abicko.cz	1,092,542	2	0	0	0	2	0	0	0	0	0
24th	lamer.cz	1,046,953	2	0	0	0	2	0	0	0	0	0
25th	hry.cz	18,659,554	1	0	0	0	1	0	0	0	0	0
26th	alik.cz	1,548,421	0	0	0	1	1	0	0	0	0	0
average of the top 5		7,312,047	8	1	0	0	10	3	0	0	0	3
average of the bottom 5		5,530,865	1	0	0	0	2	0	0	0	0	0

Source: Own research based on data from NetMonitor - SPIR - Gemius & Mediaresearch (2017)

The page which has the most advertisement is spark-rockmagazine.cz with 1,087,712 visits has 13 banners when ABP is enabled or disabled. The second place belongs to hrej.cz, 7,086,151 visits and 11 banners when adblock plus is off when on has none of them. The third place is occupied by kinobox.cz has 9,019,937 visits 7 banners, 1 PPC, 1 pop up window and 1 advertisement before willing content when ABP is off. After enabling addblock no advertisement is shown. Fourth place Bonusweb.cz, 13,528,740 visits without ABP 5 banners, 2 PPCs. With ABP only 2 banners and one pop up window which informs user about using adblocking software. Last place from the top is zing.cz has 5,837,693 visits, 6 banners and one pop up windov after enabling ABP none advertisement is shown. Oposite side of the chart shows pages with least advertisement from the bottom first web site is alik.cz with 1,548,421 visits has only one advertising before video or gallery after enabling ABP no advertisement left. Second place from the bottom belongs to hry.cz, 18,659,554 visits has only one banner without ABP, with has 0 advertisement. Third place from the bottom lamer.cz with 2 banners without ABP and none with. Last fifth place from the bottom is occupied by raketka.cz has 5,306,857 visits, 2 banners at homepage and 1 add before online game. After enabling ABP only 2 banners left at the page.

The top five pages have an average of 7,312,047 visits, 9.6 ads without and 3.2 with enabled ABP on the other hand bottom ones have 5,530,865 visits, 1.8 ads without and 0.4 with ABP.

Conclusion of the top 5 pages with most ads and least ads without ABP

This observation shows that the web sites with most ads have more average visits than pages with least ads. The next thing to consider is top ones by average have more advertisement after enabling than the bottom ones and when is considered average number before ABP filtering and after, We can see the fact that top ones have 3 times less ads and the bottom ones have 4.5 times less From this view pages with least ads are less efficient in optimalising ads than the top ones.

10.3.3 Sites that recognizes the user´s adblock and allow to use the adblock at their sites

In the chart 3 we can see that every site at this list allows visitor to enter with enabled ABP but only two of them recognized the adblock extension.

The first one bonusweb.cz with 13,528,740 visits, which is the eight place from the top, recognizes adblock users and informs them by big pop up window with 3 boxes. As you can see in the picture 1, the first one informs the user about his enabled ABP and tells politely why it is important to turn off his extension. The user can click at the small red window which leads to the manual how to turn ABP off on his browser. In the second box there is an offer of adfree web version which is free for one month but later the user must pay a taxes. In the third and the last one the visitor is given opportunity to report fraudulent ads by sending an email to administrator of certain e-mail. Under this text there is a red window that allows the user to enter bonusweb pages with enabled APB. This pop-up windov can be seen in the picture 1 down bellow.

Picture 1 Homepage AdBlock security at bonusweb.cz

Source: bonusweb.cz (2017)

The second one humr.cz, with 7,078,010 visits occupied the twelfth position from the top, has different recognition of ABP users. At this site the user can surf with ABP on. Only if he wants to see a video or a gallery is forced to turn off his extension by element that loads instead of the video or the gallery with text saying: *„The AdBlock has been found in your browser. To play this multimedia you have to turn it off.*" This warning message is shown in the middle of the picture 2.

Picture 2 humr.cz warning message before the video content

Source: humr.cz (2017)

Conclusion of the sites that recognizes the user´s adblock and allow to use the adblock at their sites

From this observation it is obvious that ABP protection isn not so popular because it is used only by 2 examined web sites out of 26. This research described pages which are using the ABP protection held at average positions not at the bottom ones from the view of visits which can bee seen in the chart 3.

10.3.4 The most optimalised web pages compared to average of the other pages

In the next subchapte the 7 most optimalised pages will be compared to average of the 19 others which did not show any forms of advertisement. The average of seven pages was used for this purpose, they displayed the advertisement of the nineteenth average ones.

Chart 4 Most optimalised web pages compared to average of other pages

Position	Site	Total visits in 2016	Number of displayed ads without AdBlock					Number of displayed ads with AdBlock				
			Banners	PPCs	Pop-ups	Advertisement before willing content	Total	Banners	PPCs	Pop-ups	Advertisement before willing content	Total
1st	spark-rockmagazine.cz	1,087,712	13	0	0	0	13	13	0	0	0	13
2nd	games.cz	17,188,092	6	0	0	0	6	3	2	0	0	5
3rd	bonusweb	13,528,740	5	2	0	0	7	2	0	1	0	3
4th	tryhard.cz	5,256,659	5	0	0	0	5	3	0	0	0	3
5th	raketka.cz	5,306,857	2	0	0	1	3	2	0	0	0	2
6th	musicserver.cz	2,424,728	6	0	0	0	6	1	0	0	0	1
6th	filmserver.cz	1,087,851	6	0	0	0	6	1	0	0	0	1
average of the optimalised		6,554,377	6	0	0	0	7	4	0	0	0	4
average of the rest		16,197,339	4	0	0	0	4	0	0	0	0	0

Source: NetMonitor - SPIR - Gemius & Mediaresearch, own research (2017)

In the chart 4 can be seen that 7 following pages have some optimalized advertisements which are shown after enabling adblock. The first one spark-rockmagazine.cz, 1,087,712 visits and 13 banners with and without enabled ABP. The second place belongs to games.cz, 17,188,092 visits, 6 banners without ABP and 3 banners and 2 PPCs with. The third place bonusweb.cz 13,528,740Visits, 5 banners, 2 PPCs after enabling ABP only 2 banners and one informative pop-up window. Fourth place tryhard.cz with 5,256,659 visits has 5 banners with ABP disabled, after enabling 3 banners. The fifth place raketka.cz has 5,306,857 visits, 2 banners at homepage and 1 add before online game. After enabling ABP only 2 banners left at the page. The sixth place is held by musicserver.cz and filmserver.cz. musicserver.cz has 2,424,728 visits 6 banners before enabling ABP after only one and filmserver.cz with 1,087,851 visits has the same mumber of banners before and after like musicserver.cz. Other 19 pages shown 0 ads after enabling ABP together has 307,749,443 visits, 73 banners, 3 PPCs and pop-ups and 4 Advertisement before willing contetent.

Conclusion of the most optimalised web pages compared to average of the other pages

From this observation it is obvious that 7 sites displayed advertisement after enabling ABP in average had 6,554,377 visits compared to average of the other sites with 16,197,339 it is less. From this result chart it i is obvious that the site with optimalised advertisement has less visits than the unoptimalised ones.

10.3.5 The conclusion of all the measurement

In this subcapitol all the identified informations from the research were put together in order to complete the main task.

From the view of visits and ads

The most visited sites have less advertisement than the least visited ones. This small amount of advertising can be one of the reasons why these sites are so popular. This fact supports the result of the optimalised web pages where the sites with optimalised advertisements were less visited than the others. On the other hand it is not a rule because the top 5 pages with the most ads have more visits by average than the least ones.

From the view of the site advertising protection

Investigated sites are not protected well because only 7 of them show advertisement after enabling ABP. Only 2 sites are using the ABP protection window and an ABP user can enter each site in this research. Pages with least ads are less efficient in optimalising ads than the top ones. The sites using the ABP protection window held average positions from the point of visits.

Recommendations for the security of site ads before adblocker

For the security of the site advertising should be used for example a pop-up window which alerts the visitor about using of adblocking software, because according to this research the pages which using this form of protection held at the average positions from the view of visits.

Nex step to secure site advertising is use the banners, because it is form of the advertising which is the most displayed after enabling adblocking software.

10.3.6 Other results of the research

In the chart 3 other results of the research can be seen. For example the amount of the visits of all sites that fits in the criteria which was 353,630,082 visits, average number of visits is 13,601,157 and the median was 5,919,583. The most visited site was loupak.cz with 78,560,602 visits and least visited site was lamer.cz with 1,046,953 visits.

In the banner category the total number sum of all banner before ABP was 116 and after enabling there were only 25 banners. In average 4 banners before and one after. The median 4 before and 0 after. Modus 2 banners before 0 after. Maximal number of banners were 13 at spark-rockmagazine.cz, the same number has web site after enabling ABP. Minimal value 0 banners at homepage had alik.cz and after enabling ABP joined him more sites such as loupak.cz, horoskopy.cz, duelovky.cz and mamy more. All the sites wihout banners after enabling ABP can be seen in the chart 3.

PPC category total sum before ABP 5, after 2. Maximal value before and after enabling 2 point has bonusweb.cz. and other values such as average, median, modus and minimal 0. ABP in this case has no influence.

Total number of pop-ups were 3 with maximal value of 1 point at bandzone.cz, zing.cz and eurogamer.cz. When AdBlock plus were enabled all the pop-ups at the pages vanished, only at different page bonusweb.cz one pop-up window was displayed. Average, median, modus and minimal value before and after enabling ABP 0.

Advertisement before willing content was used at following 5 pages: zkouknito.cz, kinobox.cz, raketka.cz, eurogamer.cz and alik.cz. All the 5 sites had this kind of advertising in one quantity and after enabling ABP none of Them had a single advertising. Average, modus, median and minimal value were the same in the both measurement.

Total sum of total category 129 advertising were shown and after raid of ABP only 28 advertising left. Average number of advertising per site was 5 and after only 1. Median 4,5 after activating AdBlock plus median had changed to 0 which was the same value of the modus after enabling. Before was 3. The maximal number of advertisement had spark-rockmagazine.cz with total number 13. The number did not change after activating AdBlock plus and still the same. Minimal value were in the first measurement 1 and in the second one, when the AdBlock plus was enabled changed to the 0.

10.4 Conclusion

From the view of the site advertising protection
Investigated sites were not well protected because only 7 from 26 displayed advertisement after enabling the ABP. Only 2 sites were using the ABP protection which forced users to turn it off and the ABP user could enter all sites of the research. Pages with the smallest number of ads were less efficient in the ads protection than the top ones.

From the view of visits and ads
The most visited sites had fewer advertisements than the least visited ones. That small amount of advertising could be one of the reasons why the sites were so popular. The fact supported the result of optimalised web pages where the sites with optimalised advertisements were less visited the others. On the other hand it was not a rule because

the top 5 pages with the most ads had more visits in average than the others. The sites which were using the ABP protection window had the average number of visits.

Recommendations for the security of site ads before adblocker

For the security of the site advertising should be used for example a pop-up window which alerts the visitor about using of adblocking software, because according to this research the pages which using this form of protection held at the average positions from the view of visits.

Nex step to secure site advertising is use the banners, because it is form of the advertising which is the most displayed after enabling adblocking software.

Inacuracy of research measurement

Some banner points and PPC points may be different, due to personalized ads, but when they are add up together the final figure will be the same. This research took place on 4th January 2017 and it is possible that the numbers of advertisements might be different from another date. Marketing articles are not counted into the final score. The next factor that is not mentioned in this research is the fact that the visitor may have regard to the content of those pages and consider whether to dissable the blocker or not.

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Tablet 3 overall results

Site	Total visits in 2016	Number of displayed ads without AdBlock					Recognition of AdBlock	Admision to the page with AdBlock	Number of displayed ads with AdBlock				
		Banners	PPCs	Pop-ups	Advertisement before willing content	Total			Banners	PPCs	Pop-ups	Advertisement before willing content	Total
loupak.cz	78,560,602	3	0	0	0	3	no	yes	0	0	0	0	0
horoskopy.cz	57,607,982	2	1	0	0	3	no	yes	0	0	0	0	0
duelovky.cz	37,195,406	4	0	0	0	4	no	yes	0	0	0	0	0
karaoketexty.cz	34,993,606	3	0	0	0	3	no	yes	0	0	0	0	0
hry.cz	18,659,554	1	0	0	0	1	no	yes	0	0	0	0	0
zkouknito.cz	17,539,761	2	1	0	1	4	no	yes	0	0	0	0	0
games.cz	17,188,092	6	0	0	0	6	no	yes	3	2	0	0	5
bonusweb	13,528,740	5	2	0	0	7	yes	yes	2	0	1	0	3
kinobox.cz	9,019,937	7	1	1	1	10	no	yes	0	0	0	0	0
bandzone.cz	8,130,876	3	0	0	0	3	no	yes	0	0	0	0	0
hrej.cz	7,086,151	11	0	0	0	11	no	yes	0	0	0	0	0
humr.cz	7,078,010	5	0	0	0	5	yes	yes	0	0	0	0	0
moviezone.cz	6,001,473	3	0	0	0	3	no	yes	0	0	0	0	0
zing.cz	5,837,693	6	0	1	0	7	no	yes	0	0	0	0	0
hryprodivky.cz	5,677,368	5	0	0	0	5	no	yes	0	0	0	0	0
raketka.cz	5,306,857	2	0	0	1	3	no	yes	2	0	0	0	2
tryhard.cz	5,256,659	5	0	0	0	5	no	yes	3	0	0	0	3
nova.cz | herni portal	4,953,039	4	0	0	0	4	no	yes	0	0	0	0	0
eurogamer.cz	3,975,728	4	0	1	1	6	no	yes	0	0	0	0	0
musicserver.cz	2,424,728	6	0	0	0	6	no	yes	1	0	0	0	1
fandimefilmu.cz	1,744,341	6	0	0	0	6	no	yes	0	0	0	0	0
alik.cz	1,548,421	0	0	0	1	1	no	yes	0	0	0	0	0
abicko.cz	1,092,542	2	0	0	0	2	no	yes	0	0	0	0	0
filmserver.cz	1,087,851	6	0	0	0	6	no	yes	1	0	0	0	1
spark-rockmagazine.cz	1,087,712	13	0	0	0	13	no	yes	13	0	0	0	13
lamer.cz	1,046,953	2	0	0	0	2	no	yes	0	0	0	0	0
total sum	353,630,082	116	5	3	5	129	x	x	25	2	1	0	28
average	13,601,157	4	0	0	0	5	x	x	1	0	0	0	1
median	5919583	4	0	0	0	4.5	x	x	0	0	0	0	0
modus	x	2	0	0	0	3	x	x	0	0	0	0	0
maximal value	78,560,602	13	2	1	1	13	x	x	13	2	1	0	13
minimal value	1,046,953	0	0	0	0	1	x	x	0	0	0	0	0

Source: Own research based on data from NetMonitor - SPIR - Gemius & Mediaresearch (2017)

11. Sinanajová Ardiana: Artificial Intelligence and its impact on company management

SUMMARY
Main objective: The aim is to formulate recommendations for AI technology in company future.
Research methods: The theoretical part of this work was processed thanks to the analysis and comparing of literary research of internet sources on the topic of artificial intelligence. This same literary research of internet sources has been used in the practical part as well for the discovery of examples of the functioning of individual technologies. The practical part has used primary and secondary sources to evaluate the beneficialness of AI technology utilisation on the basis of 3 criteria. Subtechnologies were also evaluated to provide further detail into the conditions to which the technology is beneficial or non-beneficial. A Table of results is featured for the presentation of all criteria and the degree of beneficialness, followed by the author's comments. Recommendations on the usage of AI technologies in companies are deduced on the basis of these results.
Result of research: From the table of results, it is apparent that it is "beneficial" to "rather beneficial" to use AI technologies in companies in the economy and resource contexts as well as on the basis of how they are able to perform tasks compared to human resources. The results also show certain security threats which these technologies can pose on companies, consumers or even humanity as a whole.
Conclusions and recommendation: Companies should educate and inform themselves about the utilisation of the artificial intelligence technologies and should invest in them. It is however very important to acknowledge the issues of security. From the development of the AI itself, which could one day surpass the intelligence of humans, to working with information, which could get into the wrong hands and be abused thanks to the connected environment of the internet. Scientists are speculating whether and if they are able to develop an artificial technology that exceeds the human intelligence, therefore it is not possible to recommend any security measures as of right now. When it comes to the security of information and data, companies can buy and develop encrypting and anti-hacker software and can appeal to their customers to prevent the leakage of data. Another risky factor in introducing artificial intelligence is the unemployment of unqualified people who would lose their jobs as a consequence of employing a technology that would do it for them, and the overall risk of loss of mental capabilities in people. It is therefore important for companies to prevent these shortcomings, particularly by the requalification of employees, supporting of education and the overall proactivity of people. Even though the introducing of the technology of AI is mostly beneficial for the company, it is important for the company to acknowledge the fact that the technology is a machine

and cannot compare to a human in terms of emotion, which is one of the key factors to successful decision making that managers possess.

KEYWORDS
Artificial intelligence, company management, internet of things, virtual assistants, digital twin, innovation.

JEL CLASSIFICATION
O20 O30 O31 O32

LIST OF ABBREVIATIONS

AI	Artificial Intelligence
DT	Digital Twins
IoT	Internet of Things
VA	Virtual Assistant
VDA	Virtual Digital Assistant

11.1 Introduction

Technology plays one of the most major roles in shaping day-to-day lives. Looking back, the life expectancy of the U.S. population, for example, has increased from 47 years in 1900 to 68 years in 1950 and 78 years in 2005, thanks to technology. (Hoskins, 2009). Medical science and technology have helped cure former life threatening diseases that now seem very common and uncomplicated for the contemporary person.

Now, more than ever, it is important for companies to stay present in the global race for technological advance, as innovation not only requires creative management of companies, but also a technological, scientific and engineering background. A technological presence in every company. One of the largest recent technological advancements lay in the rise of Artificial Intelligence Technologies. It is only in the past decade that companies have been using AI to aid them in business growth and it is only until the last few years where it has touched the lives of regular consumer. It is starting to have a massive impact in all industries and fields imaginable.

The idea of this paper is that it will provide companies that do not focus very much on technological innovation an introduction into the world of AI, pinpoint its benefits and issues and also allow them to understand the ways to utilise the technology and at the same time maintain an awareness of its issues and have an idea on how to deal with them.

The main objective of this paper is to formulate recommendations on using Artificial Intelligence Technologies in the future of companies.

11.2 Theoretical-methodological part

The theoretical part acts as a brief factual background that will help understand the practical uses and concrete examples of AI technologies in the practical part. It acts as an introduction and contains the basic information about each of the innovative technological concepts that are currently trending and influencing businesses around the world. Information about AI in general is first provided moving on to information about particular practical uses of the technology.

The methodological part will serve as an enumeration of the methods used to gain the understanding of the topic and to providing a conclusion based on the findings.

11.2.1 Artificial intelligence

John McCarthy, co-founder of the field, states that Artificial Intelligence, or AI, is defined as "*the science and engineering of making intelligent machines, especially intelligent computer programs*" (McCarthy, 2007). As the co-founder of the field, he started working on the earliest versions of AI in 1955. Since then, AI has had its ups and downs and even "winters", however things that have happened in just the past few years were first considered science fiction, and have now become a reality (Määttä, 2017).

The simplest definitions of AI include computer systems able to perform tasks that usually require human assistance (Määttä, 2017).With that said, it is easy to imagine AI as shiny robots that can talk like humans, however, this is not the case, people do not realise that they are in contact with it as they learn to use new technology every day and they do not stop to think about the science behind it (Peart, 2011).

AI consists of many subfields, such as machine learning, deep learning, computer vision, natural language processing, machine reasoning, strong AI and more (Tractica, 2016). These subfields then work together to perform a range of tasks, from seemingly simple ones, such as Siri setting a reminder on an iPhone, to schemes set up by the local government, such as smart parking (Peart, 2017).

The past two years have seen several landmarks when it comes to important advancements in the field of AI. The most recent advances have seen AI systems surpassing human performance in image recognition and speech recognition (Määttä, 2017). The chapters below introduce and define some technologies that use AI – as is the case of VDAs and DTs, or are closely linked to AI as it is dependent on it– as is the case of the IoT. Panetta (2017) talks about the top 10 strategic technology trends of 2017, the ones that are linked to AI were chosen as practical examples of the technology and are written about below.

11.2.1.1 Virtual Digital Assistants

To understand the function of the Virtual Digital Assistant, (or VDA), it is important to acknowledge their predecessors – the Virtual Assistant. These VAs have gained popularity over the last 20 years and have functioned as an independent person on contract who provided administrative services to clients while not being present in the client's office (Investopedia, 2017).

The Virtual Digital Assistant is an intelligent software version, defined as an automated software application that assists the user in a similar way and is performed through the understanding of natural language in written or spoken form (Tractica, 2016). They represent the fusion of speech recognition, natural language processing and artificial intelligence. Examples of VDA usage range from enabling customer self-service through a database of FAQs in a search tool on company websites, interaction with a digital service through a chat interface (chatbots), to an actual conversational speech-based interaction, where the VDA facilitates scheduling, calling, dictation of emails and other services provided by familiar interfaces like Siri or Cortana.

11.2.1.2 Digital Twins

A Digital Twin is a digital model of something that delivers a business outcome (Parris in Bolton, 2017).

According to Dimitri Volkmann, Digital Twin Thought Leader at GE Digital, previous waves of digitalisation involved the dematerialisation of records and communications, moving from paper letters, orders or checks to digital only (Volkmann, 2016). He then explains that the next wave of digitalisation hence calls for a means through which we can pair digital objects to physical ones. The Digital Twin is thus developed in the Internet of Things space as the technology of choice to digitalise the world, where, "*fundamentally, it is the combination of data and intelligence that represent the structure, context and behaviour of a physical system of any type, offering an interface that allows one to understand past and present operations and make predictions about the future*" (Volkmann, 2016). Volkmann states that the Digital Twins can become very powerful digital objects that can help improve the performance of operations and business processes. These digital objects then act as a sort of a digital model which is programmed to have the same characteristics as it would in the physical world.

11.2.1.3 Internet Of Things

Even though the IoT is not classified as AI per se, it forms a symbiotic relationship with it and in many cases, they even depend on each other. The IoT has been chosen as an example to demonstrate the power of AI and the reach it has thanks to its interconnectivity.

The Internet of Things is used to refer to objects that are connected to the Internet (Marr, 2016). However, as one dives further into the rabbit hole, it becomes apparent that it is not as simple as being connected to the internet; these things are more like intelligent virtual objects with identities and personalities that can communicate in a smart space within social and other contexts, as is defined in a report published by the European Technology Platform on Smart Systems Integration (Lange, Santucci, 2008, p. 6). According to the Internet of Things Council, the 90s storage databases were too expensive and operation has been enabled since the 2000s since the introduction of the Cloud (Internet of Things Council, 2017). The Cloud is electronic data that is not stored on a device but captured through the internet, in other words, using software and applications that are not installed on the device. It creates a network, or the internet. The Internet of Things allows access and a flow between wearables, smart homes, connected cars and the smart city, the only key to create and maintain this flow is having control of the data (Internet of Things Council, 2007). This control is achieved through the use of AI technology.

11.2.2 Methodology

The sources for the processing of this paper came from the internet. Both, the theoretical and practical parts are based on literary research, where it was important to identify key technological concepts or argue with statistics or facts from the scientific world.

The technological concepts and trends spoken about in this paper are mostly very new and so only a certain amount of official research has been conducted on the topic to date. The vast majority of the papers and research were only available in reviews or shortened versions as the whole reports are still currently intended for the eyes of the managers of companies as registration is required without an option to log-in through an institution such as the Academy of Sciences Library.

The theoretical part of this work was processed thanks to the analysis and comparing of literary research of internet sources on the topic of artificial intelligence. This same literary research of internet sources has been used in the practical part as well for the discovery of examples of the functioning of individual technologies.

The practical part is a theoretical study which uses the research provided by cited organisations, institutions and authors to evaluate the beneficialness of the use of AI technology based on 3 criteria. Examples of AI technologies are evaluated in this paper using the same criteria, as it will help acquire further detail on the conditions the technology is beneficial or non-beneficial for the company. The AI technologies were chosen during literary research as they were cited among the top 10 strategic technologies of this year by a prominent researching facility.

Criteria that the AI are assessed on:

- Impact of AI technology on business sectors (Criterion 1)
- Beneficialness of AI technology compared to utilising human resources (Criterion 2)
- Safety / security (Criterion 3)

The criteria were selected based on the relevance in business use, in other words the main questions businesses would ask and issues they would address before implementing AI into their company.

The resulting level of beneficialness is deduced based on the scale below:

beneficial – rather beneficial – neutral – rather non-beneficial – non-beneficial

Deductions on the level of beneficialness were made using the criteria below:
Beneficial – unequivocally beneficial
Rather beneficial – beneficial but has flaws that can be manageably dealt with
Neutral – pros are equal to cons or neither beneficial or non-beneficial
Rather non-beneficial – has some benefits but the flaws outweigh them
Non-beneficial – causes harm/damage

Results are then drawn in a table and commented on. The contribution of this paper lies in the formation of recommendations which are deduced based on the synthesis of the results of the study. The paper is designed to act as an introduction to AI technologies to companies that do not focus on technological innovation as much and the recommendations should help them in the initial phases of introducing and implementing them into the company.

11.3 Practical part

The practical part contains the evaluations of AI as a technology in general then focuses on the practical uses to gain further detail into the beneficialness of the technology as a whole.

11.3.1 Artificial intelligence

Impact on business sectors

Recently, AI has been "creeping" into the business world through applications and software without many people noticing (Howard in Goldstein, 2016). According to research provided by Tractica, "*AI revenue will reach $38.8 billion worldwide by 2025, it will have an impact on almost every industry sector*" (Tractica, 2016). Tractica's analyses (2016) have also identified almost 200 cases of use of AI which are divided into 25 industry sectors, they anticipate that the top 10 industry sectors, where AI will be used, are:

- Business Service;
- Advertising;
- Media & Entertainment;
- Investment;
- Finance;
- Healthcare;
- Manufacturing;
- Agriculture;
- Legal;
- Education.

The utilisation of AI in business extends from apps that analyse customer behaviour, schedule business meetings, answer customer requests, to assisting in revealing opportunities that can assist business growth (Kutting, 2016)

Goldstein (2016) states that it is apparent that AI will make a lot of work easier and could help many businesses, especially small ones. However, on the other hand, the rise of AT technologies may result in the elimination of a whole category of jobs, such as drivers, truckers and ship captains will most possibly be replaced by self-driving cars, trucks and boats.

From the criterion of Impact on business sectors, Artificial Intelligence is "rather beneficial" as available data suggests that companies and industries are growing with the introduction of AI and will continue to thrive with the development of it. The negative impacts such as unemployment are manageable and can be dealt with.

Beneficialness of AI technology compared to utilising human resources

According to Mike Fekety, with AI, intelligent machines are built that can provide research with little to no error and great accuracy and precision that are often provided by humans with difficulty (Fekety, 2015). They can replace human beings in many areas of work helping people focus on more innovative and creative tasks than having to keep up with painstaking activities. These machines can help with time-consuming and repetitive, or even dangerous tasks and be made to act quickly and unaffected by factors that often affect many humans (such as emotions or personal needs).

The biggest advantage is that these machines do not need to sleep or take breaks, they can function with no need to stop (Weeks in Connolly and Gill, 2015, pg. 17). The tasks can be performed repeatedly for an endless period of time (stopping only for service check-ups perhaps) without it getting bored, tired or scared. Also, most ethical reasons are eliminated as machines are not living beings and are not covered by any ethical labour rights laws or movements.

It is best to demonstrate the use of an AI service with a real example. In 2015, Amazon launched a service called Amazon Machine Learning which lets companies and people of all skill levels build predictive models using their existing data. In its essence, the AI technology uses data that companies already keep track of to train algorithms that help predict the behaviour of users and deliver coveted results. Typical examples of this technology include websites providing new items based on past purchases, alerts from banks if they suspect a suspicious transaction and getting e-mails from stores about items that the customer usually buys and that are now on sale (Amazon Web Services, 2016).

A case study (Amazon Web Services, 2016) talks about the effects of the aforementioned technology. Upserve is a software that provides a restaurant management platform to restaurant owners. It provides them all the information they need in one place, real-time guidance to it and also interacts with customer spending, social media and other data, including credit card payments, menu trends and turns them into analytical reports. Upserve could hence analyse data that was inputted into the system, but could not provide prediction capabilities for the future. With the help of Amazon Machine Learning, two weeks after deciding about the use of AML, the app could already provide predicative analyses to the restaurateurs. Upserve could help its customers increase the profitability of their restaurant by helping them predict how full the restaurants would be on specific times and days and ways to more efficiently spread labour and food costs. If managed by a human staff member, these tasks would require hours of work, analysing countless, ever-changing factors that would be subject to error and would take a much larger amount of time to provide such reports and predictions of customers' behaviour for the future. This human would also most probably have to be an educated specialist and he/she would require a large monthly expenditure to be able to pay for their wage or the outsourced service, both of which are incomparable to what the use of the machine would cost.

As to the disadvantages of AI, resources have to be spent to maintain and repair them and also update, back up and secure them very well (Fekety, 2015). From another perspective, machines only act out what they are programmed to do and will not learn to do something new with experience. This also means that the machines will base their decisions on information, not emotion and will not be able to perform original creative jobs. Other disadvantages include that with the entrance of AI, human multitasking, lateral thinking and other skills are threatened as machines will start performing these basic functions which will deem them unnecessary to remember for the human mind. In other words, eliminating these daily tasks could result in the human loss of mental capacities.

To determine the beneficialness based on this criterion, AI is "rather beneficial" as the advantages such as saving time, money, resources, far outweigh the disadvantages that are very manageable.

Safety / security

Some also worry that artificial intelligence has the potential to destroy. In an interview for the BBC, Stephen Hawking talks about artificial intelligence and how humans are already using the primitive forms of it, but once full artificial intelligence is discovered, it could end the human race (Hawking in Cellan-Jones, 2014). *"Once humans develop artificial intelligence, it will take off on its own, and re-design itself on an ever-increasing rate. Humans, who are limited by a slow biological evolution couldn't compete and would be superseded"* (Hawking in Cellan-Jones, 2014). Many other important personas from the technology world also consider AI as a threat, Elon Musk, Nick Bosrom, or Ray Kurzweil to name a few.

When it comes to AI being used to actually implement security, some companies are developing the use AI to prevent, predict and defeat cyber-attacks (CB insights). These security algorithms are based on machine learning and have the potential to respond to threats as they occur and have the ability to keep on learning from these threats and other pools of knowledge (Cyberisk, 2016)

From evaluating the safety criterion, it is determined that AI is "neutral" in beneficialness from this perspective. This is due to the fact that even though AI does help with cyber security, the threat it could one day pose is too great. However, it is questionable when and if this day will come, developers have enough time to prepare and secure themselves for such a case. From a safety perspective so far, the advantages and disadvantages are equalised.

11.3.2 Evaluating AI in practice

The following chapter will evaluate examples of AI technology in use to provide further detail into the beneficialness of it.

11.3.2.1 Virtual Digital Assistants

Impact on business sectors

Many of the world's technology giants and researchers believe that VDAs will play an important role in their businesses in the future. According to research conducted by Tractica, there is growing potential in the VDA market as it will rise from $1.6 billion as an industry in 2015 to a predicted $15,8 billion by 2021 (Tractica, 2016). 25% of households in developed countries will utilise VDA services by 2019 (Gartner in Racounteur, 2016).

VDA technology is expanding beyond smartphones to other consumer devices and enterprise markets, such as fitness trackers, smart watches, smart home systems, automobiles, and others. Recent articles talk about how in the near future, people will no longer have to work with multiple apps, just literally talk to a VDA such as Siri, who will have everything in control – be it for the consumer or company (O'Neill, Gartner In Goodman, 2016).

According to Bart Perkins (2015), VDAs will be able to assist with transaction processing in finance, HR, supply chain and other parts of the enterprise. VDAs will be able to assist with transaction processing in finance, HR, supply chain and other parts of the enterprise. In addition, VDAs will assist analysts who are trying to make sense of the large volumes of data found throughout the enterprise. They could be essential to improving call center operations. In addition, VDAs will assist analysts who are trying to make sense of the large volumes of data found throughout the enterprise. They could be essential to improving call center operations.

From the Impact on business sectors point of view it is clear that the Virtual Digital Assistants are determined as "beneficial" as statistics and other trends and evidence suggest the wide-range application of this AI technology in business with no known disadvantages.

Beneficialness of AI technology compared to utilising human resources

One form of virtual digital assistants is using them as a personal assistant. Computer programs or smartphone apps such as Siri by Apple or Cortana by Microsoft can understand natural human language in spoken or written form and complete tasks for the user (Elgan, 2016). They include features such as dictation, reading text out loud, looking up phone numbers, reminding about appointments, entering requests into search engines, placing calls or planning meetings. Some newer apps, such as Google Now offer the broadest functions as it runs in the background and will store data about browser history, location, and information collected from apps, giving it great potential for prediction. VDAs are hence beneficial in saving time and are used to plan time instead of the person doing it himself. It offers shortcuts that are easier as they are speech based and allow the person to focus on more important tasks in their work.

Limitations of the VDA technology include that many queries can be misinterpreted by the application, if one does not say a particular key word or voice command, the app might not recognize the tasks. The speech recognition is also limited through dialects. For example, after asking Siri on an iPhone to "google virtual digital assistants", Siri replied "searching google for virtual digital assistance", which is similar, but has a different meaning.

Newer and more intelligent applications and software are still being released, such as the beta version of Facebook's "M". There are a few differences between VDAs such as Siri or Cortana and "M", one of which is that Mark Zuckerberg, founder of Facebook and developer of "M", does not wish for the app to be voice based. Instead it is based on Facebook Messenger, a messaging app that is being used by 700 million users (Seekingalpha, 2015). "M" is also a virtual digital assistant – human hybrid, meaning that AI works in combination with actual human assistants to fulfil almost every query. The beta version tests have showed that the app can provide information such as where to take someone who loves jazz on a date.

Another new generation of the VDA is Amy, a software that is great at scheduling meetings. By simply sending a cc: (copy) of the e-mail to Amy's email address, Amy takes over. Amy is good at natural language processing and understands texts like: "let's grab a bite to eat", she will then take action, introduce herself to the other person and based on her user's calendar and personal preferences she schedules a time and suggests a place to meet (Elgan, 2016). Amy, together with other virtual assistants, such as "*Shae, Amy and Otto, represent the future, as it will be more specialised, personalised, thorough, preemptive, highly intelligent and optionally available in the form of dedicated physical appliances"* (Elgan, 2016).

Though Facebook's "M" is technically a chatbot as it uses text to communicate, chatbots are primarily linked to customer service. Gartner predicts that more than 85% of customer interactions will be managed without human help and with the assistance of AI by 2020

(Gartner, 2011). Chatbots are expected to be the most used AI consumer application in the near future (TechEmergence in businessinsider, 2016). With the increase in mobile usage of apps and social media, it is important for companies to capitalise on the mobile messaging phenomenon. According to a study provided by ubisend, 64% of customers want to be able to talk to retailers through messaging applications (2016). Facebook IQ reveals in its study that 53% of people state that they are more likely to shop if they can message the business directly (facebook IQ, 2016).

Based on the above information, VDAs are "beneficial" when compared to human resources as the uses of virtual digial assistants aid businesses in development by allowing people to focus on other tasks than tasks that can now be done by machines.

Safety / security

There are some security concerns regarding devices that operate virtual digital assistants on a speech basis as they are not based on the voice of a particular user. As the devices that use VDAs as personal assistants are always listening for a command that contains a certain prefix, such as "Hey Siri" or "OK Google", questions arise on whether these devices could be used to document, record or transcribe conversations by a voice command by an unauthorised party (Haber, 2016). Also, third party sources could intervene by, for example, setting an event in the user's calendar. If a command starting with "Hey Siri" was played through television, for example, it could set off the Siri in many iPhones in proximity to the television.

Chatbots do not seem to pose a security threat as users only disclose information they wish.

For safety reasons the technology is hence "rather non-beneficial", until these security issues are properly addressed by law and in the technology structure itself.

11.3.2.2 Digital Twins

Impact on business sectors

Digital Twins in their basics involve the creating, testing and building of equipment in a virtual environment. Volkmann states that the Digital Twins are very powerful digital objects that can help improve the performance of operations and business processes (Volkmann, 2016). The advantage of the digital twin is in the fact that it cuts prototyping and construction costs and enables to predict failure (GE Look Ahead, 2015).

Examples of use include (Spacey, 2016) the testing of device performance, overviewing a digital version of a heart before surgery, identifying need for maintenance, drug discovery and more. It is difficult to determine a financial value to DT technology as it rather a dynamic software model of a physical thing than a product. It's real value lies in the prediction of outcomes and performance leading to saving of resources, lives and speeding up research discovery and information

Digital Twins have such a positive impact on companies and all sectors, they are therefore "beneficial" as the simulation of costly tasks could only help save company resources and only cons to the technology are the once mentioned maintenance costs.

Beneficialness of AI technology compared to utilising human resources

To name a concrete example of the advantages of a digital twin as opposed to using human resources, Atomwise, a drug developing enterprise has recently raised $6 million to speed up drug research using its artificial technology algorithms. This was mainly due to its recent success in drug discovery for the Ebola virus. Atomwise used the same Digital Twin technology that designs airplanes and computer chips in simulation, to predict the effectiveness of new medicines, reducing the need for expensive and time-consuming physical synthesis and testing. In other words, it used the side effects of drugs that are known and searched for new uses of existing drugs to speed up drug discovery. According to its press release from March, 2015, two drugs predicted by Atomwise's AI technology may actually be effective against the Ebola virus and reduce its activity. The drugs were usually prescribed for other illnesses and their effects on the virus were unknown up to then. The press release states, that a huge advantage of this system is that all the previously known drugs have already passed clinical trials for other illnesses, which means it is already known of them to have a safety profile. The analyses conducted by the AI would physically take months to perform by a person, but was simulated and completed digitally in less than one day (Levy in Techcrunch, 2015).

There are many case studies about the successful implementations of digital twins, so much so that the technology seems to have little limitations. They are presented as ground-breaking and are a step into the future where almost everything will be digitally modelled before physical implementation. The technology saves resources, predicts the outcome and helps reflect reality, and is hence "beneficial" compared to using human resources for the same tasks, where humans could use their newly acquired time elsewhere.

Safety / security

When it comes to security, no research or trends have been found to any benefits or threats to company security. DT technology is used to predict the outcomes of certain tasks and can help hence predict failures which could have led to negative events. In this sense the technology is "beneficial", however, as these findings are very theoretical at this current time and research has not yet been provided, the beneficialness result of DT in regards to safety / security has to be maintained as "neutral".

11.3.2.3 Internet of Things

Impact on business sectors

According to research provided by Gartner, there will be 20,8 billion devices connected to the internet by 2020 and consumer and business spending on IoT endpoint hardware will total $3 trillion by 2020 (Gartner, 2016).

According to predictions made by research company Forrester, investment into AI will grow by 300% in 2017 compared to 2016 and that businesses that use AI, big data and IoT will *"steal $1.2 trillion per annum from their less informed peers by 2020"* (Forrester.com in Forbes, 2016). Businesses that will prioritize developing IoT technologies will have a competitive advantage to other businesses. Customers will be investing more into their networking devices (i.e. smartphones, tablets) and exploring the data they produce, and will help the companies optimise their customer's experiences while they digitally engage with their products, services and support. The IoT will not only be beneficial for the ending customer, but also will help to predict when something like a jet engine will fail, saving time and money and even providing security as opposed to those who do not invest in such technology.

The disadvantages that may be included in the IoT have partly been mentioned in the AI section – the loss of jobs (Saxena, 2016).

From this point of view, IoT technologies linked to AI are hence "rather beneficial" for companies, where investing into IoT technology or connecting their product to the Cloud will most probably benefit the company. The problem of unemployment of unqualified workers can be dealt with.

<u>Beneficialness of AI technology compared to utilising human resources</u>

The practical use of the IoT is demonstrated by Libelium. Libelium is a company that designs and manufactures wireless sensor networks for Internet of Things and Smart World solutions. With the help of the IoT technology, cities and countries will have a solution to many of its problems from air pollution to time consuming parking. It will serve as rubbish level detectors, energy radiation measurement, snow level measurement to know the quality of ski tracks and for avalanche prevention, earthquake early detection, weather adaptive lighting on the street, monitoring of vibrations and material conditions in buildings and bridges, individual item location in big surfaces like warehouses or harbours, to indoor air quality, monitoring ozone levels, temperature monitoring, wine quality enhancing, study of weather conditions, monitoring patients inside hospitals and old people's homes, and many, many more (Libelium, 2017). Libelium is just an example of a company that cooperates with many other business giants in their consecutive fields such as Telefónica, Intel, Siemens, Philips, IBM, etc. The fields that the IoT will have a positive impact on are drawn on Picture 1 in the appendix.

That is why the IoT is "beneficial" as the IoT will help manage resources better without the need of human resources.

<u>Safety / security</u>

The Internet of Things can provide the optimist a view into a brighter, more connected, ecological and functional future. The interconnectivity of things driven by AI technology can lead to safer roads, for example, as self-driving cars will mean there will be less accidents as the vehicles will have a full 360°view around itself including an awareness of vehicles around it thanks to their connection to the internet (Thompson, 2016). However, there are many threats that have risen with having devices connected to each other. The loss of privacy and security is and will be one of the most prominent limitations to the technology (Saxena, 2016). Most of the world's information is available on the Cloud and will be prone to hacker attacks which can result from as much as having money stolen from a bank account, spying and stalking individuals, to mass anarchy as systems such as having traffic, electrical and phone grids disconnected by these attacks. From the current position, people are not driving self-driven cars yet, all these "smart-city" benefits have yet to be properly implemented with the current main focus landing on the threat the IoT poses on the loss of privacy. Right now, the IoT is from a security standpoint "rather non-beneficial" with data of even ordinary people being stolen and misused every day. The benefits to safety and security will rise in the future but so will also the threats.

11.3.3 Results and recommendations

The results are taken from each criterion and featured in the table as follows.

Table 1 Results – Beneficialness of each technology based on criteria

	Criterion 1	Criterion 2	Criterion 3
AI	rather beneficial	rather beneficial	Neutral
VDA	beneficial	beneficial	rather non-beneficial
DT	beneficial	beneficial	Neutral
IoT	rather beneficial	beneficial	rather non-beneficial

Source: own findings

AI technology overall is to rather benefit the company than to pose threats to it. The most benefits are shown in the growth of business sectors and the efficiency of AI compared to humans. Data suggests many industries will gain from AI and the author of this paper thus recommends to invest in the introduction and implementation of AI in companies of all sizes. Owners of businesses are recommended to educate themselves in their options of using AI, such as using Upserve in restaurants to predict the behaviour of their customers, creating a machine learning predicative digital twin that will research the combined effects of known drugs or establish a chatbot messaging service on their company's facebook page as a part of their customer service. A person or a group of people (depending on company focus and size) should be named / hired that will focus on keeping track on new ways AI technology is used in the world, and find ways to implement them into the company and also provide their own original research for AI technology development. This job can also be outsourced to outside companies or people on contract. Many companies such as Amazon will even provide businesses with the means through which AI can help them grow. This will help the company stay on track and keep up and benefit the most from new technological trends.

Companies are recommended to educate their employees to use AI technology - from small tasks such as using VDAs as time-management tools, to using them to process large volumes of data, or even designing and working with digital twin models to predict the behaviour of things and save resources. By educating their employees, the corporations could also avoid the negative impacts that many of these technologies have found to have – the unemployment of unqualified employees and the decreasing of human mental abilities. By requalification programs or progressive training, the loss of jobs can be minimised.

According to the results, where the IoT proved beneficial to rather beneficial in company usage, companies should interconnect and digitalise objects and systems as that will make them traceable and controllable and could lead to saving resources and even lives (e.g. tracking waste management systems, radiation levels, forest fire detection, etc). This can be done by cooperating with companies that focus on such tasks such as Libelium and will provide the best solutions, or in the case of larger corporations, invest in setting up inside departments that will focus on them.

The key to all of these tasks is to always acquire the knowledge of people skilled in AI technology, robotics and other similar fields. The recommendations into investments are high but accessible research and statistics show that they will be worth it.

The results of this paper also show that the main flaws of the technology lie in the security / safety issues, where the daily use of AI technologies can lead to security threats and information leakage. It is hence important for companies to thoroughly invest in security software solutions. An easy way to do this is to outsource cyber-security to other companies such as IBM security, Sophos or more local security companies such as Avast or Eset.

As to the threats AI pose on humanity as a whole, the level of intelligence of technology is in its complexity still nowhere near that of a human and it is still being discussed by scientists as to if it is even possible to ever develop a machine that can be at least as intelligent as a human. The recommendation here is general, therefore will not be included in the conclusion, but it is important as well – to maintain an awareness of this possibility in the future and to take precautions and maintain a level of transparency with other capacities in the field.

11.4 Conclusion

Ground breaking technology is being discovered every day. Businesses that use innovative technologies are going to be at an advantage as opposed to those that do not focus on technology to such extent. The purpose of this theoretical paper was to help companies that do not focus on technological innovation very much to draw attention into the benefits and issues into the use of artificial intelligence technologies. The objective was to formulate recommendations for AI in the future of businesses. This was attempted as follows:

The topic of Artificial Intelligence was defined in the theoretical part as well as general explanations on how it can be used – these practical examples were then also defined and their uses were explained. The practical part holds the evaluations of AI technology in general and its practical exemplars according to 3 criteria on a scale of beneficial to non-beneficial. The level of beneficialness was determined using research that was already provided by institutions, organisations and authors. At the end of the practical part, recommendations are formed on the basis of these evaluations.

The recommendations and the outcomes of this paper are concluded as follows:

- Companies should reserve resources to acquire new knowledge about AI technologies, their introduction and implementation into companies and aim to discover new ways in which to use them. This can be done through naming or hiring a person / group of people or even a whole company such as Amazon Web Services to take care of this.
- Companies should educate and train their employees, either on the usage of AI technologies, in creating them (digital modelling) or in requalification programs. This will also help prevent the unemployment of unskilled workers. Requalification programs can be designed by a HR administrator with the help of an AI expert.
- Companies should try to digitalise as many things as possible. From objects to systems which will help them keep track of them. Companies such as Libelium are specialised in such tasks.
- Companies should try to prevent security breaches as these technologies open the company to data leakage or hacking. This should also be done internally and using software developed by an outside company such as IBM or Avast.

Artificial intelligence is the key to a new age which is terrifying and incredible at the same time. Companies that have not yet tried to benefit from this technology should "jump on the bandwagon" and try to benefit from it while it is still new, because sooner or later they will be forced by the growing demand of consumers.

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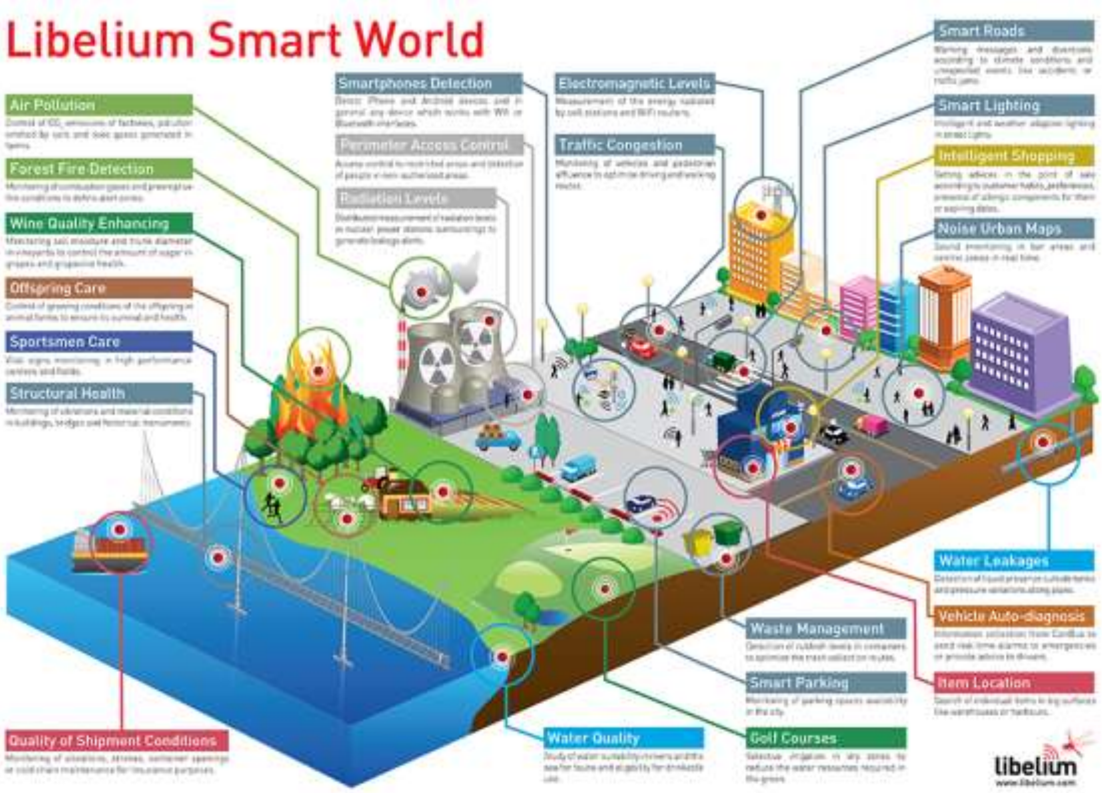
Appendix

Picture 1 Libelium Smart World



Source: Libelium, 2017

12. Uzdařová Veronika: Innovations in delivery services

SUMMARY
Main objective: The aim of this thesis is to evaluate the company Uber Rush. Furthermore, based on this evaluation, is to make recommendations for small businesses and regular customers on whether or not they should use Uber Rush or choose one of its competitors FedeEX Same day or USPS Priority Mail Express.
Research methods: The first step in writing this paper was a literature review of online resources after the author used this groundbreaking service, Uber Rush, during her stay in the USA. The drafting of the theoretical- methodological portion used predominantly foreign sources but utilized some Czech and secondary literary sources as well. Relevant information about innovations in E-commerce and in delivery services were acquired from secondary sources drawn from mostly foreign online resources. Literary sources were obtained from Google Books and were chosen as the basis for compiling the practical portion of the paper. Another method used was the comparison of authors using literary research. In the practical portion of this paper, various innovative elements in the delivery service as well as Uber Rush, the new delivery service on the market, are introduced. In the practical portion, the research method used is comparison. It is used to compare the new business model utilized by Uber Rush to other companies active in the market of same day delivery in New York City like FedEx Sameday and USPS Priority Mail Express. The author compares the important elements of individual companies, such as price, speed of delivery, operating hours, and the amount of insurance and coverage of a shipment. Furthermore, the method of induction is used, comparing advantages and disadvantages of Uber Rush, Fed Ex and USPS from the perspective of both small businesses as well as individuals.
Result of research: Implementation of various tech innovations has allowed Uber Rush to successfully grow and make the market of delivery better. In comparison to FedEx Same Day and USPS Priority Mail Express, Uber Rush is much better than existing companies on the market because they offer a much lower price for the delivery of both short and long distances. Uber Rush is also much more powerful and has the ability to deliver a parcel within one hour, while its competitors need 2-24 hours to make that same delivery. Furthermore, Uber Rush is better because of the possibility of online tracking using GPS and delivery options offering shipments 7 days a week, while its competitors only deliver 5 days a week with higher charges on the weekends.
Conclusions and recommendation: With innovation comes disruption in the market. This disruption can either be good for business or bad for business. It is up to companies to either choose to implement these innovations into their business models or run the risk of competitors implementing these innovations for their own business models. Innovation is often accompanied with growth and success in the market. However, depending on whether or not certain innovations meet the expectations of costumers is up to the business to decide. It is their job to choose

if implementation is the right fit for their companies for one size does not fit all when it comes to business models. Uber, a once small tech start up using already established crowdsourcing business model has moved into the market of delivery. They now offer on-demand delivery establishing themselves as a highly sought after option by customers when it comes to online shopping. Filling various desired expectations of customers, Uber Rush and other on-demand delivery services have the ability to compete against traditional delivery powerhouses like FedEx and USPS who currently lack in the market of on- demand service.

KEYWORDS

E-commerce, on-demand delivery, last mile delivery, innovation, crowdsourcing

JEL CLASSIFICATION

L81 Retail and Wholesale Trade, E-commerce
L87 Postal and Delivery Services
O31 Innovation and Invention: Processes and Incentives

12.1 Introduction

It is no secret that the E-commerce market has grown substantially from the dawn of the digital age until now. In a market where it seems like almost anything is just a click away for the consumer, global trends have shown that E-commerce sales are only continuing to rise. Take the U.S. for example. According to census.com (2017) The Census Bureau of the Department of Commerce, the U.S. has reported $101.3 billion dollars in retail E-commerce sales for the third quarter of 2016. This is a 15.7 percent increase from the previous year's third quarter numbers of 87.5 million dollars. 2017 promises to show similar increases as economist like Forrester Research Inc. in emarketer.com (2016) forecast, that E-commerce sale will reach an estimated 531 billion in the U.S. alone, topping an estimated 27 trillion dollars worldwide by 2020. The key driving force behind these numbers for the U.S. and other countries alike is the increase of overall internet users as more consumers and retailers gain access to the internet from which they can conduct business and do their shopping. More importantly, it is the way in which this business is carried out that has consumers doing most of their shopping electronically. Today’s shoppers have an unquenchable desire for easier, faster, more convenient and more personal ways to conduct their shopping. Retailers understand this desire as they too have similar wants of convenience and efficiency which they view as a means of driving up sales and profits. The market of E-commerce has become the vehicle in which to satisfy these desires which is why it has continued to change, develop, and grow. Growth in the market is usually accompanied with innovation. Innovation generally refers to the changing of processes or creation of more effective processes, products and ideas. For businesses, this means researching and developing new ideas, creating cutting-edge products or improving existing services in attempts to improve customer satisfaction and generate profit. Whatever the outlook, businesses must maintain their relevance in the market of E-commerce by having a competitive edge when innovation is concerned. They not only need to react to customer's requests for better services or products but to the new products or services offered by their competitors. Innovations are the main key to a business's growth and positioning in the market. One great opportunity for innovation and expansion in the market is in product delivery.

Today product delivery is all about options. Thanks to recent technological innovations, new delivery firms, and new business models, customers have a few more options when it comes to who arranges for a product delivery and how it gets to them when they order online. In previous years, customers shopping on-line could expect delivery by one of two companies; FedEx, or the U.S. Postal Service. Now, new companies such as Uber Rush and Postmates have emerged as competitors in the growing E-commerce market due to their ability to get products delivered faster, more flexibly, and sometimes less expensively than the traditional players have in the past. The aim of this thesis is to evaluate the company Uber Rush. Furthermore, based on this evaluation, is to make recommendations for small businesses and regular customers on whether or not they should use Uber Rush or choose one of its competitors FedeEX Same day or USPS Priority Mail Express.

This thesis examines the emergence of Uber Rush and its innovative service of on-demand last mile delivery via the use of new technologies and the use of new business models. First it defines both innovation and E-commerce and how they are broken down into categories. Second, it examines the past and current states of the last mile delivery market. Next, it examines emerging last-mile delivery business models like Uber Rush and analyzes the innovative technologies in which Uber Rush uses. Furthermore, it discusses the applications of these new technologies and business models in the market; highlighting both Uber Rush's pros and cons. Finally, it discusses the impact that Uber Rush has had on the market of last-mile delivery and the company's outlook in the future of last mile delivery.

12.2 Theoretical-methodological part

The theoretical-methodological section of this paper will define both innovation and E-commerce. Furthermore, this section covers the Oslo manual; breaking innovation into categories. E-commerce is also categorized to give a better understanding of what place Uber Rush is filling in the market when discussed in the practical section of the thesis. In addition, this section covers the current state of last mile delivery and discusses the idea of crowdsourcing as a tool used for delivery.

12.2.1 Definition of Innovation

In both Czech and English literature, there are several acceptable definitions and meanings of the word innovation depending on the field and context in which the word is being used. In fact, according to an article in torkar.se (2013) the Journal of Systems and Software wrote that there are over 40 different instances of innovation making it difficult to give one universal definition of the word. For this reason, in this thesis a general definition of the word is used. It encompasses various elements gathered from a couple different definitions of innovations from several different authors as followed:

According to Veber (2016, p. 79), the definition of innovation is an improvement, novelty or change that leads to something new in various areas of social life. He also states that innovation is a complex process; starting with an idea, continuing to realization/development and finishing with implementation.

OECD (2009, p. 11) says that all innovation must contain a degree of novelty. Eurostat (2005) in OECD (2009, p.26) also describes innovation as the implementation of a new or significantly improved product which can be but not limited to a good, a service, or a process of new marketing and organizational methods in business practices. OECD also describes innovation as a broad concept which includes a wide area of activities and processes in markets and networks as well as competition between organizations abilities and knowledge transfers.

Novák (2015, p. 21) in his publication explains innovation as a renewal and expansion of products or services on the market. He also explains innovation as the creation of new methods of manufacturing, delivery and distribution. All the authors above agree that innovation involves the changing or the creation of new methods, products or services. For businesses this means implementing new ideas into a business model, creating new products and services, or improving existing services.

Therefore, the general definition which will be used in this thesis is as follows: According to Business.gov (2016) innovation generally refers to the changing of processes or creation of more effective processes, products and ideas. For businesses, this means researching and developing new ideas, creating cutting-edge products or improving existing services in attempts to adapt, to grow and to succeed in the competitive marketplace while maintaining or improving customer satisfaction.

12.2.1.1 Oslo Manual

According to unstats.un.org (2011) "The Oslo Manual is the foremost international source of guidelines for the collection and use of data of innovation activities in industry. The latest edition was updated in October 2005"

According to Eurostat (2005) in OECD (2009, p.26) the Oslo manual discusses three relevant concepts: new to the company, new to the market and new to the world.

OECD (2009, p. 26) separates innovations into four basic categories:

- "***product innovation*** *– the introduction of a product or service that is new or significantly improved with respect to its characteristic and intended uses. This includes significant improvements in technical specification, components and materials, incorporated software or other functional characteristics,*
- ***process innovation*** *– an introduction of a new significantly improved delivery method or production to include big changes in techniques, equipment and software,*
- ***marketing innovation*** *– is an implementation of a new marketing method which involves fundamental changes in the 4Ps- product promotion, pricing, product placement and product packaging/design,*
- ***organizational innovation*** *– is the implementation of a new organizational method in a business practice or workplace."*

12.2.2 E-commerce

According to Azoor (2010, p. 2) E-commerce refers to the use of various electronic technologies to conduct commerce (ex. purchase, sell, transfer, trade or other services). Azoor further describes E-commerce as any business or commercial transaction that is taking place over the Internet.

Categories of E-commerce

There are 4 main categories of E-commerce according to digitsmith.com (2017) which are:

-*B2B (business to business*) – is a business model which involves companies doing business between each other. Some examples of B2B are manufacturers selling to distributors and wholesalers selling to retailers. Prices are usually based on amount of goods sold and are negotiable.

-*B2C (business to customer)* – is a business model where businesses sell their products through catalogs or shopping cart software with which there is no need for human interaction with a customer. When people think of E-commerce this is usually what comes to mind. An important component of this category is the delivery option after processing the order. Most businesses outsource delivery to a third party provider that uses its own fleet for delivery. Depending on the size and resources of a business, they may choose to in-source delivery instead, using their own delivery networks to ship orders.

-*C2B (customer to business)*- is a newer business model similar to the B2C model. However, the only difference in this model is that customers are selling goods and services to various businesses that are willing to bid on and purchase.

-*C2C (customer to customer)* is a business model where many third party web sites are offering forums and auctions that facilitate the transactions of products and services between customers. Consumers can buy and sell all kinds of various items and services securely and safely via online payment systems like PayPal. EBay auction service is the most well known example of a third party peer to peer website.

In addition to the 4 main business models previously covered, digitsmith.com (2017) makes mention of a few more. One such model is B2E (business to employee). B2E is a business model which is used for offering employees services and products provided by the company. Other models of E-commerce involve the government. These models include G2G (government to government), G2E (government to employee) and G2B (government to business) all which involve transactions with the government such as the helping with the filling of taxes or with business registrations.

12.2.3 Last Mile Delivery

The term "last mile" is used in logistics to describe the last leg of the supply chain, in which products ordered and shipped from a business are delivered to the home or final destination. Last mile delivery involves three key persons each with their own expectations and concerns; businesses, consumers, and delivery providers. The new trend being seen the last couple of years across the globe has been the rise in E-commerce sales. Many consumers have taken their shopping online, buying from the comfort of their homes or from the convenience of their mobile devices. For this reason, consumer preferences have become increasingly important in regards to last mile delivery. Customers have an increasingly higher set of expectations regarding delivery. They expect fast delivery, more flexible delivery hours, small costs, reliable service, and security/safety of their products while being transported and delivered. These expectations have become the major decision making factor for consumers when choosing a delivery option for their online order. According to a 2016 survey conducted by Temando.com (2016), most customers prefer same day delivery options over regular delivery options even if offered at a premium rate. However, according to a 2015 survey conducted by Deloitte.com (2015) consumers if given the option, prefer free shipping over faster shipping with an added fee. Not only are these expectations important to consumers but to businesses and delivery providers as well for they determine what delivery options they have to offer to gain a competitive edge and grow in the market. As a result, on demand delivery services have become an innovative tool for success in the delivery market.

According to Turban (2016, p.129) an express delivery option is called on-demand delivery service and it is part of the B2C (business to customer) business model. The on-demand delivery service must be done quickly after the store receives the order. This service must be done faster than overnight shipping but no slower than 30-60 minutes. In addition, Turban explains that most of the big retailers in the United States use third party logistics to deliver products to customers like traditional delivery companies such as FedEx or USPS.

12.2.4 Crowdsourcing

According to Sloane (2011, p.15) "*Crowdsourcing is the act of taking a job traditionally performed by a designated agent (usually an employee) and outsourcing it to an undefined, generally large group of people in the form of an open call*".

According to entrepreneur.com (2013), crowdsourcing can be used as a valuable resource among retailers which do not have the employees, trucks or warehouses to in-source delivery and ship it themselves. Crowdsourcing also gives the opportunity for businesses big or small to provide same-day shipping to its customers for the same or sometimes lower price than standard shipping. "*Up until now, the faster you got something, the more expensive it was*." (entrepreneur.com, 2013).

Furthermore, crowdsourcing.org (2014), explains that in 2013 the crowdsourcing industry was worth 375 million dollars. In 2015 the industry was worth 6.5 billion dollars according to fbicgroup.com (2016). This substantial increase is proof that the crowdsourcing business model has grown exponentially in only the past few years and it still has big potential for growth in the future.

According to fbicgroup.com (2016), the benefits of crowdsourcing not only include saving money but also providing access to a rating system. For example, e-Bay´s rating system lets signed in users making a transaction rank the seller on a scale of one to five in five different categories. Either the buyer had good experience or a bad experience. The rating will encourage/discourage the next potential buyer to make the transaction or not. The system helps generate a reputation for buyers and sellers, which in some cases becomes a potential factor in whether or not others will want to conduct business with those individuals.

12.2.5 Methods

The first step in writing this paper was a literature review of online resources after the author of this thesis used this groundbreaking service, Uber Rush, during her stay in the US. The drafting of the theoretical-methodological portion used predominantly foreign sources but utilized some Czech and secondary literary sources as well. Relevant information about innovations in e-commerce and in delivery services were acquired from secondary sources drawn from mostly foreign online resources. Literary sources were obtained from Google Books and were chosen as the basis for compiling the practical portion of the paper. Another method used was the comparison of authors using literary research. In the practical portion of this paper, various innovative elements in the delivery service as well as Uber Rush, the new delivery service on the market, are introduced. In the practical portion, the research method used is comparison. It is used to compare the new business model utilized by Uber Rush to other companies active in the market of same day delivery in New York City like FedEx Sameday and USPS Priority Mail Express. The author compares the important elements of individual companies, such as price, speed of delivery, operating hours, and the amount of insurance and coverage of a shipment. Furthermore, the method of induction is used, comparing advantages and disadvantages of Uber Rush, Fed Ex and USPS from the perspective of both small businesses as well as individuals.

12.3 Practical Part

The practical part of this thesis compares the new innovative third party delivery service Uber Rush to other third party and traditional delivery services on the market in the United States of America. It will discuss how Uber Rush has emerged as a growing competitor with the use of new innovative technologies and implementation of a new business model and why these new services set Uber Rush apart from the competition FedEX Same day and USPS Priority Mail Express appeal to the consumer. Finally, it will discuss the pros and cons of Uber Rush on-demand service.

12.3.1 Last Mile Delivery

There are three main groups involved in the market of last mile delivery; customers, merchants, and delivery services/companies. Each of these groups have their own set of expectations and difficulties. Customers have high expectations when it comes to the speed, quality of service, flexibility, safety and cost of delivery. Many customers when ordering online would like the flexibility of having the option to pick up the items in the store or have the items shipped home or to another location. Many prefer that deliveries take place on their time after normal business hours when they are more likely to be at home or on the weekends to ensure safer delivery of the items. Customers prefer shipping costs to be low or free and expect delivery to be fast.

Merchants main focus and concern when it comes to delivery is on costs and meeting the customer's expectations. High shipping rates are a huge factor for smaller businesses for they often lack the resources that allow larger businesses to offer cheaper and faster delivery. Due to increased costs many businesses, large and small, have started looking for more cost efficient solutions to delivery while still meeting customer expectations. To achieve this, they often offer multiple shipping options. However, many businesses still do not offer what customers value the most which is same-day delivery option or store pickup option.

Delivery companies have their own difficulties when it comes to cutting cost and meeting consumer and merchant expectations. They must provide speedy service but at the same time keep the costs of this fast service low. They must provide great customer service and must deliver items to the right place without damage.

12.3.2 Technological Innovations in Delivery

Technology is not the only factor that can influence whether a delivery model will be successful in a market. However, they cause more and more disruption each passing year as technology continues to evolve and get better. The following are a few examples of software innovations that have been improving the market of last mile delivery.

Rating System- The best way for companies to keep track of how their employees are performing and to make sure that their drivers provide the high-quality service that is expected of them is to have online rating system. This system can be based on a variety of categories including speed and level of professionalism. Ratings can be given from both businesses and customers. This system provides an honor system which can motivate drivers to provide better services.

Communications with Customers- Communication is very important, whether it be over email or a phone via text message or phone call. Communication is helpful in delivery for it provides a timeline of when the customer can expect their products or services. Businesses can provide a delivery service alert to the customer with delivery details. Some of the delivery companies allow the customer to communicate with the delivery service directly for example, the customer can pick preferred time of the delivery or change the delivery address to a more convenient location.

Courier Matching – Matching software uses your location and location of the closest delivery driver to match you with in attempts to cut the delivery time. A closer driver means shorter distances and less amount of time to deliver.

12.3.3 Uber Rush

A lot of people already know the ride sharing giant Uber. It is an app in which people use their smart phones that have an Uber app installed to connect with drivers. The drivers are usually freelancers looking for extra income and because the minimum requirements which an Uber driver has to meet are simple there are a lot of Uber drivers out providing services. According to Uber.com (2016) you have to own a vehicle 2001 and newer, be at least 21 years old (in USA), have one year of driving experience and have a valid driver license. Uber works as an online taxi service where as a rider you request your ride through an Uber app and pay online with your credit/debit card which is linked to your account.

According to jobmonkey.com (2016) Uber was founded by Travis Kalanick and Garrett Camp in 2009 in San Francisco, California, USA and currently operates in 311 cities and 58 countries around the world. In 2014, Uber introduced Uber Rush, the on demand delivery service which currently operates in San Francisco, Chicago and New York.

According to businessinsider.com (2014) it all started when Uber began experimenting, starting with on-demand delivery of flowers on Valentine´s day and on demand ice cream delivery on hot summer days. Uber Rush is fast and efficient but it is inexpensive compared to other same day delivery companies on the market which makes it so innovative and stand apart from the rest. The difference between Uber Rush and other crowdsourced delivery companies like Postmates is that Uber Rush fulfils many delivery needs, not only from the app but as an option for delivery for online shopping as well.

How it works: a customer orders items from a local business and Uber Rush handles the delivery- it is up to every business if they want to add the delivery cost of the item to the total paid by the customer or pay it “out of pocket”. Most customers will not even know that they ordered delivery with Uber Rush until they receive a text message, which informs them that their delivery is on the way together with a link with GPS online tracking of the package. Since quality of this delivery service might be difficult because of thousands of freelancers, Uber Rush resolved this potential problem with letting shoppers leave feedback on the drivers which not only motivate the drivers but also make this service more personal.

Uber Rush can deliver not only items from all kind of businesses across the city but can also work for personal use like when someone forgets their passport at home while they are already at the airport or when someone forgets their raincoat at the meeting and is already on the way home. This innovative delivery service does not have many competitors on the market yet; most likely the opposite because it is giving a hard time to other well known delivery services such as Messenger, UPS, FedEx and U.S Postal Service because they do not offer on demand delivery. Compared to Uber Rush these competitors are overpriced and their delivering to the local areas take them about 24 hours. Even though Uber Rush is a big help for all kinds of small businesses around the 3 above mentioned cities there are restricted items according to Uber.com (2016) which cannot be delivered. An Uber driver is not allowed to deliver and can refuse to carry items such as alcohol, very expensive or rare items, fragile items or dangerous items. Another potential setback for businesses is the size of the package for bike deliveries which cannot exceed over 30 pounds and because of these restrictions it might not be possible for some businesses to use this same day on demand delivery service.

Seller Arranged Delivery

After the customer’s order is made and processed online, most of the sellers would use third party delivery providers to get the customer’s package delivered (USPS and FedEx). Lately however, new options like on demand delivery are being considered and used for local deliveries. Uber Rush, which uses a mobile crowdsourcing app, has become the answer for growing customer expectations for faster, more personalized and more cost-affordable services. This option of on demand last mile delivery is very helpful for new businesses engaging in E-commerce especially local restaurants for they can reduce initial investments. They can outsource their delivery with Uber Rush meaning they would not have to operate their own delivery vehicles or have to employ their own full-time drivers. They can also offer significantly faster delivery with the use of Uber Rush because delivery takes between 30-60 minutes.

Buyer Pick Up

If a store has the extra inventory retailers can offer their customers the option of ordering online but instead of getting it delivered for extra shipping costs to its final destination they are offering the option to pick the item in the nearby store usually for free. This option is especially convenient for people, who prefer to see and check the item before they make the final purchase. However, if the customer changes their mind or just doesn’t have the time to get the item themselves, they can request an Uber Rush delivery. Uber will go to the store and pick up the item for the customer and have it delivered to them wherever needed.

12.3.4 Advantages of Uber Rush

In chart 1 below are shown the three biggest same day third party delivery services which operate in New York City, USA. The author compared a couple of very important factors which make people decide what company they would hire to get their packages delivered the same day. The important factors compared in chart 1 below are the price of the delivery, the weight limits for one package, length of deliveries, online tracking options, protection options for the package and what days and times during the week they will deliver the package.

In chart 1 the comparison between Uber Rush to FedEx Same Day and USPS Priority Mail Express shows Uber Rush as a cheaper option, even if the package would be delivered either a short or a farther location. FedEx is charging extra money for weight of the package which means that even if they offer a weight allowance for the package up to 150 lbs, a package heavier than 50 lbs will get charged an extra fee. Uber Rush does not have any restrictions for the maximum weight of a package one can send but it should be easy enough to carry for the delivery person to handle. Also, Uber Rush offers online GPS tracking where you can track your package along the route thru the city. FedEX and USPS show the position and status of the package only when the package is scanned by the delivery person. Another category where competitors can not compete with Uber Rush are hours and days of operation. FedEX Same day operates only during the week and for weekends and holidays they are charging usually a price which is higher than the delivery itself. Uber Rush uses the crowdsourcing method which matches the closest drivers to pick-up and delivery locations. Since they are already out in the city the delivery time is only about 30 minutes to 1 hour, depending on traffic, which is 2-5 times faster than FedEx Same Day. FedEx drivers have to follow their designated route which takes much longer than a direct route to the delivery location. USPS Priority Mail Express is slower because the driver has to take the package back to the Post office before being rerouted as priority mail in the morning on the regular route of the post man.

Chart 1Competitors on the same day delivery market

	Uber Rush	FedEx-Same Day City	United States Postal Service- Priority Mail Express
Price	for customer $3 base fare+$4 additional mile for business $5.50 for first mile/$2.50 extra mile	$16-68 depends on length of delivery+ extra surcharge when package weights over 50lbs	21-30 $ depends on length of delivery
Online Tracking(GPS)	yes	only when is package is scanned	only when is package is scanned
Length of Delivery	30 minutes to 1 hour	2 -5 hours	24 hours
Weight Limit	no weight limit (driver must be able to carry) / 30 lbs for bike deliveries	up to 150lbs	up to 70lbs but must be able to fit in a seal flat rate envelope

Days of Operation	7 days a week+ holidays no extra charge	5 days a week and weekends and after 7a.m-8p.m surcharge $20 + holidays surcharge $40	6 days a week- Sunday and holidays for extra fee
Protection	coverage up to $250	surcharge$1 for every $100 the package worth	coverage up to $100

Source: Uber.com (2017), FedExSameday.com (2016), USPS express.com (2017); own creation

12.3.5 Pros and Cons of Uber Rush

Some of the pros of using Uber Rush instead of their competitors are:

No overhead or additional cost for a business to ship item (only a cost for the delivery itself). Price – it is cheaper than regular delivery companies (e.g. New York City $5.50 within 1 mile/2.50 per extra mile). It is also faster which means your package will be delivered mostly in less than an hour by matching with driver close to start point of delivery.

It will be more personal: when you are sending the package you are able to pick the driver depending on his score/ratings from previous deliveries, being able to rate quality of service upon delivery, limited amount of resources used because whole pool of employees from already established crowdsourcing business model. More flexibility: can drop off package almost anywhere within its operating zones and also can track delivery using online tracker via the UBER Rush app.

There are also some negative features which Uber Rush has and should work on in the future. One such negative feature is availability. Uber Rush needs to expand the company to more cities across the United States as well as Europe where there is currently a lack of this kind of business. Other con that Uber Rush has is the restriction for items that can be delivered and the loss of GPS signal in the metro when delivering packages by foot.

12.4 Conclusion

Technological innovations are helping improve existing business models as well as create new business models in the market of last mile delivery. Last mile delivery has received a substantial amount of attention from investors and businesses as the global trend of E-commerce continues to rise. Rising rates of commerce taking place online means greater need of a delivery service to get those products to the consumer. For this reason, the market of delivery has become large and profitable. The aim of this thesis is to evaluate the company Uber Rush. Furthermore, based on this evaluation, is to make recommendations for small businesses and regular customers on whether or not they should use Uber Rush or choose one of its competitors FedeEX Same day or USPS Priority Mail Express.

Success in this market relies on whether or not a delivery company can meet a costumers' preferences and expectations for they are a major decision making factor when choosing a delivery option. Customers expect faster, cheaper, more reliable, more flexible, safer and more secure delivery options. Uber Rush has met these expectations by providing an innovative business model of on-demand delivery to customers across three cities. Through their use of crowdsourcing and other innovative technologies like their mobile app, Uber Rush has successfully managed to provide these services to customers. Uber Rush is continuing to build upon and expand on their services to others around the country. Their success has made them a competitor against larger traditional players in the delivery market such as FedEx and USPS. As technology continues to get better and more innovative business models will be developed and implemented into the market. Uber Rush´s outlook on the market of delivery looks bright but may face some challenges in the future. Uber Rush has really forced FedEX and USPS to evolve their business practice after decades of monopoly has permitted them to remain content. We will continue to see new disruptive models that many might see as "unfair" as technology improves.

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13. Varga Viktor: Work motivation and management: Pros and cons of six-hour shifts

SUMMARY
Main objective: The main objective of this work is to identify the six and eight hours working time. The work deals with comparison of working times in two European countries – Slovakia and Sweden. The main aim of the work is to identify which of the two working times compared, six or eight hours working times, are more suitable for employees and for the companies. In the theoretical part are described positive and negative aspects of both working times. The practical part deals with the experiment with six hours working time which was held in Sweden. This working time was compared with the traditional eight hours working time in Slovakia.
Research methods: The main methodological techniques used in this paper were following: background research, analysis of the information, deduction of the results. Background research was used to select relevant information from the sources such as articles, internet sources and studies. The focus was placed on truthfulness of the information from the selected sources. Background research helped us to understand the problematic and the knowledge gained was applied to the theoretical part. The practical part was based on information taken from the internet sources. Current relevant economic articles were analyzed and appropriate information was taken. The topic of the article is about current situation so taking information from the internet was the best choice.
Result of research: Based on the research conducted regarding six hours working time which was conducted in Sweden was found that this type of working hours was suitable for employees of the company. Six hours working time has been proven as positive in several companies in Sweden. Attempts to six hour working time in Slovakia were not widely approved by companies. This type of working hours is only in two companies in Slovakia. It was found, during the research, that eight hours working time in Slovakia will not be changed, not even by legislation.
Conclusions and recommendation: It is clear from the research that six hours working time will stay in the level of experiments and only future will show whether it is positive step forward or it is a step back. According to information in the work eight hours working time is not effective and it is also obvious that different types of work take different concentration. The recommendation for the companies thinking about changing the working time to six hours should be considered among several aspects. The first one is whether the employees would agree with this type of working hours. The second one is whether the company will manage six hours working

time financially. The profitability of the company is the primary thing. Six hours working time is probably not suitable for every type of the company. The company must decide what the best choice is, from the economic and employees point of view.

KEYWORDS

Working hours, Sweden, Slovakia, experiment, company, employee, employer

JEL CLASSIFICATION

J21 Labor Force and Employment, Size, and Structure
J22 Time Allocation and Labor Supply

13.1 Introduction

Throughout the history people always dealt with problems with working time. To have a suitable life people expect to have good well paid job. It is not always simple for company to find dedicated employees so they try to find the best possible way to harmonize working time, salary of the employees with the economic profitability of workers. Six hours working time is not suitable for every job sector. Sometimes the employers must choose between happiness of the employees and economical prosperity.

The main aim of the work is to identify which of the two working times compared, six or eight hours working times, are more suitable for employees and for the companies. The work will compare two European countries Slovakia and Sweden and their point of view on working time. The paper talks about the experiment with six hours working time which was carried out in Sweden and compares it with traditional eight hours working time in Slovakia. The methods used for the purpose of this work are background research, selecting of information from the sources, analysis of the information, deduction of the results and comparison of information. These methods helped to understand the problematic and the knowledge gained was applied throughout the work. The work consists of theoretical and practical part. It finishes with conclusion where information about the results of the comparison of mentioned working times are summarized. There are also included recommendations about the dealing with the working time. The recommendations are for the companies and for their employees as well.

13.2 Theoretical – methodological part

Theoretical part, at the very beginning, describes the problematic of working time generally. In the next part, there are described positive and negative aspects of six hours working time. In the following subchapter, there are portrayed positive and negative aspects of eight hours working time. Both working times are described in the examples of two countries Slovakia and Sweden. The methods used for this part of the work helped to understand the problematic.

13.2.1 Working time

The most common working time all around the world is eight hours a day, five days a week. Economist John Maynard Keynes, in his essay Economic Possibilities for our Grandchildren from 1930, wrote that his grandchildren will not work more than fifteen hours a week after hundred years. *„For many ages to come the old Adam will be so strong in us that everybody will need to do some work if he is to be contented. We shall do more things for ourselves than is usual with the rich to-day, only too glad to have small duties and tasks and routines. Three-hour shifts or a fifteen-hour week may put off the problem for a great while. For three-hours a day is quite enough to satisfy the old Adam in most of us!*" (Keynes, 2017).

Was Keynes right? Will people work for three hours a day in 2030? The future will show the result. There are still few years to be passed. The truth is that the number of working hours is lowering. In 19th century people usually worked ten hours a day. The trend of 20th century was to shorten the working time to eight hours a day. In the 21th century the working day still remains to eight hours, but the trend is to shorten it. In the 20th century companies started to use other forms of contracts with their employees. Those, for example, are part-time jobs, home-office work, flexible hours working or six-hour working time.

13.2.2 Positive and negative aspects of six-hours working time

The six hours working time sounds good for most of the people. It brings money for the eight hours work and plenty of spare time for hobbies and family. The shorter working time has positive sides also for employers. Employees working less hours are happier and more productive. They take less sick leaves and their time at work is dedicated to work only. According to Golden "*one reason people work as many hours as they do is at least partly or initially involuntary, outside their direct control.*" (Golden, 2006 in Burke 2006, p.21).

Kivimäki (2017) wrote that the positive aspects of shorter working time were visible in the experiment described by Kivimäki which took place in Sweden. Kivimäki (2017) also wrote that workplace environment and health of staff has improved because of shorter working hours. There has been 10 percent reduction of people calling sick. This could be counted as positive step forward. In Slovakia there are only two companies where this type of working time is applied. People in the company mark this also as a positive step.

Among negative impacts of six hours working time could be counted the fact that the pressure on the employees could be higher. The employees, during the shorter time, should be able to do the same work as those having a longer time. This could be stressful. The opinion of Gail Kinman in the article by Sheffield, who is professor of occupational psychology at the University of Bedfordshire, is clear "*The risk is that people may work more intensively and try to cram more work into a shorter period of time which would increase rather than reduce pressure.*" (Sheffield, 2016).

Another negative aspect about shorter working time is that the companies must hire new employees which raise their costs. The salaries paid to the staff are the same as if they had worked for eight hours and the payments to the state are also the same. The measurement of the economical benefits is therefore difficult. Tvardzík (2016) wrote for the etrend.sk that higher costs of levies and taxes should be offset by higher employee productivity, less staff turnover and lower sickness. The higher costs of the company should be balanced by higher productivity of employees. Shorter working hour appear to be more productive. Pencavel (2014) from Standford University claims that employee´s performance drops sharply when they work more than 50 hours a week. If the working hours exceed 55 hours the company can cease their business straight away. The effect of additional work is so negligible that it does not matter whether someone works 70 hours a week or 50 hours.

13.2.3 Positive and negative aspects of eight – hours working time

Research from Standford University mentioned by Greenfield (2016) found out that there is non-linear relationship between hours worked and output but the fact is that too much work can damage productivity and effectiveness of the work done but employees who are overworked. They make more mistakes at work and their productivity lowers. Among positive aspects of eight hours working time could be counted the fact that people can done their work in less stress. The truth is that they spend more time at work but the employees have time to fully concentrate on work and have time needed to do the job properly. The breaks taken during this working time are useful for restart of the thinking.

The costs for eight hours working time are the same as the costs of six-hours time. The costs and the profits of the company, with six hours working time, could be disproportionate. Those are the two sides of the coin - profits of the company or happy employees. Some countries in Europe fear that with six hours working time the productivity might fall. Therefore, they keep eight hours working time. The companies must decide what is best for their productivity – happier, productive employees with shorter working time but with the same salary as for eight hours shifts or less employees working eight hours a day who are less concentrated after few hours of work with the same cost for the company.

The negative aspects of eight hours working time are that employees have less time for their families and hobby. They spend most of the day at work and come home late. The Oxford University study, mentioned in article at panobcan.sk (2016) claims that employees starting their work early suffer from sleeping deprivation. Longer working hours and stress at work could lead to heart disease and stroke. This is described more closely in the medical study published in Lancet (Lancet, 2017). The study´s results are not as positive as it may sound. If the employees who work eight hours a day would start later in the day it would prolong their day even more. They would come home late and have no time for their private life. People are the most productive in the morning so the early start can bring positive and productive day.

13.2.4 Methodology

The main methodological techniques used in this paper in theoretical and practical part were the following: background research, selecting of information from the sources, analysis of the information, deduction of the results and comparison of information. Background research was used to select relevant information from the sources such as articles, internet sources and studies. The focus was placed on truthfulness of the information from the selected sources. Background research helped us to understand the problematic and the knowledge gained was applied in the theoretical part.

The practical part was based on information taken from the internet sources. Current relevant economic articles were analyzed and appropriate information was taken. The topic of the article is about current situation so taking information from the internet was the best choice. The conclusion and recommendations were based on information gained throughout the writing.

13.3 The practical part

In the practical part of this work the reader can find description of the working time in Slovakia and its changes throughout the history. It shows the traditional way with dealing with eight hours working time. The next subchapter describes working time in Sweden. There is also description of an experiment with six hours working time that took place in Sweden. The aspects of working times in both countries are compared on specific examples of the companies. The practical part finishes with comparison of working times in both mentioned countries and shows which working time is suitable for employees and for companies.

13.3.1 Working time in Slovakia

Slovakia is country with more than five million people. As Kvarková (2009) states, most of the population in Slovakia work five days a week. There are of course exceptions, in some occupations, where it is not possible. The average working time in Slovakia is slightly higher than in EU15 countries; therefore, the usual hours worked are 40. This is e number counted for full time workers. In Slovakia, part-time work or flexible working hours are not as usual as in other states of Europe. Only 3 % of people in Slovakia work part-time. As a traditional country, Slovakia uses full time work with fixed working hours. The new legislations allowed homework and telework, but this type of work is not so common yet.

Kvarková (2009), in the article, also states that part-time work is performed only on demand of the employer. Most reasons for part-time workers are health 18,5 % or inability to find full-time job 12,5%. The Government of Slovakia is open to the new forms of employment. This is stated in the Documents of the Government - The National Action Plan for Women, Strategy of Equal Opportunities for Women and Men, National Action Plan on employment. Part-time jobs are not well paid by employers and the costs for the company are the same as for full-time contracts. This is the main reason, why these types of contracts are not preferred by companies. The fact that Slovakia joined European Union in 2004 had a positive impact on decrease of working hours due to the new national legislations. As it is described at ec.europa.eu (Eurostat, 2017), other adjustments to the fixed weekly working time can be negotiated through the collective agreement or employment contract in particular company.

In Slovakia, it is not common to work overtime. If the employer works overtime, as it is written in the article (Eurostat, 2017), the employee must pay addition to wages and wage compensation. The employer and employee can agree in different form of compensation, for example compensatory leave, employer will not get wage surcharge. The average weekly working time, including overtime, cannot exceed 48 hours.

13.3.2 Changes in working time in Slovakia

Determination of working time, as it is claimed by Pacherová (2011), is a result of historical development. This particular topic is of interest of doctors, sociologists and many other experts. The results of their research are applied to the practical life and they are usually workers oriented. Experts do not try to extend the working hours. The longer working hours, even one or two hours a day, bring, according to psychologists, negative impact of workers. Psychologist Hrozáň states, that "*In Slovakia, these efforts are additionally associated with a wrong political system that causes an increasing decline of human labor. This is also the* *reason why growing number of people ends up on the street and leave their family in poverty and deprivation.*" (Hrozáň, 2011 in Pacherová, 2011)

In 2011 Slovak trade unionists tried to establish new working time, 35 hours per week, but the economics problems of the country in this particular year did not allowed it. Changes in working time in Slovakia should be brought by new legislation. In the past few years, nurses, doctors and teachers were dissatisfied with their working time and salaries. They tried to raise their salaries and negotiate new working hours through strike. Some changes were made but the result of the strike was not satisfactory for them.

According to Vladimír Maňko from political company Smer, it is not suitable if the legislation changes according to serious deformations of labor market that are brought by economic crisis. He says that the Europe holds the principle that people should be able to comfortably live from one job, not two or three. Residents of Slovakia work more than one job if they want to have a suitable life. (Pacherová, 2011) The idea of Maňko is interesting but in Slovakia unreal. The problem in Slovakia is not usually about the working hours but it is about the salary paid for the work. Shortening of working hours will not solve the problem.

13.3.3 Working time in Sweden

Sweden is larger country than Slovakia. Its population is more that 10 million people. Thorsén and Brunk (2009) in their paper write that the working time in Sweden has no general trend in increasing or decreasing. According to authors, in 2006, men worked on average 38 hours per week in their main job and women worked 32 hours a week. The number of hours worked in full-time jobs has been quite stable. The number of working hours in part-time jobs has increased.

Several attempts were made in Sweden to reduce working time. The most active were the Committee which gave out several proposals how to do it. Their attempt, as it is stated in the paper written by Thorsén and Brunk, was to "*lower the weekly average working time from 40 hours per week to 35 or 38 hours per week, or to abolish the working time regulations and make working time more of an individual issue.*" (Thorsén, Brunk, 2009) The article continues with the statement that the Swedish Government, the Confederation of Swedish Enterprise opposed to this proposal. According to Thorsén and Brunk (2009) the decline in working time would lead to lower growth and worsen the economic situation for smaller companies. On the other hand, three large trade union confederations SACO (the Swedish Confederation of Professional Associations, TCO (the Swedish Confederation for Professional Employees and the LO (the Swedish Trade Union Confederation) agreed with the suggestion of shorter working time for full time employees.

Working week in Sweden is 5 days. Only 7% of working population works six or seven days a week. There are also several possibilities for contracts with employees. The most common contracts are full-time jobs and part-time jobs. Thorsén and Brunk (2009) discuss that the demand for shorter working time is not very useful. The more important is the demand for raising the wages of the employees. In Sweden, part-time work is generally viewed negatively by the trade unions. The Swedish Trade Union Confederation has a long-term vision of a general work time shortening to six hours per day. The attempts of the country are visible. It is clear that people would like to have shorter working time because they like to spend more time with their families.

13.3.4 Changes in working time in Sweden

Legislation of the country is in theoretical level. The article in independent.co.uk written by Sheffield (2016) discusses that there are still employees who work more than 50 hours a week. In 2015 Sweden announced innovation in the world of employment and that is six hours working day. It is obvious that innovation has its supporters and opponents. The future showed that this innovation has its pros and cons. The idea of six hour working hour might not be as revolutionary idea as it sounds.

As Savage (2015) states the concept of six hour days is not entirely new in Sweden, but in 2015 the country made headlines in all newspapers with this idea. The Savage continues about the experiment which was performed in two hospitals in Sweden. The first one was in Umea in northern Sweden and the second was surgery unit at Sahlgrenska University hospital in Gothenburg. In one of them 80 nurses switched to six-hour days as a part of two-year controlled trial of shorter hours. In other hospital staff of eighty continued working usual eight-hour shifts.

The results of the experiment could be marked as positive even though there were some negative aspects. Among positive aspects it could be mentioned the fact that nurses who worked shorter hours were taking less sick leave and reported being less stressed. The care of patients in hospital improved because staff organized more activities for patients such as dance classes, group reading sessions or outdoor strolls (Savage, 2015).

As it was mentioned earlier there are a lot of different opinions on six hours working time in Sweden. The article in The Times written by Einsenberg (2016), 89 nurses and doctors in Gothenburg Sahlgrenska University Hospital, where the experiment took place, were more efficient and did not called in sick. The main problem was that the hospital had to hire another 15 new employees to ensure the hospital works properly. The article points out that the experiment was expensive. In 2015 similar experiment took place in Svartedalens nursing home. During this experiment 80 nurses worked six-hour shifts and got paid for eight-hour working time. The result was the same, as the article in The Times points out, the sick leave was half the average, the nurses were happier and the care was better.

The same opinion on the experiment has Lorentzon who for says in article for bloomberg.com written by Greenfield that "*If the nurses are at work more time and are more healthy, this means that the continuity at the residence has increased that means higher quality care*" (Greenfield, 2016). The results of the experiment also showed that nurses from the experiment group were happier and had more energy for their work and for their spare time. The six hours working time lead to do 64 percent more activities with elderly residents.

The question now is was it worth it? Both the hospitals had to hire new staff and spend quite large amount of money for the wages, but the employees were happier and more efficient, clients were satisfied either. The experiment in Gothenburg was run by Daniel Bernmar who is leader of the Left party on the city council. His idea was, as it is cited in the article by Eisenberg, to change the situation in working hours. He said that, "*We´ve had 40 years of a 40-hour work week, and now we are looking at a society with higher sick leaves and early retirement. We want a new discussion in Sweden about how work life should be to maintain a good welfare state for the next 40 years*" (Eisenberg, 2016). Sweden as a country that started the experiment with six-hour working time started a stormy debate around the Europe. Not every country agrees with it. The economics in some countries does not allow this type of working time.

13.3.5 Comparison of working time in Slovakia and Sweden

The question asked, at this point, is whether the six-hours time would work in every type of work or the working time would work only in the hospitals or nursing homes and manufacturing companies. In Sweden, as stated by Sheffield (2016), this type of working hours was also tested in Toyota centre in Gothenburg decade ago. The company claims that this type of working hours made staff happier, the company had lower turnover and profits went up. Tvardzík (2016) in the article in etrend.sk writes that the Toyota Company still uses six hours working time. Employees work on two six hours shifts. The working hours were shortened from 40 to 30 hours a week. Regional boss Martin Banck claims that this model is beneficial for both parties. The employees are more rested and therefore make fever mistakes and the customers whose orders are produced more quickly. Tvardzík continues, the opinion of Mr. Banck is that the employees feel more comfortable. There is not such a fluctuation of them and it is easier to find new employees. The staffs come to work during the time of the day where there is not traffic on the roads. The profit of service centers increased by 25 percent.

There were, in Sweden, experiments which were not as successful as those above mentioned. In the article at bbc.com by Savage is written that experiment in town of Kiruna, which took place sixteen years ago, was not measured as profitable and triumphant. Another company that had tried six hours working time was Filimundus from Stockholm. (Savage, 2015) As it is stated in the article by Tvardzík (2016), the company launched shorter working time two years ago. The boss of the company, Linus Feldt, thinks that eight hours working time is not as effective as people should think. During the shorter working time employees are not allowed to spend time at social networks, make private phone calls and other possible incentives to distraction. The time spend at work should be completely dedicated to work.

The situation in Slovakia is slightly different. In the country, the eight hours working time is established for a long time. There are some exceptions, of course, by the large companies which try to move with the times. According to article in Pravda written by Toma (2014), two biggest Slovak companies, in 2014, started to shorten their working time. The employees started to work six hours for the salary of eight hours. It is due to the positive impact of modern technologies. The companies that tried this innovation are U.S. Steel in Košice and Volkswagen in Bratislava. The Volkswagen Company regulated working hours to four six hours shifts. This way they could produce more. The modern technologies they own can work seven days a week and this way the company would be more productive.

Even though the six hours working time works in some companies in Slovakia, Ministry of Labor refuses to shorten working hours by law. Toma (2014) states that shortening of the working time will not bring company to be competitive. It could be true because the companies had to hire new employees and the costs of the company would go high in numbers. Iveta Falatová from the press centre of U.S Steel Košice said for the article that, "*The introduction of 5-shift operation the company had to increase number of employees and by this also the total cost of labor, which made the adverse effect on the competitiveness of the company in the following years*" (Toma, 2014). The five-shift operation was the request of the employees not of the management of the company.

13.4 Conclusion

This work brought information about working time in two countries – Slovakia and Sweden. The countries are different mostly in terms of size of the population and in terms of mentality of the people. The requirements for the working time of people in those countries are also different. As the research showed the decision about the working time is in hand of the companies. The companies are those who decide what benefits they will bring to their employees. The decision of the companies is usually based on their profitability.

The main aim of the work was to identify which of the two working times compared, six or eight hours working times, were more suitable for employees and for the companies. It is clear from the research that six hours working time will stay in the level of experiments and only future will show whether it is positive step forward or it is a step back. It is said that eight hours working time is not effective. It is not always simple to stay concentrated for specific work for eight hours. It is obvious that different types of work take different concentration. The eight hours working time is commonplace in most of the countries. It all depends on points of view of the employees and companies what is suitable for them. If the eight hours working time suits employees and companies than both sides are satisfied.

To state clear stance on this topic is difficult. The recommendation for the companies thinking about changing the working time to six hours should be considered among several aspects. The first one is whether the employees would agree with this type of working hours. The second one is whether the company will manage six hours working time financially. The profitability of the company is the primary thing. The experiment in Sweden showed that the six hours working time worked for the employees and the clients in the hospital but it did not work for the company because they had to pay their employees for eight hours. The extra money put to the experiment were taken from the profit of the company. On the other hand, the Toyota Company in Sweden claimed that the employees were happy with the six hours working time and also the company´s profit went up. The result from this, it could be said, is that six hours working time is not suitable for every type of the company. The company must decide what the best choice is, from the economic and employees point of view.

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14. Vylíčil Miroslav: Innovation in employee education

SUMMARY
Main objective: The primary aim of the work is to assess the impact of new technologies and innovation on the development of the employees education. Particular assessment of the impact of the use of the tablet in the education of employees of the company XY, a.s., findings advantages and disadvantages of the use of the tablet from the lecturer's perspective and from the perspective of the students and the subsequent recommendations in this area. The secondary objective is to describe new technologies and innovation in education of employees, and also to characterize their benefits and advantages.
Research methods: Structure of the thesis is divided into theoretical-methodological part and a practical part. A pivotal part of the seminar work consists of a case study and outputs from the questionnaire investigation, which lead to the evaluation of the influence of the tablet on the training of employees in the company XY, a.s. Through the analysis of specific innovations in the training of employees in the practical part and the primary investigation is to assess the influence of the tablet on the development of education employees of this company. In the interview investigation, whose main outputs are listed in detail in the practical part of the seminar work. The investigation was aimed at finding the benefits or other effects of use tablet.
Result of research: The case study discusses the example of the use of new technology in a specific educational course for employees. This is a educational course for the staff, which is implemented in a group of 10 people. The course was organized by unnamed private company XY, a.s. This group course was designed for employees and its aim was to extend the skills of employees that could choose between computer, language or other course. Course tutor in these courses was very actively using the tablet, which had each participant available so he / she could actively use newly obtained knowledge on the tablet. During the interviews the participants expressed their satisfaction with the use of the tablet, also the lecturer of the course appreciated the tablet as a tool for active involvement of participants during the teaching. In the form of the personal interviewees conducted a survey, whose main outputs are listed in detail in the practical part of the seminar work.

Conclusions and recommendation:

This thesis dealt with the influence of new technologies and innovation on the development of employee education in company XY, a.s. It was confirmed, the tablet belongs to the so-called information and communication technologies, which have their importance in the education of employees. Effects of the use of the tablet are positive and learners, who utilize a tablet, describe the general effects of the courses more positive way than others who tablet do not use. From these findings it can be concluded that the use of a tablet increases the efficiency of learning, improve the mediation of sources of learning, accelerate the mediation of the learning of new knowledge and skills, or support to active learning and learning-oriented student etc. The primary investigation confirmed benefits in the form of aid faster understanding interpretation of the tutor.

KEYWORDS
Employee education, employee development, information and communication technology, tablet, innovation

JEL CLASSIFICATION
I20 – General. O31 - Innovation and Invention: Processes and Incentives.

LIST OF ABBREVIATIONS

Abs. frequency	Absolute frequency
Rel. frequency	Relative frequency
p.	page
etc.	from Latin, etcetera; and other similar things
i.e.	for Latin, it is; in other words

14.1 Introduction

Currently occurs the extensive development of computing and information technology. In our society, any technological change and innovation is not perceived as a threat but as an opportunity, which is logical, because new technology, in many cases, improve existing systems and increase their performance. This also applies to the performance of the people themselves, when technology can improve their own results.

One of such examples may be education, in which new technology and innovation bring new opportunities. The potential of their utilization is huge and can not be neglected. On the contrary. Training and development without the use of any technology in today's time it becomes unthinkable.

This thesis deals with the influence of new technologies and innovation on the development of employees education.

The primary aim of the work is to assess the impact of new technologies and innovation on the development of the employees education. From wide range of new technologies used in education it was chosen to detail focus on the use of tablet in employees education.

The secondary objective is to describe new technologies and innovation in employees education, and also to characterize their benefits and advantages.

Structure of the thesis is divided into theoretical-methodological part and a practical part. The theoretical-methodological part is devoted to new technologies in employees education and methodical procedure of processing work. The practical part characterizes the case study, the outputs from the questionnaire survey and provides a critical evaluation of the impact of the tablet on employees education. Through the analysis of specific innovation in the education of employees in the practical part is to assess the influence of the tablet on the development of education employees.

The advantages and also disadvantages in use of the tablet will be assessed based on the output from questionnaire survey. Through the list of questions it will be proven what is the effect in use of the tablet in course, if it is beneficial to the students and/or has other effects in the course.

14.2 The theoretical-methodological part

The theoretical-methodological part of the thesis describes the new technology in education, which includes the use of the tablet in the context of teaching. There are of course different types of technologies used in education. Next chapter will briefly list few examples of emerging new technologies but mostly will focus on the use of tablet.

14.2.1 New technology in education

Based on the TeachThought Staff (2013), it's hard to know exactly what will catch on and what won't, but the following list showcases some of the emerging new technologies, software, and platforms available. With their innovation and practicality, many of these are poised to enter the classroom and change the way students and teachers learn permanently.

There are 15 examples of new technology in education:

- **Flashnotes** - allows students to upload their lecture notes and sell them to other students who need more help or resources.
- **Lore** - the new startup is using a Facebook type platform- riding the wave of what works- and tailoring it for education. This social network allows professors and students to communicate, follow one another, and discuss class work and lectures.
- **Study Blue** - imagine your smartphone as your primary source for study materials. This company has created an app that allows students to organize their coursework, store notes and flashcards, and share their materials with other students.
- **Leap Motion** - LEAP has developed a piece of hardware that allows anyone to write, draw, zoom, play, and interact with their computer screen using a finger, fingers, or entire hand. By moving your hand over the device, the mouse follows your movements.
- **Papertab** – revolutionary paper tablet.
- **Chromebooks** – laptops as rival to more expensive iPads.

- **Celly** – it’s a text messaging network that allows anyone to creat a network anywhere using smarphones.
- **Flipped Classsroom** - rather than spending the class time lecturing the students, the lectures are delivered to the student’s in video format for them to watch at home (or in study hall).
- **Snagit, Jing, Camtasia** - these screen capture video software programs are making it easy for instructors to give online tutorials.
- **Kid Blog** - designed specifically for younger students; Kid Blog provides a safe opportunity for children to startup their own blog connected to the classroom.
- **Glogster EDU** – allows students to collage picture, text, video and custom graphics to create a visually appealing presentation for their lates project.
- **Donors Choose** – funding websites that are used for projects created by teachers for their students and shared across social media to catch someone attention and money it needs.
- **Live Binders** – those handy three ring binders are now digital and allows educators to collect and organize resources for lesson plans.
- **Knewton** – this new technology company aims at personalizing content for optimal learning. The platform monitors the student’s activity and uses the information to give the student the best personalized resources based on their level of performance.

Cejthamr and Dědina (2010, p. 319) understand the concept of technology as a manufacturing process that the organization uses to transform inputs to the desired output products. Today every business requires technology. Specifically, the authors of the technology describe it as a machine or specific knowledge and procedures. Neumajer, Rohlíková and Zounek (2015, p. 15) draw attention to the continuous development of information-communication technologies, which is reflected in the field of education, where it creates new opportunities for improving this process. According to these authors, the digital technologies are the product of human culture and is involved in the creation of the present society and life of all the people, and thus also the learners.

Cejthamr, and Dědina (2010, p. 319) mentioned that new technologies can influence every business in several ways. Technological development may lead to a change of existing production and other activities of the enterprise or affect the character of the products or services.

The fact that new technology creates in the field of education new possibilities and opportunities, are the opinion of Vodák and Kucharčíková (2011, p. 117). From their point of view, new technologies can meet the expectations of the individual participants and ensure that the process has learning sufficient efficiency. Palásthy, Bednaříková and Siváková in the contribution from the Conference of New technologies in education (ed. Dostál, 2011, p. 77) speak about the fact that today's period of modern technology, advanced machines, equipment and various advanced computer programs is very challenging in the sense that it is very challenging to captivate the attention of learners. The educational process is therefore, according to the authors of the need to implement a variety of multimedia teaching aids.

Plamínek (2014, p. 11) defines that the success of employees education is destined to two basic factors. It is about the usefulness of the learning content and the degree of efficiency of the method of learning. Outage of one of these factors (or both factors) leads to failure. This author even mentions a third factor in the form of people who occur in educational courses. And even assigns the fourth factor in the form of meaning and context. The success of education is affected by the consciousness of reason, why the education is taking place and benefits that are expected.

Český statistický úřad (2013, p. 39-49) on the basis of its own investigation, estimated that in the population of persons 18 to 69 years, participated in the years 2010 and 2011 in non-formal education 32.1% of. In particular, the working people, living in densely populated areas. The most common and the most typical form of non-formal education are courses, then workshops and seminars. The specific focus of the activities is very broad, but the predominant are courses in technical sciences, foreign languages, courses from the industry transport services and communications, or business and law.

Průcha (2014, p. 23-24) describes informal education as part of lifelong employees education, when it is implemented in different environments (in the environment of the enterprise, in a private educational institute, in interest organizations etc.) As informal, this education indicates, therefore, that does not lead to obtaining a state recognized degree education. According to Plamínek (2014, p. 11) modern educational programs must considered participants in the education as equivalent to the partners with whom it will be the lecturer to work together to achieve the goals of education.

Tablet as a new technology

Due to the practical part of it is here necessary to introduce the tablet as a new technology. Barvíř, Melišová, Hampl (2011, p. 9) describe the tablet as a computer with a touch screen, sort of an intermediate step between a laptop and a pocket pc. The Tablet PC is a laptop with a touch screen. For the sake of completeness, we can mention that the laptops have built-in components that provide comparable functionality as the components of desktop computers.

Burian (2014, p. 49) characterizes the tablets as thin and portable computer with network connection internet. From classic desktop computers to tablets differs by the absence of a physical keyboard, but also a longer operational time, lighter weight and thinner size. Primarily the tablets are designed for entertainment, communication and interactive perception of information and multimedia.

Neumajer, Rohlíková, Zounek (2015, p. 13-24) confirms that the tablet is gaining an increasingly important place in education. However, its integration into the process of education requires professional knowledge, technical didactics, pedagogical reflection and advanced skills in the field of digital technologies. Generally to the benefits of the tablet in education are assign (benefits can be applied to all new technologies in education): option provide simple sources of learning to students (from applications and programs, to more complex database), providing of various types of knowledge and skills, promoting active learning and learning-oriented student, the possibility of co-authoring learning content, immediate communication (almost anywhere and at any time), facilitating the access of students to learning or in cooperation between students. At the same time the use of tablets, allow better organization of time and tasks (using apps).

According to Dvořákova and Langer (2016), the tablets are and the possibility of their use one of the trends of contemporary employee education in the Czech Republic. The authors described this trend as online education and new trends in education in connection with the development of information and communication technologies. In the future, there will be this issue more detailed addressed and the individual areas of the modern technologies in employees education elaborated. Zounek and Sudický (2012, p. 13) consider modern technology as a tool with enormous potential for lifelong learning. According to the authors, it can become a guide and a helper (always prepared) man in his learning and solving various life situations.

14.2.2 Methodology

For processing this thesis, was used the methodological approach in the form of choosing the topic, drafting a proposal of outline and objectives, analysis of secondary data sources (in order to create a theoretical-methodological part of the work). As the other was in the framework of the methodology elaborated by the case study on the impact of selected new technologies on employees' education in the selected course. A case study was prepared with the use of primary sources of data about the educational course, and informal interviews with course participants and the lecturer.

It was further processed by a questionnaire survey among the participants of the training courses for employees, in which the tablet was used. Just tablet was the chosen new technology. 152 persons out of 250 persons addressed by informal email attended a questionnaire survey. It was a deliberately selected participants of training courses. As a method was used interviewing, where the respondents marked their answers in the obtained electronic questionnaire. Then the responses were recorded by interviewer in the electronic form (recording sheet) on the tablet. The data was then transformed into MS Excel, so it was possible to get an overview of relative and absolute frequency of individual responses. The deadline of the questionnaire survey was the period from 1. 12. 2016 to 16. 12. 2016.

The interviewer in the course of the investigation visited the premises, where there are courses in employees' education, and after the call the potential interviewee requesting participation in the questionnaire survey. These were courses ongoing in Prague. Before starting the questionnaire investigation took place and piloting (testing the course and evaluating the investigation on a small sample of respondents). At this stage there has been no problem. Even during the implementation and evaluation of the investigation did not occur any issues.

14.3 Practical part

The practical part of the work is created based on the collection of primary data, and in particular through the implementation of a questionnaire survey. The primary aim of the work is through the analysis of specific innovations in the education of employees to assess the impact of this innovation on the development of the employees' education. As the innovation, it was chosen the use of new technology - tablet in education of employees. The secondary objective is to describe new technology and innovation in education of employees, and also to characterize their benefits and advantages.

14.3.1 Case study

The case study discusses the example of the use of new technology in a specific educational course for employees. This is the educational course for employees, which is implemented in a group of 10 people. The course was organized by an unnamed company XY, a.s. (wished to remain anonymous, as well as the participants of the course). This unnamed company XY, a.s. is a retail company with more than 5 000 employees that operates in majority of

Europe. It's activities started in the Czech republic in 1990's and concentrates its support to Czech producers of grocery (XY, a.s., 2016).

It largely supports the education of its employees and their development through different types of educational courses. This group course was designed for its employees and its aim was to extend the skills of employees that could choose between computer, language or other course.

Course tutor in these courses was very actively using the tablet, which had each participant available so he / she could actively use newly obtained knowledge on the tablet. The course offers participants the six lessons of 90 minutes, in which they carried out practical training work with a computer. In addition to the use of desktop computer also tablets were used, which teaching complement or desktop computer should replace. Tablets are in addition rented to the participants of the course, so even in their free time, they can practice their skills with their use.

The case study will focus on the use of tablets in the individual lessons. Lecturer of the course during its preparation been looking for a suitable tool, which can interactively communicate with each participant of the course. At the same time it was expedient, that each of the participants may acquire knowledge to practice even outside the training course, i.e. for example from home. Rent a desktop computer, of course, was from the beginning considered as unrealistic. The computer in the form of a laptop also was not available, so it turned out as a very appropriate and desirable the use of tablet devices and their subsequent lease to the students.

From the informal interviews revealed that, the participants valued the tablet as helpful tool that allows them easy training of new knowledge, and also come into contact with the technique, which then facilitates the work in the course. The lecturer appreciates that it is possible through the tablet to enhance the work with every student, because teaching actively engages (following, for example, only the interpretation of the lecturer, but must be active).

14.3.2 The questionnaire survey

The questionnaire survey took place in the period from 1. 12. 2016 to 16. 12. 2016, and through the method of personal and electronic inquiry among the participants of the training courses for employees.

The questionnaire survey contained 11 questions:

1. What training course do you attend?
2. Do you use a tablet when studying?
3. The use of the tablet is according to you for your results?
4. What is your motivation to visit the training course?
5. To what extent will the use of the tablet help to better results?
6. To what extent the use the tablet accelerated the understanding of the material?
7. What was the general impact of the use of the tablet to your development in the context of education?
8. How do you evaluate the contribution of the course for your education?
9. What is your gender?
10. What is your age?
11. What is your highest achieved education?

Each question consisted of predefined answers that the respondent chosen from. The aim of the questionnaire survey was to identify the effect of the use of a tablet for employees' education. The pattern of the questionnaire is available in Appendix I.

Evaluation of the questionnaire

Evaluation of the questionnaire is shown in Appendix II, where is located the absolute and relative frequencies of individual responses. Each answer was carefully noted in the questionnaire summary. Based on the answers total of 13 tables were elaborated for better overview. Each table is focused on one single concern. These tables are available in Appendix II.

The questionnaire survey participated in the 61,44 % of the respondents, who are attending computer courses, another 27,45 % then it searches for language courses or other courses it is 11,11 % of the interviewed (Appendix II, Table 1). Tablet in the training courses uses 40,50 % of the respondents (Appendix II, Table 2).

The next group of questions was designed for the tablet user in the context of education. This group of respondents attending training courses most often – in 62,90 % - for the purpose of acquisition of new skills, only 16,13 % for leisure and 12,90 % for meeting new people (Appendix II, Table 4). Evaluation of the benefits of the use of the tablet is very positive, and it is rated as definitely beneficial view 74,16 % of the respondents and rather beneficial according to the 24,19 % of the interviewed. Only in 1.61 % of cases, the evaluation was neutral (Appendix II, Table 3). Similar is the assessment of the impact of the use of the tablet for better results – to a very large extent it was beneficial for the 62,90 % of the respondents, and to a rather large extent, for the 30,65 % of the interviewed (Appendix II, Table 5). I managed to find out that the use of the tablet speeds up (according to respondents) understanding of the material, up to a large extent according to the 74,19 % of the interviewed (Appendix II, Table 6).

Also the general influence of the use of tablet development in the context of education is at a very high (positive) level. This is the 85,48 % of respondents who describe it as very high. Only 1,61 % of this effect describes a negatively or neutrally (other 1,61 %) (Appendix II, Table 7).

Overall, the completion of courses rated as beneficial (an absolute majority of respondents, i.e. 62,75 %) (Appendix II, Table 8). By users of tablet the benefit of course to education was considered by 83,00 % respondents as very high, or rather high by 14,38 % respondents (Appendix II, Table 10). By non-users of tablet the benefit of course to education was considered by 50,33 % respondents as very high, or rather high by 20,92 % respondents (Appendix II, Table 9).

The differences in ratings between participants who use a tablet, and which tablet do not use, are presented in detail in the next chapter. A questionnaire survey was attended by 64,05 % of women and 35,95 % men (Appendix II, Table 11). Most respondents were aged 40 to 50 years (i.e. 37,91 %) (Appendix II, Table 12). More substantial proportion of respondents had a highest educational attainment in form of secondary with school-leaving exam (i.e. 66,01 %) (Appendix II, Table 13).

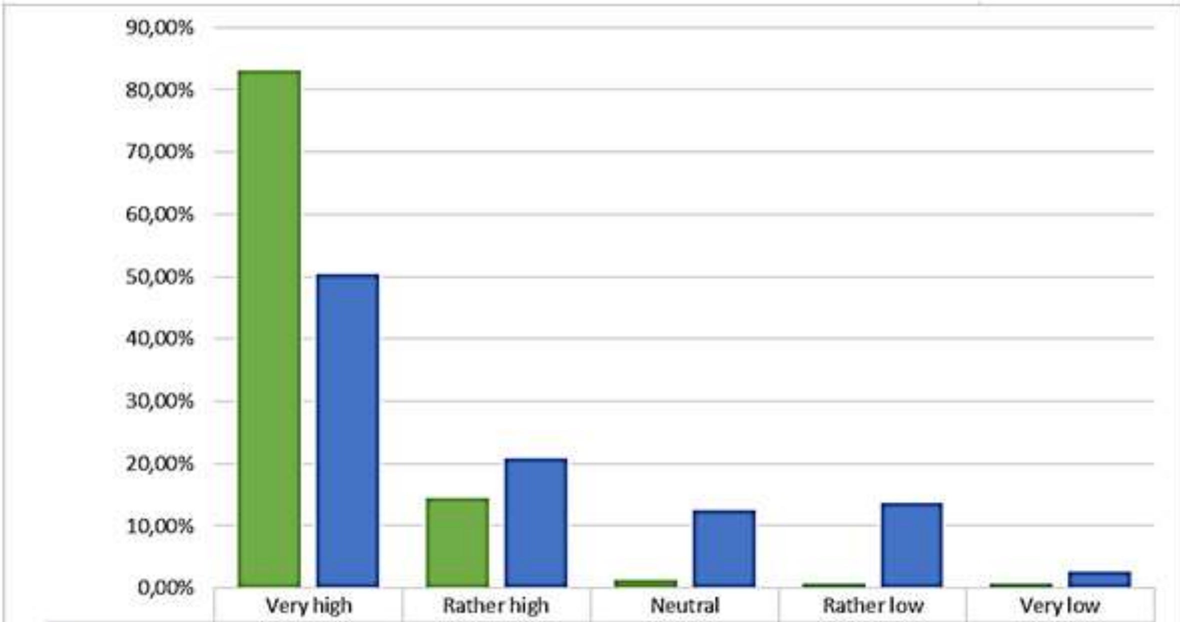
14.3.3 Critical evaluation of the impact of the tablet on employees' education

A critical evaluation of the impact of the tablet on employees education can be made both on the basis of the analysis of secondary sources, as well as practical findings, which I managed to collect during the processing of case study and implementation of primary data collection. Burian (2014, p. 49) says that the tablets are suitable for communication and interactive perception of information and multimedia. This suggests that there is a scope for their use in education. From the case study it was revealed that the tablets are beneficial tool that allow employees to practice their new knowledge and experience, but also to encourage more active involvement of users in teaching.

The Chart 1 displayed below serves as a great graphic overview of the effect of use of the tablet. This chart represents the comparison of the evaluation of the contribution of the course for education in the case, when it uses or does not use a tablet.

At first glance, it is apparent that this is a benefit for education rated more positively for participants in the courses who use the tablet. The effect of the tablet as a new technology in the education of employees is positive. At the most positive ratings (very high influence) is the difference in the responses of 32,67 %, which is almost one-third of respondents. You cannot of course conclude that this difference is exclusively associated only with the use of the tablet (there may be a better teacher, receptive students, etc.) However, the tablet is rated positively in other factors.

Chart 1 Benefits of course to education



	Very high	Rather high	Neutral	Rather low	Very low
With tablet	83,00%	14,38%	1,31%	0,65%	0,65%
Without tablet	50,33%	20,92%	12,42%	13,73%	2,61%

Source: own research

The primary data collection confirmed that the participants of training courses who use tablets during classes, their interaction was positive, and it's most often in more than half and significant majorities. The use of the tablet is certainly a benefit for 96,77 % of the respondents benefit (i.e. a summary of the responses certainly or rather the benefit),

(Appendix II, Table 7). Further, it was noted that 93,55 % of respondents using a tablet helps to a large or rather large extent, and to better results (Appendix II, Table 5). Positively it is evaluated and the speed of understanding of the material when the tablet is accelerating understanding of the material in 93,54 % of the respondents (in the summary of responses to the very large or rather large extent), (Appendix II, Table 6). On the basis of these results, then it is not surprising that it is the general effect of the use of tablet development in the context of education rated 97,38 % of the respondents as high (i.e. in the summary of the responses very and rather high), (Appendix II, Table 10).

14.4 Conclusion

This work dealt with the influence of new technologies and innovation on the development of employee's education. As has been shown, education is a very important activity in the life of every person. It is through education the individual can constantly improve and develop. New technologies in achieving this objective also play an important role, because they allow you to streamline and accelerate the process of education. The primary objective of this work through the analysis of specific innovations in employees' education was to assess the impact of this innovation on the development of employee's education. The focus was on one of new technologies, specifically on the use of the tablet in employees' education.

Based on accomplished case study and questionnaire survey relevant findings have been concluded. It was confirmed, the tablet belongs to the so-called information and communication technologies, which have their importance in the education of employees. Effects of the use of the tablet are positive and students, who utilize a tablet, describe the general effects of the courses more positive way than others who tablet do not use.

From these findings it can be concluded that the use of a tablet increases the efficiency of learning, improve the mediation of sources of learning, accelerate the mediation of the learning of new knowledge and skills, or support to active learning and learning-oriented student etc. The primary investigation confirmed benefits in the form of aid faster understanding interpretation of the tutor.

Training organizations, which provide or organize employees education, can be recommended to consider their integration into processes of education. The benefits of such a move are clear and very positive. It will definitely increase the outcomes of their students.

On the other hand, there are relatively high costs on the potential acquisition of the tablets, their service, operation and maintenance, which is a downside that cannot be ignored. As another disadvantage, we can mention the necessity of certain professional knowledge and skills, both on the side of the tutor and the student. If, however, it is the students who want to learn to work with the computer, so is a tablet a suitable tool and may cause the emergence of a certain synergistic effect.

This finding supports the outputs from the analysis of secondary data, from which it follows that the tablets have their advantages and are an asset (see, for example, Neumajer, Rohlíková, Zounek, 2015).

The secondary aim was to describe a new technology, use of tablet, and innovation in employees' education, and also to characterize their benefits and advantages. Brief announcement of other new technologies used in employees' education was provided as well.

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Amendments

Appendix I

The pattern of the questionnaire:

1) **What training course do you attend?**

Computer course
Language course
Another course

2) **Do you use a tablet when studying? (If no, skip to question number 8.)**

Yes
No

3) **The use of the tablet is according to you for your results.**

Definitely the benefit
Rather the benefit
Neutral
Rather without the benefit
Certainly without the benefit

4) **What is your motivation to visit the training course?**

The acquisition of new skills
Leisure
Meeting new people
Another motivation

5) **To what extent will the use of the tablet helped to better results?**

To a very large extent
To a rather large extent
Neutral
To a rather low extent
To a very low extent

6) **To what extent the use the tablet accelerated the understanding of the material?**

To a very large extent
To a rather large extent
Neutral
To a rather low extent
To a very low extent

7) **What was the general impact of the use of the tablet to your development in the context of education?**

Very high
Rather high
Neutral
Rather low
Very low

8) **How do you evaluate the contribution of the course for your education?**

Very high
Rather high
Neutral
Rather low
Very lox

9) Very high

Rather high
Neutral
Rather low
Very low

10) What is your gender?

Man
Woman

11) What is your age?

18 to 28 years old
29 to 39 years old
40 to 50 years old
51 to 61 years old
62 years and over

12) What is your highest achieved education?

Basic
Secondary with school-leaving exam
High school with a vocational certificate
College

Appendix II

Table 1 Attendance on the training course

What training course do you attend?	Abs. frequency	Rel. frequency
Computer course	94	61,44%
Language course	42	27,45%
Another course	17	11,11%

Source: own research

Table 2 Use of table during course

Do you use a tablet when studying?	Abs. frequency	Rel. frequency
Yes	62	40,50%
No	91	59,48%

Source: own research

Table 3 The use of tablet to your outcomes

The use of the tablet is according to you for your results?	Abs. frequency	Rel. frequency
Definitely the benefit	46	74,19%
Rather the benefit	15	24,19%
Neutral	1	1,61%
Rather without the benefit	0	0,00%
Certainly without the benefit	0	0,00%

Source: own research

Table 4 The motivation for course attendance

What is Your motivation to visit the training course?	Abs. frequency	Rel. frequency
The acquisition of new skills	39	62,90%
Leisure	10	16,13%
Meeting new people	8	12,90%
Another motivation	5	8,06%

Source: own research

Table 5 The effect of use of tablet

To what extent will the use of the tablet helped to better results?	Abs. frequency	Rel. frequency
To a very large extent	39	62,90%
To a rather large extent	19	30,65%
Neutral	3	4,84%
To a rather low extent	1	1,61%
To a very low extent	0	0,00%

Source: own research

Table 6 Faster understanding of the material with the tablet

To what extent the use the tablet accelerated the understanding of the material.	Abs. frequency	Rel. frequency
To a very large extent	46	74,19%
To a rather large extent	12	19,35%
Neutral	4	6,45%
To a rather low extent	0	0,00%
To a very low extent	0	0,00%

Source: own research

Table 7 Effect of use of tablet on education

What was the general impact of the use of the tablet to your development in the context of education?	Abs. frequency	Rel. frequency
Very high	53	85,48%
Rather high	7	11,29%
Neutral	1	1,61%
Rather low	1	1,61%
Very low	0	0,00%

Source: own research

Table 8 The benefits of the course to education

How do you evaluate the contribution of the course for your education?	Abs. frequency	Rel. frequency
Very high	96	62,75%
Rather high	27	17,65%
Neutral	12	7,84%

Rather low	12	7,84%
Very low	6	3,92%

Source: own research

Table 9 The benefits of the course to education without the use of tablet

How do you evaluate the contribution of the course for your education (without tablet)?	Abs. frequency	Rel. frequency
Very high	77	50,33%
Rather high	32	20,92%
Neutral	19	12,42%
Rather low	21	13,73%
Very low	4	2,61%

Source: own research

Table 10 The benefits of the course to education with the use of tablet

How do you evaluate the contribution of the course for your education (with tablet)?	Abs. frequency	Rel. frequency
Very high	127	83,00%
Rather high	22	14,38%
Neutral	2	1,31%
Rather low	1	0,65%
Very low	1	0,65%

Source: own research

Table 11 The gender of respondents

What is Your gender?	Abs. frequency	Rel. frequency
Man	55	35,95%
Woman	98	64,05%

Source: own research

Table 12 The age of respondents

What is your age?	Abs. frequency	Rel. frequency
18 to 28 years old	15	9,80%
29 to 39 years old	45	29,41%
40 to 50 years old	58	37,91%
51 to 61 years old	19	12,42%
62 years and over	16	10,46%

Source: own research

Table 13 The achieved education of respondents

What is your highest achieved education?	Abs. frequency	Rel. frequency
Basic	4	2,61%
Secondary with school-leaving exam	101	66,01%
High school with a vocational certificate	27	17,65%
College	21	13,73%

Source: own research

Conclusion

The fourth annual international student conference „Entrepreneurial Spirit“ was organized by the students of University of Economics and Management. The goal of the event was to improve the presentation skills, to provide the floor for discussion and exchange of experiences, and to master the English language of the participants**.**

The conference was held in spring 2017 in the Auditorium of VSEM. Except for direct participants – contributors, committee members – the conference was also attended by students of the University of Economics and Management and selected company management as guests.

The expert committee was composed of academic staff and experts from practice. Contributions which were presented at the conference and are included in this conference proceedings are among the top 14 out of the total number of 20 submitted contributions, as far as both the content and formal aspects. Students were encouraged to send contributions so they can improve their communication and presentation skills, improve their skills of working with scientific text or to obtain credits for seminar paper.

The conference is in line with the objective to create conditions for the development of such knowledge, skills and experience of the students, allowing them to successfuly enter labor market shortly after their graduation (in relation to the improvement of their communication and presentation skills).

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