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Content

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CORPORATE SOCIAL RESPONSIBILITY – COMPARISON OF PILSNER URQUELL AND MILLERCOORS

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Introduction

Currently, people start to learn about Corporate Social Responsibility (CSR) more and more. CSR is a system of management, which has a long history but it had started to ascend in 1950s. Corporates starts to realize, that to achieve their goals is now more difficult than ever. It is necessary to contribute sustainability, take care of maintaining positive relationships with all company stakeholders, protect the environment, behave ethically and spend its financial resources in an efficient way. Social responsibility may be divided into three areas – economic, social and environmental. CSR concept is not regulated by legislative and every activity combined with it, are purely voluntary. Although, in April 2014 European parliament adopted a directive, which require from specific companies a CSR report. CSR implementation comes with many benefits for society but also for the companies themselves. Advantages include for example gaining positive image, stronger market placement, growing sales, reducing costs on risk management or increase motivation and loyalty of employees. CSR had become one of the trends of nowadays life. Consumers are more careful what they buy, who is the producer of the specific product or if the brand has a good reputation. This can sometimes lead to pressure on corporates, that they have to respect their consumers and society and they just have to do more for others than it is determined by law. People start to realize how important role plays SCR in the world and in our future.

The aim of the project is to make a report of companies Pilsner Urquell and MillerCoors and afterwards comparing them. The project will focus on society and how people feel about CSR. That will be represented also in the practical part.

Company´s history

This chapter should describe the companies Pilsner Urquell and MillerCoors. Also the environment that the companies work and process in, their history, financial situation and management (organisation structure)

Pilsner Urquell

For Czech part of this project we had picked Pilsner Urquell, which is one of the most favourite beers in Czech Republic with market share 43% (Conbiz, 2019). It is the leader of beer agriculture in Czech Republic.

Basic information

Pilsner Urquell is very significant producer and exporter of Czech beer, which is brewed in four breweries, Pilsner Urquell and Gambrinus in Pilsner, Radegast in Nošovice and in Velké Popovice in the middle Bohemia. The biggest breweries are Pilsner Urquell and Gambrinus.Czech people are very proud on their beer and especially on Pilsner Urquell, due to its famous, delicious taste and golden colour, which has changed the whole thinking and producing of beer. It was founded in 1842 and was also named by the city – Pilsen. Its headquarters are situated in Pilsen, although the beer had expanded all over the world so the product is available to people everywhere. Pilsner Urquell is the leading brewing company in Central Europe. They export mainly to Germany, Slovakia and South Korea. The product is available in 330 ml, 355 ml and 500 ml cans and green or brown bottle. We found out by one survey that people in Bohemia still prefer the historical and more environmental glass bottle. The survey consists of 50 respondents, where are 24 men and 26 women. Respondents answered question: What type of covers do you prefer? And answers were: 48 % in glass bottle, 42% in barrel and 10 % in cans. When a customer buys glass bottle Pilsner Urquell, they also pay a deposit, which will be refunded, when the bottle is returned. Wastes that Pilsner Urquell produced in 2017 were recycled or reused 98.5 %. This is less about 0.3 % than from year 2016 (Plzeňský Prazdroj, Naše pivo, 2019).
The brown bottles are distributed mainly to USA. Under the Pilsner Urquell are a lot of brands and they are: Gambrinus, Kozel, Radegast, Birell, Excelent, Frisco, Kingswood, Master, Kopparberg, Klasik and Primus (Plzeňský Prazdroj, Naše pivo, 2019).
Pilsner Urquell is considered as the largest Czech beer exporter in almost 50 countries around the world and on Czech market represents roughly 48 %. The Pilsner Urquell brand

represents the legendary pale lager with an alcohol content of 4.4 %. The company employs cca 2250 people and they made 20 000 indirect job opportunities. It is possible for employees but also for public undergo trainings as in beer quality, tapping and serving. In 2015 they became responsible corporation and got award for long-term contribution to CSR in Czech Republic.

The brewery used to belong to the same owner as of MillerCoors - SABMiller, but in 2017 it was bought by the company Asahi. From the date of March 31st 2017 is the Company part of Asahi Group Holdings Ltd, Japan, which is the controlling entity.

Asahi Group Holdings Ltd is a huge company in Japan specializing on soft drinks and beer situated in Tokyo. They focus mainly on Asian market but they have expanded to more than 100 countries in the world. Asahi has acquired the former SABMiller companies and brands in central and eastern Europe, namely in the Czech Republic, Slovakia, Poland, Hungary and Romania, and export companies in European markets and South Korea (Cyrrus, 2016).

Pilsner Urquell has very extensive scope of business; here are some examples from the Business Register:

- Beer production
- Brewing and malting
- Hostess activity
- Sale of fermented alcohol
- Manufacture of other food products
- Production of soft drinks; bottling mineral and other water
- Wholesale of beverages
- Retail of beverages
- Storage
- Guide activities
- And many other (Ministerstvo spravedlnosti České Republiky, 2019)

Figure 1 Pilsner Urquell logo

Target customers

To identify target customer, we need to analyse few criteria like gender aspects, age, geographical aspects, life style, etc. For company Pilsner Urquell is very major an age of their customer, because they do not allow underage drinking. Second criteria would be the gender.

Main group of customers are adults (18+), who consume alcoholic drinks. Pilsner Urquell is mainly focused on men population as they are the major consumers of the product. Other, smaller group are tourists who visit Czech Republic.

History

Before the name Pilsner Urquell that we know, there was Burghers´ Brewery. It was brewed for the first time by Josef Groll in 1842 in Pilsen, who brew it as the way we know it today. The beer got famous and spread all over Bohemia and almost immediately was also exported and tested in Vienna or Paris. As the popularity of the beer spread all over the Bohemia, imitations started to appear. That is why in 1859 the Burghers´ Brewery had registered "Pilsner Bier" as a trademark. The first exportation to USA was in 1873 and after that the export to the North America became regular. In 1898 was registered Pilsner Urquell trademark to protect the unique brand which serves as the model for all Pilsner-type beers. Through the years in 20th century, Pilsner Urquell was very successful, but years of glory were cut off by the Second World War, because of lack of materials and the export was reduced only for Germany.

In 1995 Pilsner Urquell founded a restaurant network, which has to strictly follow values of storage, tapping and serving beer lager Pilsner Urquell. First Pilsner Urquell Original Restaurant (PUOR) was opened in Karlovy Vary, than in Moskva, Vienna or in Vietnamese Hanoj (2011).

From 1999 Pilsner Urquell was owned by SABMiller until it was bought by Asahi along with other European corporations like Peroni and Grolsch from SABMiller (Plzeňský Prazdroj, Historie České legendy, 2019).

Organizational structure and management

The Joint-stock company Pilsner Urquell has five members of Board of Directors and three members in Supervisory Board (Ministerstvo spravedlnosti České Republiky, 2019).

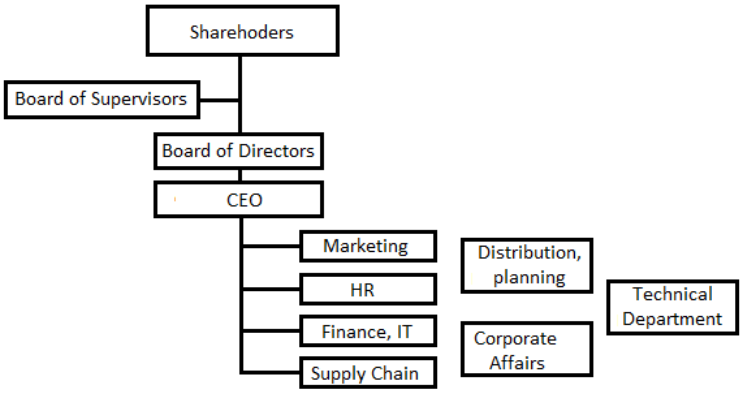

Figure 2 Organizational Structure

Board of Directors

Grant Murray Liversage	Chairman
David Anthony Udal	Vice-chairman
Hikaru Sato	Member
Paolo Alberto Francesco Lanzarotti	Member

Board of Supervisors

Václav Berka	Chairman
Tomáš Krčil	Member
Andrew David Bailey	Member

Management

Chief Executive Office	Grant Liversage
Marketing Director	Roman Trzaskalik
Financial and IT Director	David Udal
Human Recourses Director	Rob Kenney
Supply Chain Manager	Marek Prach
Sales Director	Tomáš Mráz
Corporate Affairs Director	Drahomíra Mandíková
Technical director	Diarmaid De Búrca

Sales

The company assign revenues from main activities income of years 2013 to 2017 are graphically illustrated on the chart below (Chart No. 1). Revenues from core business for the year 2017 were 14.85 bn. It is clear on the chart, how sales have increased in 2017.
Sales of the unique lager Pilsner Urquell has increased on Czech market by 6 %. Export of Pilsner Urquell had also risen by 5 % and that is 218 thousands hectolitres (Ministerstvo spravedlnosti České Republiky, 2019). This effect is well perceived in the charts:

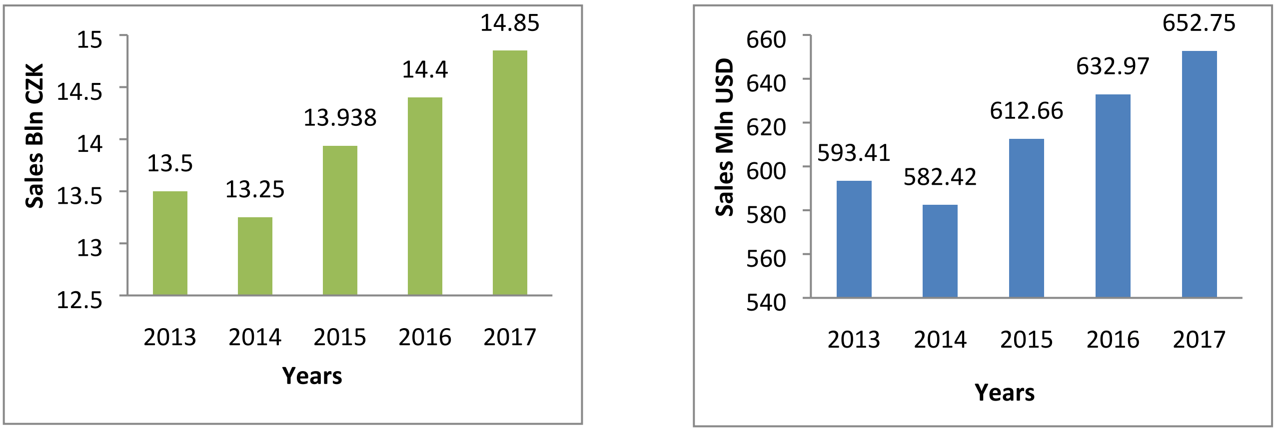

Figure 3 Sales 2013-2017 in CZK

Even though it is only one year from changing the owner, numbers of revenues are positive and go uphill. Only the time shows more, if the numbers will keep rising. Unfortunately, we do not have any report form year 2018 so it is not possible to compare the results with past.

MillerCoors

Figure 5 MillerCoors logo

The other company we are comparing is MillerCoors for American part. It is the second biggest producer of beer in USA with share market 23.5%.

Basic Information

In some was MillerCoors is very similar to Pilsner Urquell. We can find the similarities in case of employees, brands or age of the companies. The company combines from three brewing families, Molson, Coors and Miller. Molson Coors is a parent company to MillerCoors from year 2008, where SABMiller merged with Molson Coors.

Brands of MillerCoors are Miller Lite, Miller High Life, Hamm´s, Blue Moon, Coors Banquet, Coors Light and Leinenkugel's. Pilsner Urquell has almost the same amount of brands just like MillerCoors. The companies are also almost the same age, Pilsner Urquell is 177 years old and MillerCoors is 165. They also have approximately the same amount of employees, MillerCoors employs in U.S. approximately 7,300 people and globally 17,750 employees. The beer is made in 27 breweries all over the world (MillerCoors, Strong Leadership, 2019). MillerCoors' market share for 2018 was 24% in U.S. market, reduced from last year about 1%. The biggest part of the market in U.S. holds Anheuser-Busch which is 42%, that's also the biggest competition for MillerCoors

Altogether they have seven breweries, in Albany - Georgia, Elkton - Virginia, Fort Worth – Texas, Golden – Colorado, Irwindale – California, Milwaukee – Wisconsin and Trenton – Ohio (MillerCoors, 2019).

History

Frederick J. Miller emigrated from Germany to the United States in 1854 and the year after he founded Miller Brewing Company. In 1867 Jacob Leinenkugel joins the company. In 1868, Adolph Coors Sr. emigrated also from Germany to the United States. In 1873, he and his business partner Jacob Schueler bought Golden City Tannery and rebuilt it to the Golden Brewery. Adolph Coors became an owner in 1880, he bought Shueler's interest and the brewery was renamed Adolph Coors Golden Brewery. In 1885 Coors starts to recycle empty bottles. At the begging of 20th century, Miller´s production is mostly mechanical. The prohibition was from 1916-1933 and made it very hard for the both breweries, but eventually they survived thanks to some reasonable inventions like melted milk, syrups or good strategic investments. During World War II, Coors and Miller had to cut production and consumption of raw materials. Coors also stopped to water down the beer, so his profit was very low. Coors launched first aluminium beer can in 1959. They also started an American recycling revolution, that for every returned can they payback a penny. In 1975, Miller introduced the first low-calorie beer Miller Lite. Coors produced the Coors light in 1978. More affordable beer was made in 1984 The Coors Light "Silver Bullet". In 2002 South African Breweries Buys Miller Brewing Company and Coors joins Molson and the company were renamed Molson Coors Brewing Company. In 2008 SABMiller merges with Molson Coors and created MillerCoors. Molson Coors bought in 2016 full ownership of MillerCoors for United States (MillerCoors, Proud history, 2019).

Organizational structure and management

MillerCoors, a beer brewing company is the second largest brewery in U.S, after Anheuser-Busch. Molson Coors Brewing Company is a parent company of MillerCoors. MillerCoors is a joint venture of SABMiller plc and Molson Coors Brewing Company (MillerCoors, Strong Leadership, 2019).

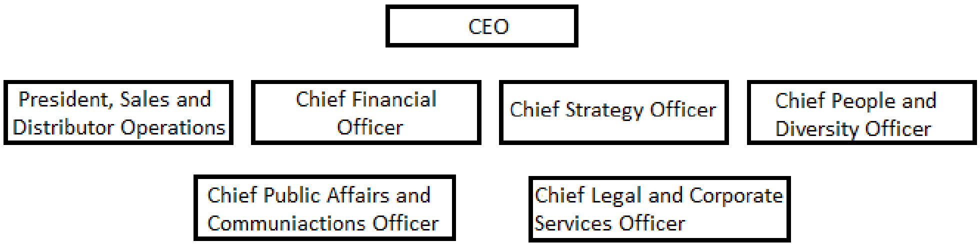

Figure 5 Organizational Structure of MillerCoors

Management

Chief executive Office	Gavin Hattersley
President, Sales and Distributor Operations	Kevin Doyle
Chief Legal and Corporate Services Officer	Kelly Grebe
Chief Public Affairs and Communications Officer President, Tenth and Blake Beer Company	Pete Marino
Chief People and Diversity Officer	Dave Osswarrd
Chief Strategy Officer	Brad Schwartz
Chief Financial Officer	Greg Tierney

Sales

The chart relates to all segments, where the company does business, so in U.S., Canada and Europe. The numbers were recorded every 31st December. We can see a graphical representation in the chart below.

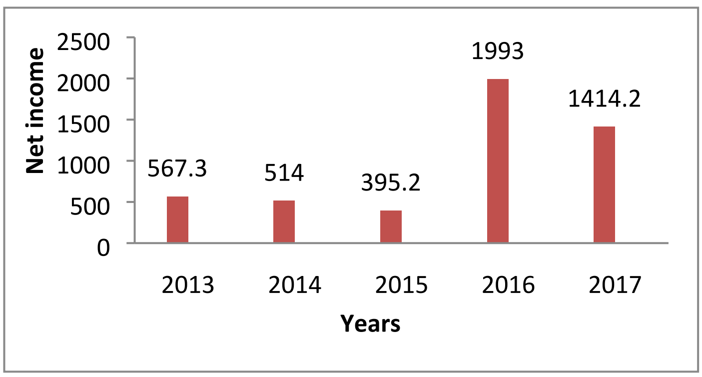

Figure 6 Net income attributable to Molson Coors Brewing Company from 2013-2017 in USD Mill.

The main reason for the massive increase of net income in 2016 could be that Molson Coors created a business unit in U.S. and also got full ownership over MillerCoors. Total worldwide brand volume in hectolitres was 93,959 million for 2017 (for all segments), which has increased by 43.4% from the last year (Macrotrends LLC, 2019).

Corporate social responsibility – general facts

CSR is based on assumption that companies does not work only in circle of their economical relationships. They influence their surroundings like community, social situation of employees, environmental situation etc. On the other side, stakeholders influence the success of a company so it is all connected and it is in everyone's interest to cooperate.

Principles CSR

Companies which follows CSR:

- Complement their traditional economical goals with socially beneficial goals (expanding the company´s strategy with environmental, social, ethical, community aspects)
- Are oriented mainly on long- term goals.
- Prefer optimal profit before maximum profit.
- Prefer volunteering or partnership (Kunz, 2012).

Social responsibility behaviour is a long-term investment into its overall development. Social responsibility behaviour comes with more loyal customers and employees, stronger value of a brand, good reputation, better relationships within the region and a significant potential for dealing with possible crisis situations (Kuldová, 2010). There are three areas, where the company should effect:

- Economical responsibility – long-term prosperity of business in regions influence number of employment.
- Environmental responsibility – protection and sustainability of the environment for the public and rational draw and recovery of regional resources.
- Social responsibility – creating an environment to secure the standard of living in the region, safety and health protection for the public, improving the quality of life including the development of the education and cultural development (Carroll, 1999).

CSR in Pisner Urquell

History of Pilsner Urquell's CSR from year 2017 is widely spread and very comprehensive. They achieved great things and on base of this they set goals until 2020, which are listed down below. They have seven strategic plans of sustainable development. It is seven priorities, where they try to focus on sustainable developments.

Here are seven highlights from 2017:

- History – The number of visitors to their breweries were record breaking. They also supported rides with historical trains to the brewery in Nošovice.
- Ingredients – 100 % crops (specifically barley) for brewing the beer were bought by domestic supplier. They supported research activities in brewing industry by 2 million CZK grant. They bought 148 thousand tons of malting barley, which is more from last year by 7%.
- Brewing, packaging and distribution – Reduction of water consumption by 33.3% from 3.1 to 2.9 hl/hl water to beer ratio that consists of all three breweries. Electricity consumption was reduced from 92.3 to 78 MJ/hl. When the glass bottles are returned, they wash it and with water they wash away labels too. Annually it is 400 ton. To reduce this waste to landfill or incineration plants they use them in composting plant. They mix the labels with waste water sludge and after 90 days it is ready to be used for road strengthening or reclamation of landfill.

  In 2017, they have recycled or reused 98.5% of produced waste that is less from previous year by 0.3%. The consumption of electrical and thermal energy on process of 1 hl beer had decreased to 81 MJ/hl.

  To retrench carbon emission they cut number of kilometres for delivery of the beer by 4%.

  They provide beer in returnable covers 69.77% from all products they produce.
- Customers – Their developing educational programs attended about 1,927 pubs and restaurants and almost 2,000 retails. In Czech Republic were opened 850 tank pubs and almost 90 abroad.
- Employees – Pilsner Urquell has three ways how to motivate and support employees. In the first place it is wages, benefits and self-realization like training or courses. Retirement benefits were raised from 6 to 12 thousand annually. They increase number of women in company by 3% in 2017. Currently 33 % of employees are

women. They also doubled contribution for retirement savings of employees, which retrench carbon footprint.
In 2017, they invested 19.3 million CZK into Garden project, for better working conditions their employees in the breweries. According to this investment they reduced work injuries from 15 to 12 injuries.
10% of employees had volunteered and worked off 1,552 hours, which is more from last year by 55%.

- Responsible drinking – To the projects of prevention drinking alcohol by underage people were involved almost a 1.68 million people, that is about 9% more than in 2016.
  They published nutritional information and alcohol serving facts on labels on website (Plzeňský Prazdroj, Naše pivo, 2019). At the end of 2017 more than 90% of labels of their products had caloric value they even exceeded their plan by 10%.
  Innovation of application called Promile Info, where were added some tools such as "alculator", which counts according to time and amount of drank alcohol drinks content in the bloodstream. This tool is very helpful for calculating the time when you can drive again after consuming alcohol.
- Patronage – To keep good relationships with their regions. They helped to people around breweries and supported 19 community projects through their charity and other grant programs, where were given in total amount 4.3 million CZK (Pilsner Urquell, a.s., 2017).

Those are seven operations that were successful in 2017. Taking care of suppliers keeps their materials high-quality. On basis of website Atmoskop.cz, employees are more confident and stable, they learn to new things and there is possible career promotion for them. Employees are more loyal and satisfied with their work. By supporting responsible drinking they help the consumers to be healthier. Important is to drink better not more.

Pilsner Urquell had produced of total waste 168,504 tons. They admitted they have not accomplished a goal from 2016 of reducing energy, although it was just slightly. In last few years there is increase of demand for beer from stores than in restaurants or pubs, more specifically PET bottles or aluminium cans, causing that share on returnable bottles are slightly falling. This could cause a problem, because they do not recycle PET bottles nor aluminium cans.

Their set goals until 2020 are unrolled on their goals from 2017:

- History - They want to keep invest to historical buildings, collections and springs. Declassify breweries to general and professional public.
- Ingredients - They will keep principles of responsible supplier to maintain maximal quality. Main principles of collaboration and partnership they remain correct relationships, long-terms and fairness in setting conditions.
- Brewing, packaging and distribution - They will keep monitoring water supplies and until year 2020 reduce consumption of water to 2.8 hl on hectolitre of beer. Reduce their carbon footprint and they aim to zero waste service.
- Support of small businesses and Czech beer culture - Setting a development plans with their customers about their businesses, which will be regularly analysed and consequently find possible improvements.
- Employees - Increase of attractiveness for potential employees, they will continue on development of professional skills of their employees. Increase of wages for all employees by 5%.
- Responsible drinking - They will try to contact all of their consumers by effective campaigns; its goal will be to support moderated alcohol drinking.
- Patronage - Higher investments to community projects, which needs help (Pilsner Urquell, a.s., 2017).

Pilsner Urquell, as one of the first companies who started to follow CSR in Czech Republic, has great results and a lot of awards like Top responsible company 2017, where they got three golden and one silver “medals” and Green Frog Award 2017. Those awards are only for year 2017 (Byznys pro společnost, 2019). They keep being green and also after year 2020 they will be involved in preparation for new global strategic of sustainability development. Japanese group Asahi is very strict on sustainability development and their engagements and plans are very daring.

Business is all about people. Every activity that the company does has an influence on society, whether it is company’s employees, customers or people in Czech Republic (e. g.

Pilsner Urquell affects also economical aspect of the country, environmental situation in region etc.).

CSR in MillerCoors

MillerCoors alike as Pilsner Urquell set their goals until 2025. The company had reported their CSR activities since 2008 when the company was formed. They had the great history behind of reducing the beer imprint on the community, on environment and on their business.

Their progress from year 2017 and also goals until 2025 are divided into three sections:

1. Responsibly Refreshing
    - In this section they try to focus on underage drinking and drunk driving. By expanding low- or non-alcohol beers they influence the community, so they will make choices with responsible enjoyment in mind.
    - This part of their sustainability can be divided into Social aspect kind of behaviour.
2. Sustainably Brewing
    - Reducing waste more efficiently, reduce water consumption and carbon footprint.
    - This part of their sustainability can be divided into Environmental aspect kind of behaviour.
3. Collectively Crafted
    - This part is all about people, partners and their neighbourhoods. They take care of their employees by empowering programs to help them succeed. They connect the community by programs, events or activities.
    - This part of their sustainability can be divided into Economical aspect kind of behaviour (MillerCoors, 2019).

Progress in 2018:

1. Responsibly Refreshing

- Prevented underage drinking and drunk driving in nine countries where they operate. In Bulgarian business unit Kamenitza AD they made a test drive simulation with volunteers from event at the Sofia Motor Show, to see how their sights are influenced by drunk driving. The campaign began 10 years ago, but the quantity of victims of people driving under the influence of alcohol in Bulgaria has sunken by more than 75%, accord to the Ministry of the Interior.
- Fulfilled five-year plan of joint commitments to reduce harmful alcohol use. In 2017, 11 universities accepted Great Plays grants in value of $150,000. Marquette University used the grant to offer Red Watch Band training to all students studying the second grade.
- Launching of Marketing Compliance Committees, which is self-regulatory good practice of creating responsible marketing of their products. MCC includes employees who are responsible for controlling communication materials before they go public. MillerCoors has established the strict marketing review process for Carling, Rekorderlig and Cobra.
- Expended nutritional information and alcohol serving facts on labels of 96 products. On MillerCoors website is nutritional information, alcohol serving facts or ingredients on 248 products. Nowadays, 100% of MillerCoors brands have their nutrition facts on MillerCoors.com.
- In 14 countries were put low- and no-alcohol choices of products, including US, UK and Canada (MolsonCoors, 2018).

2. Sustainably Brewing

- Improvement of water consumption to 3.57 hl/HL water-to-beer ratio in their primary breweries. Over four years in Trenton and Fort Worth they achieved 30% and 19% energy reductions.
- In their water-scarce brewery watershed in California, Texas and Colorado, they cooperated with organizations, such as The Nature Conservancy, Tarrant Regional Water District and California Water Action Collaborative, to restore water. They restored approximately 460 million gallons of water to these watersheds.

- Lower carbon emission from their main scope of business by 15% and reduction in value chain by 6.2%. They found out that packaging materials have the highest share on emissions in the value chain footprint, precisely 38% of the total.
- They succeeded of zero waste in 14 brewing and manufacturing facilities. Zero waste is a kind of lifestyle, which is supporting life without waste, so everything that is considered as a waste is reused. Also this philosophy is against landfill or waste incineration plant = burning waste.
- Improvement of total waste to landfill by 30% from the previous year. Project 50 is a recycling project in UK in Burton-on-Trent team has eliminated all paper and plastic cups from vending machines and they replaced them with ceramic mugs or glasses. During following nine mounts the consumption of paper cup fell by 52,707 cups and plastic cups by 24,000 cups. Project 50 also increased the brewery´s recycling rate from 31% to 70%, as a result they saved more than £20,000. They also try to reuse the waste, for example in Indian breweries, the use rice husk as a fuel, but this cause to producing ash. This ash is produced about 950 tonnes each year. In past they used the ash to spread it over the ground, but they found a new method for using it. They mix it with clay and make it into bricks. It saves energy, they are lighter than traditional bricks, they are still used for harvesting and they have reduced removal costs.
- They cooperate with suppliers and partners who have the same standards in sustainability for 100%. Established their enhanced Agriculture Ingredients Policy across key growing regions to support their producers (MolsonCoors, 2018).

3. Collectively Crafted

- They come up with new global Diversity and Inclusion strategy, it has four aspects: employees, consumers, customers and communities. This strategy was launched in Headquarters in Denver and in UK. It mainly focuses on to more integrate and boost employee involvement across the company.
- Cut-down of Lost Time Accident rate by 15% from year 2016. In 2017, the LTA rate for every 20,000 hours worked was 0,39.They employ 12,500 men and 4,700 women, for women there are also some ways how to empower them, including Women in

Beer seminars, career progression training, flexible work schedules and parental leave practices.

- Since 2016, MillerCoors had given $22.6 million for donations to communities; the gifts were financial but also material. They supported people who suffered from hurricanes in 2016 and 2017.
- MillerCoors tries to involve people for volunteering and personal pledges. More than 300 bushes and trees were planted in Canada. In Bulgaria their business unit organized the campaign Donate a Goal, which is a soccer tournament. The company gave 1 BGN for every goal scored. At the end of the tournament they collected more than 10,000 BGN. In Hungary, was organized a cooking competition where were involved more than 350 people. In Golden Brewery in Colorado helped over 120 volunteers to pick up trash along the Clear Creek area.
- Since 2016, they had invested $1.01 billion into various suppliers and had created 4,781 jobs (MolsonCoors, 2018).

Those were three blocks where MillerCoors focuses the most (MolsonCoors 2025 Targets, 2017).

MillerCoors goals until year 2025:

1. Responsibly Refreshing

- To prevent underage drinking and drunk driving in all countries where they operate.
- To cooperate with global alcohol producers to decrease harmful alcohol use by 10% and support and encourage consumers to take drinking seriously, responsibly and rationally.
- Create advertising and marketing responsibly and make sure that 100% of advertising and marketing programs are according to company, industry and governmental standards.
- Provide 100% of nutritional information, alcohol serving facts and ingredients of their products for public.
- Start to provide and sell low- and no-alcohol choices of beer in 100% of the countries where MillerCoors operate (MolsonCoors 2025 Targets, 2017).

2. Sustainably Brewing

- Reduce water consumption in their primary breweries by 22% to accomplish a 2,8 hl/hl water-to-beer ratio.
- Cooperate with stakeholders to save water resources in the high-risk watersheds in region where the breweries are built.
- Lower carbon emission from their main scope of business by 15% and reduction in value chain by 6.2%. They found out that packaging materials have the highest share on emissions in the value chain footprint, precisely 38% of the total.
- Decrease carbon emission from their main scope of business by 50% and reduction in value chain by 20%. They plan to achieve it by reducing specific material for packaging.
- Support and develop zero waste to landfill at all their brewing and primary manufacturing facilities. To try efficiently use waste, to recycle, remade or reused as something new.
- Increase their water-use efficiency of the agricultural supply chain and malting operations by 10%. Employ or partner with only suppliers, who follow sustainability standards in the key growing regions (MolsonCoors 2025 Targets, 2017).

3. Collectively Crafted

- Continuing with the Great Place to Work Index, which is based on surveys where employees answer questions that shows the company really meets the needs and expectations of the employees.
- Reduce Lost Time Accident rate by 40% in the workplace to provide employees greater health and safety.
- Make the world and work better place by investing $100 million into their communities.
- Try to involve even more people for volunteering and other activities.
- Cooperate with suppliers that only accept their supplier standards and allow them to engage to an ethical and sustainable supply chain (MolsonCoors 2025 Targets, 2017).

Comparison of both companies

In this part of the project we would like to compare individually every aspect in which companies follow CSR.

Both of the companies mostly apply the same activities and their goals are quite the same. We had divided every activity, based on its character into three parts – environmental, social and economic aspect.

Both of the companies have very similar strategies, where they operate, but there are also some differences, which we would like to mention and highlight.

Environmental aspect

When it comes to ecology and environment, both of the companies have many areas where they operate and where they help. Their activities in environmental aspect are the most extensive, compared to other aspects. They try to be more eco-friendly, more gentle to nature and they think of the better future for society. That gives them competitive advantage and better customer opinion.

In following table we see how similar individual activities are:

Table 1 Comparison of the companies in environmental aspect

PILSNER URQUELL	MILLERCOORS
Reduction of water consumption on 2,9 hl/hl	Water consumption to 3,57 hl/hl
Electricity decrease to 78 MJ/hl	Energy reductions by 19%
Reusing water from washing bottles process	Spent grain is sold to animal food makers and waste water from brewing sold to farmers
Significant recycle or reuse success – 98,5%	Success of zero waste in 14 brewing facilities
Less carbon emission by 4%	Lower carbon emission by 15%
Refundable glass bottles	Refundable glass bottles in 10 states; recycling glass bottles recycling aluminium cans

Obviously, both of companies focus on non-renewable resources, water consumption, zero waste, saving energy, less carbon emission, etc.

Pilsner Urquell progressed of water consumption from 3.1 to 2.9 hl/hl water to beer ratio that consists of all three breweries. MillerCoors´s goal for last five years is to achieve 2.8 hl/hl water-to-beer ratio. Slowly, time by time they are aiming there.

Pilsner Urquell had decreased electricity from 92.3 to 78 MJ/hl and MillerCoors by 19%, which is very impressive from both of the breweries.

Both of the companies try to be zero waste. In enormous companies, such as Pilsner Urquell and MillerCoors with consumption and production this big, it is very important and difficult to fulfil zero waste life style. They try to come up with new ideas how to process waste. One example of finding new ways to use waste efficiently is reusing waste water from washing bottles. When the glass bottles are returned, they wash it with water and they wash away labels too. Annually it is 400 tons and it would be more than disturbing, sending this amount of waste into landfills or incineration plants. To reduce this waste, they use them in composting plant. They mix the labels with waste water sludge and after 90 days it is ready to be used for road strengthening or reclamation of landfill. In 2017, they have recycled or reused 98.5% of produced waste.

MillerCoors has also very effective ways how to tread waste. They put the spent grain and sell it to animal food makers. Waste water from brewing is also sold to farmers so they will use it for watering crops.

This is just slight difference of waste treatment between the both companies and they can take an example from each other.

The reason, why carbon emission of MillerCoors had so decreased from year 2017 is that they found a new, more effective and less expensive way of packaging products by reducing packaging materials.

In Czech Republic is refundable bottles quite common routine. When customers buy Pilsner Urquell product they pay a small deposit which he/she can receive back after returning the glass bottle. Those bottles are washed and put into the production again. In this matter there are always doubts and questions about hygiene and delivery costs.

People in USA are very active in refunding aluminium cans unlike Czech Republic. Recycling aluminium cans are not very famous in Czech Republic but there are new campaigns. There is one in Pilsen called “Plech jede”, alerting on importance of recycling aluminium cans (Plzeňský Pivovar, a.s., 2014).

MillerCoors has refundable glass bottles in 10 states and in the rest they recycle them, they make new bottles. Recycling bottles have many processing procedures as separation, crushing, melting and moulding into new products. All those phases have its costs, consumption (water, electricity, incinerators) and also consequences (carbon emission).

Social aspect

When it comes to social aspect, both of the companies have some similarities. They support responsible drinking, participates in a charity events or support society financially. Even though they do these common activities, MillerCoors is much more active in cooperation with society – stakeholders. They organize events like cleaning the river or cleaning the forest. Firstly, it is the way how to connect society with the organization and secondly, it has positive affect on environment and also on people.

In the following table we see overall activities both of the companies operate in:

Table 2 Comparison of the companies in Social aspect

PILSNER URQUELL	MILLERCOORS
Support of responsible drinking	Preventing of underage drinking and drunk driving
Support of research activities in brewing industry by 2 million CZK grant	Provided grands to 11 universities in value of $150,000; donation of $22,6 million
1,927 pubs and restaurants passed educational programs	Women in Beer seminars
The number of women employees increased by 3%	27.3% of women works in the company
Doubled contribution for retirement savings	Provides number of benefits
Investments in value of 19.3 million CZK	Since 2016 MC had invested $1,01 billion

Pilsner Urquell supports responsible drinking by project "Respektuj 18" which was founded in 2013. Also they have projects like "I'm having alcohol-free beer 'cause I'm driving" or "Člověče, nezlob se" which is a project aimed at preventing underage drinking (Plzeňský Prazdroj, 2016).

MillerCoors operates for example in the Designated Driver Superhero campaign. They are member of the International Alliance for Responsible Drinking (IARD), which is cooperating not only with US but also with foreign governments and their aim is to fight against harmful use of alcohol and reduce it by 10% until 2025. MillerCoors also made a test driving simulation in nine countries where they operate, which started 10 years ago. It provides the view of drunk driver and simulates influence of alcohol. They fulfilled five-year plan of joint commitments to reduce harmful alcohol use. Marquette University used the grant to offer Red Watch Band training to all students studying the second grade.

Pilsner Urquell provides educational programs that should help society or pubs learn how to take care of beer, how to prepare or serve it.

MilerCoors has courses, but focused mainly on employees, in this case on women. Seminar Women in Beer is a way, how to encourage women in the company, another ways are career progression training, flexible work schedules and parental leave practices.

Pilsner Urquell invested 19.3 million CZK into Garden project, which helps their employees for better working conditions. MillerCoors were very generous and they invested $1.01 billion into various suppliers and thanks to it were created 4,781 jobs.

Economical aspect

In economical aspect point of view were the most significant differences between companies. The reason why is it so is maybe because such distinguish culture.

Activities which are similar are listed in the table below:

Table 3 Comparison of the companies in Economical aspect

PILSNER URQUELL	MILLERCOORS
100% of crops meant for brewing were bought by domestic supplier	Cooperation with suppliers with same standards in sustainability
90% of labels of products has caloric value	Expended Nutritional Information and alcohol serving facts on 96 products
Supporting neighbourhood by 375,000 CZK	Involvement of employees and partners on protecting water resources
Set goals until 2020	Set goals until 2025

Proudly, Pilsner Urquell cooperates and collects 100% of crops from domestic suppliers - specifically barley. On the other hand, MillerCoors cooperate with suppliers and partners who have the same standards in sustainability for 100%. By this principle they make sure, that the history of the collected material is clear and indubitable.

To stay clear and open with public, Pilsner Urquell published nutritional information and alcohol serving facts on labels on website napivosrozumem.cz (Plzeňský Prazdroj, 2019). They extended products with caloric value table on more than 90% of products, which is more than they expected (by 10%). On the other side, MillerCoors has covered nutritional information on 100% of their brands (MillerCoors, Nutrition and Codes, 2019).

Pilsner Urquell is supporting neighbourhood by 375,000 CZK, where expert committees will choose between projects and those projects will split the amount of money. After that, public will vote for the most likeable project and whoever wins, gets 25,000 CZK. The themes of projects are connected with improvement of environmental conditions.

They both show their goals for the future, which is the great overlook into the company´s information and strategy for the future.

Differences in companies' CSR

The most significant differences are listed in the table below:

Table 4 Differences in companies´ CSR

Name of the company	Activity
Pilsner Urquell	Refundable glass bottles, instead of MC recycle bottles
Pilsner Urquell	Provides seminars for pubs and restaurants to help them take care of the beer
MillerCoors	Has much bigger involvement of employees in CSR activities
MillerCoors	Is active in zero waste life style
MillerCoors	Recycle aluminium cans

Pilsner Urquell also has products in cans but those cannot be recycled or recused. PU should at least support campaign (#replechuj) (Plzeňský Pivovar, a.s., 2014) to recycle aluminium cans, because the demand of beer in cans by year 2017 had increased to 15%. Zero waste is already on their list of goals to 2020 (Petr, 2018).

Pilsner Urquell arranges many events for public but they should consider involving public more into beneficent events, where people can actually be helpful for the environment (For example cleaning river or forests).

MillerCoors does not make any courses for pubs or restaurants. The courses could be oriented on teaching how to operate with their beer.

MillerCoors recycle aluminium cans but are not that active in refundable glasses. They should consider making refundable glasses more common in USA. Promote this operation in society so people know how important it is.

Conclusion

This project is based on comparison of two companies from Czech Republic and USA. In the work are compared Pilsner Urquell form Czech Republic and MillerCoors from USA. Even though the culture of those companies is very distinguished, both of the companies have mostly the same habits and sustainability routines. Both of the companies aim for the same and their CSR activities are very similar. It is crystal clear that both of the companies have mostly the same habits and sustainability routines.

This project is divided into two sections, firstly theoretical part, where are companies introduced and then is explained what CSR is. Secondly, comparison part, where the companies are being compared from all three aspects – economical, environmental and social.

We mainly draw upon Pilsner Urquell's and MillerCoors' Reports from previous years, business register or corporates' official websites.

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Joint project of Marquette University and Faculty of Economics, UWB

Comparison of Corporate Social Responsibility in the bakery industry

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Date

Content

Introduction

As part of a joint project between the University of West Bohemia and Marquette University, we focused on corporate social responsibility, specifically on the bakery sector. We chose two companies for our research. On the Czech side it was PEKO and on the US side it was Miller Baking Company.

In our work we want to analyze the theoretic issues of CSR, which is currently a relatively topical issue. Furthermore, we want to focus on a brief description of the companies and then conduct a customer survey that will be completely anonymous. We hope to reach at least 30 respondents from each country and have adequate data to compare.

We will continue to evaluate and compare the data we collect so that we can draw conclusions for both sides. At the end of the work, the conclusions will be evaluated and measures to improve CSR will be proposed.

1 Corporate Social Responsibility (CSR)

Due to the fact, that Corporate Social Responsibility is known discipline just for a short part of time, so the rules and correct form is constantly evolving. CSR is interesting by the fact, that is based only on a volunteering of companies. The discipline only gives instruction for the companies, how to make things and be more efficiently achieved results with respect to the environment. CSR is not covered by a law that would impose sanction for non-compliance.

Corporate Social Responsibility is a long-term commitment of the enterprise to contribute to economic development while at the same time behaving ethically – improving the quality of life workers and their families, as well as local communities and the broader society. (Blowfield & Murray, 2008)

The main idea of CSR is possible to describe as an activity which help the environment without expecting of profit. These are activities that are beyond the scope regulation through ordinary laws. CSR behavior consider the needs of the internal and external environments. They seek to contribute to the sustainable development of society, protect the environment and create better social conditions.

Socially responsible behavior is reflected in the integration of positive attitudes or activities into the main business strategy.

CSR consists of the three basic pillars:

- social area,
- economic area,
- environmental area.

Awareness about CSR is growing. The main reason is the dissemination of information on growing global issues through the media and the citizens initiative. Businesses are dependent on global developments, so it is in their own interest to help improve the state of this world. The greatest attention is focused on protecting the environment and the friendliness of corporate activities to nature. (Blowfield & Murray, 2008)

The significance of the CSR concept has recently witnessed high growth and mainly concerns the following:

- Large multinational corporations put CSR at the forefront of corporate philosophy and convey CSR to its smaller subsidiaries,
- CSR is seen by businesses to differentiate themselves from competition and penetrate the market as a unique,
- when choosing a product, consumers include in the decision-making process a method of production, assessing whether it is environmentally friendly and whether it does not expose employees to undignified working conditions,
- the European Union´s contribution to the CSR concept,
- increased need to protect and improve the environment. (Blowfield & Murray, 2008)

1.1 History of CSR

Corporate social responsibility discipline can be found in remote history. The beginning of the theoretical definition of CSR can be found in the second half of the 20th century, predominantly in the United States of America, as evidenced by the considerable publishing activity of local authors. The first to engage in this issue was Howard R. Bowen (1953) and Eells (1956). The basic question of this period was, according to these authors, to understand the responsibility towards society by the entrepreneurs themselves. This question arises from the belief that several hundred of the largest and most powerful firms are capable of influencing citizens' lives in several respects by their power and decisions.

The 1960s represent, for CSR, a considerable increase in attempts to formalize and define what corporate social responsibility really means. Keith Davis is the most prominent of this period. He had the theory that decisions and activities of the entrepreneur, which are realized at least partially for reasons beyond the economic and technical interests of the company. At the same time, the main CSR component is appealed, based on company volunteerism, not from the pressure of non-profit organizations and other organizations. Furthermore, it is argued that the cost of this volunteering may not always be ensured to measure their economic returns.

In the 1970s, there was a striving for a theoretical definition of the concept. Harold Johnson (1971) describes a socially responsible business as the one whose executives respect the diversity of interests. This implies that managers are not only concentrating on profits, but also on their employees, suppliers, traders, the local community, and so on.

An important milestone of this time is also the contribution of the Committee for Economic Development (CED), which states that business can be based on public consent and the basic purpose is to contribute to the company's satisfaction. In addition, CED has created three concentric circles of the concept of social responsibility because of the growing social interest in social business. The inner circle focuses on the basic economic elements - product, workforce, economic growth. The middle circle focuses on the performance of these basic economic elements with respect to social priorities (environmental protection, etc.) and their change. The outside circle then recommends that the organization be interested in its surroundings from a wider perspective. It should therefore focus on rising poverty, remote locations, etc. Other authors dealing with the concept of CSR and its definition were George Steiner, Henry G. Manne, Henry C. Wallich and many others in the 1970s.

Over the next two decades, the CSR concept is receding. An analysis of alternative concepts and themes, such as CSP, Corporate Citizenship (CC), Stakeholder Theory, etc. CSR is mainly used as a building block or reference point for these concepts. There is also a focus on empirical research conducted in this area that verifies the accuracy or management of individual theories.

It is likely that the CSR concept will be optimized in the near future rather than creating new theoretical trends. Given that awareness of corporate social responsibility has spread to the whole of society in the last half-century. Evidence of this fact is increasingly emphasized by both companies and its stakeholders. (Crane, McWilliams, Matten, Moon, & Siegel, 2008)

1.2 CSR pillars

The authors divide the concept of CSR into three core areas. These core CSR spheres include: the economic, social and environmental pillar. In the available literature, we come across the concept of triple-bottom-line (3P), which divides CSR into the following three areas:

- Profit - economic pillar;
- People - social pillar;
- Planet - environmental pillar.

The economic sphere looks at the running and management of the company. Specific elements include the quality and safety of the products and services offered, transparency and the rejection of corruption, product innovation and sustainability, payment discipline, commitment to the supply chain, investor relations.

On the social level, the organization focuses on the health and safety of its employees, quality education and retraining policies, gender balanced approach, philanthropic and volunteer activities, respect for human rights, communication with stakeholders.

The environmental pillar considers the organization's identification and impact on the environment. It includes environmentally sound corporate culture, eco-production, saving natural resources, investing and developing green technologies and other environmental aspects.

1.3 Benefits of CSR

By linking responsible behavior to company goals and values, the company can achieve a stronger corporate spirit and gain a competitive advantage. A competitive advantage may consist in gaining loyal workers or increasing labor productivity. At present, responsible behavior is becoming an important factor in choosing an employer. Companies that behave responsibly are more attractive to potential employees than those that focus only on maximizing profit or market share.

- Conduct in line with CSR can bring about:
- increasing business credibility and transparency,
- increased attractiveness for employees and other stakeholders,
- creating reputation and boosting market share,
- the opportunity to get loyal and quality workers,
- difference from competition.

Providing high-quality products, services and long-term maintenance of high-quality partnerships brings greater credibility and transparency to the company. The image of the company reflects its behavior and the behavior of happy and happy employees. This creates a true image of society as an employer in the labor market or in a business partner. The CSR helped further increase the company's intangible values. These include, for example, creating reputation and increasing market share. These benefits give the enterprise the ability to differentiate itself from competition, which may be the key factor in purchasing decisions in the customer.

1.4 Implementation of CSR in the company

The process of implementing CSR is long-lasting, complex and complex. Its aim is to introduce the principles of CSR into the vision of an enterprise, its values, entrepreneurial culture, processes at all levels. At present it is the process of adapting existing business activities to the principles of the CSR concept.

The implementation of the CSR concept is different in each enterprise, but the preparation itself can be generalized to four fundamental questions:

- Why Apply the CSR?
- How to apply the CSR principle?
- What are the current CSR activities in the business?
- What should CSR look like in a business?

The first step towards implementing the CSR concept is to identify motivational factors. These incentives are divided into internal and external motivators. Among internal impulses we rank the need for a strategy to meet socially responsible goals, the CSR response changing the organization's strategy or the need for greater alignment of CSR goals with the organization's operation. External factors include the need for effective communication on CSR activities, the need for organizational flexibility with regard to changes in social business or understanding of stakeholders.

The next step in implementing the concept is to identify the vision with the CSR concept. The vision represents a simplified description of the direction the organization wants to take and a description of the desired state it wants to achieve with its strategies. This identification can take place in two ways - directly or indirectly. We directly understand the inclusion of CSR approaches to existing visions, values and strategies. An indirect way represents a new creation oriented only on social responsibility. Firms have introduced CSR through these integration methods, proving that this approach represents the highest priority for CSR to embed the complete organizational structure.

The third step is to assess the current CSR status of the organization. This part of the implementation process evaluates the current position of the CSR concept within the organization. This evaluation is further divided into internal and external analysis. The internal analysis is focused on current activities in the field of social responsibility. The most commonly used method of self-assessment is a set of questions (5 sub-areas) that help identify the organization's characteristics in relation to CSR. Individual sub-areas of self-assessment are most often responsible for the most vulnerable management or the person responsible for the management of CSR. The individual topics of the questions are gradually addressing the issue of whether the organization is strategically engaged in responsible activities, whether it behaves responsibly to clients and business partners, employees, the environment and the surrounding area. For greater efficiency, a CSR awareness among employees is also used. The results of the internal analysis show the socially responsible activities and attitudes of the company. They are also a source of inspiration for future management of the company's management. After the inside analysis is followed by an analysis of the external environment. The organization should focus on at least the following areas: legal requirements; benchmarking; competition research; external pulses and CSR programs. In order to make the results more transparent and summarize, SWOT analysis is the source of decisions on future management of social responsibility. SWOT analysis is made up of strengths and weaknesses based on internal analysis, and the opportunities and threats that are gained by analyzing the external environment.

The next step in shaping the CSR concept is the evaluation of key stakeholders and their involvement in organizational activities. At this stage, the key stakeholders are involved in all phases of CSR deployment in the organization. The most common are the four phases, which are referred to as PDCA (Plan, Do, Check, Act).

2. Company introduction

Within the project, we compared CSR in one Czech company and one American company. Both companies are in the bakery industry.

2.1. PEKO

1.: Logo of PEKO

PEKO is small family bakery, which is focused on traditional hand-made pastries and desserts. It was founded 1.9.1991 by Věra Němečková. In this time, the company has 8 branches, seven in Pilsen and one in Třemošná. The main goal of company is happiness of their customers. They are trying to make a varied selection of pastries and desserts to reach customers.

2.2. Miller Baking Company

2.: Logo of MBC

Miller Baking Company is privately owned company that specializes in a line of bakery products known by the brand name Pretzilla. The company is situated in Milwaukie, Wisconsin. It was founded in 1923. In 1970 purchased the company Richard Miller, who unrelated with the original family.

Through 2017, the bakery produced donuts, rye, challah, Ciabatta, sourdough, and many more. The current owner is Brian Miller, who took over management of the firm from his father in 1997.

3. Research of using CSR in the companies

Our research was focused on the customer aspect of the CSR. We created two forms, which we spread between the customers of the companies.

3.1. Form for the Miller Baking Company

1. How old are you?

2. Do you live in Milwaukee?

3. Does CSR mean anything to you?

4. Do you know Miller Baking Company?

5. Do you think that the company takes good care of the health of its employees?

6. Do you think the company refuses discrimination and provides balanced wages?

7. Do you think the company does business in an environmentally friendly manner and is environmentally friendly?

8. Do you know about any charity that the company is involved in?

9. If your previous answer was "yes", can you specify?

3.: Form Response Table - USA

Miller Baking Company - USA									
Respondent	1	2	3	4	5	6	7	8	9
1	21 - 35 years	Yes	Yes	Yes	No	No	No	No	
2	21 - 35 years	Yes	Yes	Yes	Yes	Yes	Yes	No	
3	21 - 35 years	Yes	Yes	Yes	Yes	Certainly yes	No	No	
4	21 - 35 years	Yes	Yes	Yes	Certainly yes	Certainly yes	Yes	No	
5	21 - 35 years	Yes	Yes	Yes	Yes	Yes	Yes	No	
6	21 - 35 years	Yes	Yes	Yes	No	Yes	Yes	No	
7	21 - 35 years	Yes	Yes	Yes	Yes	Yes	Yes	No	
8	21 - 35 years	Yes	Yes	Yes	Yes	Yes	Yes	No	
9	36 - 50 years	Yes	Yes	Yes	Yes	Yes	Yes	No	
10	21 - 35 years	Yes	Yes	Yes	Yes	Yes	Yes	No	
11	less than 20 years	Yes	No	Yes	Yes	Yes	Yes	No	
12	21 - 35 years	Yes	Yes	Yes	Yes	Yes	Yes	No	
13	21 - 35 years	Yes	Yes	Yes	Yes	Yes	Yes	No	
14	21 - 35 years	Yes	Yes	Yes	Yes	Yes	No	No	
15	21 - 35 years	Yes	Yes	Yes	Yes	Yes	Yes	No	
16	21 - 35 years	Yes	Yes	Yes	Yes	Yes	Yes	No	
17	21 - 35 years	Yes	Yes	Yes	Certainly yes	Certainly yes	Certainly yes	Yes	Support local farms
18	21 - 35 years	Yes	Yes	Yes	Yes	Certainly yes	Yes	No	
19	21 - 35 years	Yes	Yes	Yes	Yes	Yes	Yes	No	
20	21 - 35 years	Yes	Yes	Yes	Certainly yes	Yes	Yes	No	
21	21 - 35 years	Yes	Yes	Yes	Yes	Yes	Yes	No	
22	21 - 35 years	Yes	Yes	Yes	Yes	Yes	Yes	No	
23	21 - 35 years	Yes	Yes	Yes	Yes	Yes	Yes	No	
24	21 - 35 years	Yes	Yes	Yes	Yes	Yes	Yes	No	

From the Milwaukee we got 24 respondents, who filled the form. Most of the respondents was a young people between 21-35 years. Only one was lees than 20 years old and only one was between 36-50 years. Everybody lives in Milwaukee and only two people did not know about meaning of CSR. Also, everybody knows the company. Questions about health of employees, balanced wages and environmental were mostly evaluated positively. Only one person knows about some support of local farms within a company strategy.

3.1. Form for the PEKO

1. How old are you?

2. Do you live in Pilsen?

3. Does CSR mean anything to you?

4. Do you know the company PEKO?

5. Do you think that the company takes good care of the health of its employees?

6. Do you think the company refuses discrimination and provides balanced wages?

7. Do you think the company does business in an environmentally friendly manner and is environmentally friendly?

8. Do you know about any charity that the company is involved in?

9. If your previous answer was "yes", can you specify?

4.: Form Response Table - CZE

PEKO - Czech republic									
Respondent	1	2	3	4	5	6	7	8	9
1	21 - 35 years	No	Yes	Yes	Certainly yes	Yes	Yes	No	
2	21 - 35 years	Yes	Yes	Yes	Yes	Certainly yes	Yes	Yes	Donating food to People in Need
3	36 - 50 years	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Donating food to People in Need
4	21 - 35 years	Yes	Yes	Yes	Yes	Yes	Yes	No	
5	21 - 35 years	Yes	Yes	Yes	Yes	Yes	No	No	
6	21 - 35 years	Yes	Yes	Yes	Yes	Yes	Certainly yes	Yes	Would say donating goods to homeless people
7	21 - 35 years	Yes	Yes	Yes	No	Yes	Yes	No	
8	21 - 35 years	Yes	Yes	Yes	Yes	Yes	Yes	No	
9	21 - 35 years	Yes	Yes	Yes	Yes	Yes	Yes	No	
10	36 - 50 years	Yes	Yes	Yes	Yes	Yes	Yes	No	
11	21 - 35 years	Yes	Yes	Yes	Yes	Yes	Yes	No	
12	21 - 35 years	Yes	Yes	Yes	Certainly yes	Certainly yes	Certainly yes	Yes	Support homelles
13	21 - 35 years	No	Yes	Yes	Yes	Yes	Yes	No	
14	21 - 35 years	Yes	Yes	Yes	Yes	Yes	Yes	No	
15	21 - 35 years	Yes	Yes	Yes	Yes	Yes	Yes	No	
16	21 - 35 years	Yes	Yes	Yes	Yes	Yes	Yes	No	
17	21 - 35 years	Yes	Yes	Yes	Yes	Yes	Yes	No	
18	21 - 35 years	Yes	No	Yes	Yes	Yes	Certainly yes	Yes	Cooperation with Person in Need
19	21 - 35 years	Yes	Yes	Yes	Yes	Yes	Yes	No	
20	36 - 50 years	Yes	Yes	Yes	Yes	Yes	Yes	No	
21	21 - 35 years	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Cooperation with Person in Need
22	21 - 35 years	Yes	Yes	Yes	Yes	Yes	Yes	No	
23	21 - 35 years	Yes	Yes	Yes	Yes	Yes	No	No	
24	21 - 35 years	Yes	Yes	Yes	Yes	Yes	Certainly yes	No	
25	21 - 35 years	Yes	Yes	Yes	Certainly yes	Yes	Yes	No	
26	21 - 35 years	Yes	Yes	Yes	Yes	Certainly yes	Yes	Yes	Donating food to People in Need
27	36 - 50 years	Yes	Yes	Yes	Yes	Yes	Yes	No	
28	21 - 35 years	No	Yes	Yes	Yes	Yes	Yes	No	
29	21 - 35 years	Yes	No	Yes	Yes	Yes	Yes	No	
30	21 - 35 years	Yes	Yes	Yes	Yes	Yes	Certainly yes	Yes	Donating food to People in Need

From Pilsen, we got 30 respondents, who filled the form. From these 30 respondents were 26 between 21-35 years and 4 persons were between 26-50 years. Only 3 persons did not know about meaning of CSR and only two of the respondents were not from Pilsen. Also, everybody knows the company. Questions about health of employees, balanced wages and environmental were mostly evaluated positively. In addition, 8 out of 30 respondents said they knew a particular charity event, specifically, a collaboration with People in Need.

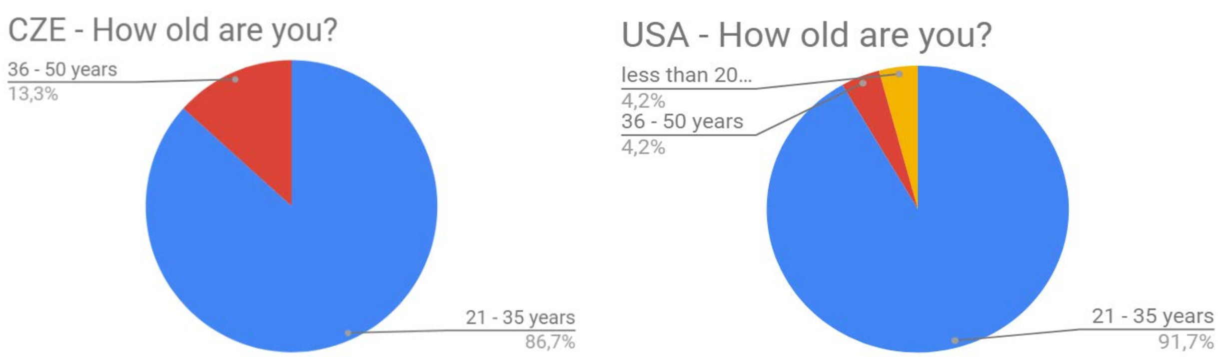
4. Comparison of the obtained data

We decided to compare the obtained data between PEKO and Miller Baking Company and create the graphical compare, which is based on a questionnaire survey.

4.1. Graphically compare

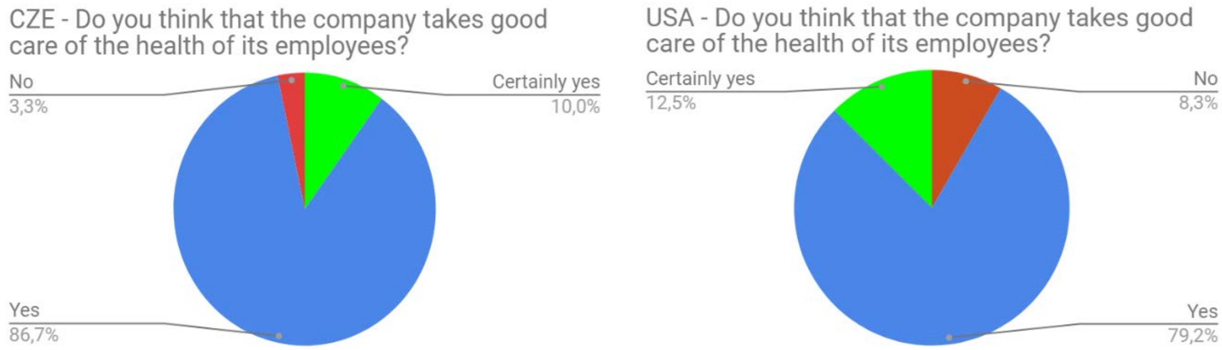
We used graphs from both of forms and compare them. The graphs were created by software Microsoft Excel.

5.: Graph n.1. - Age



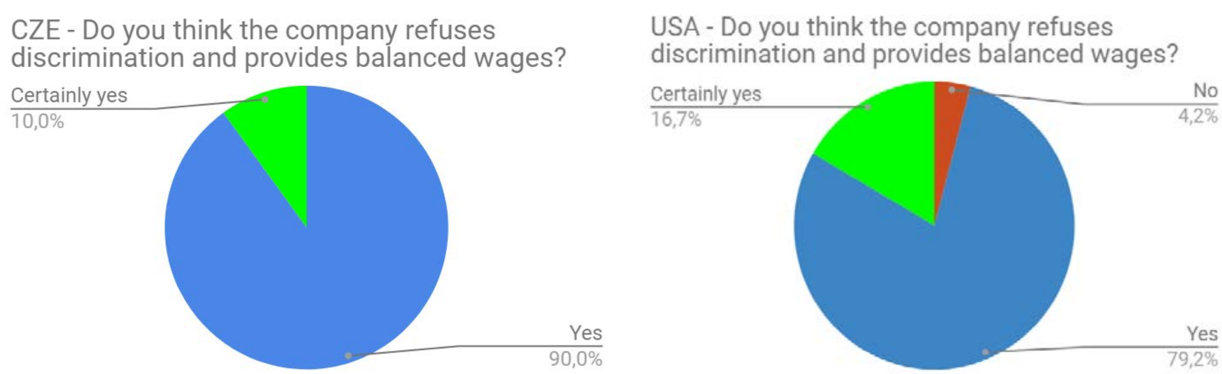
The first criterion was the demographic, ie the respondent's age. The individual response options were less than 20 years, 21-35 years, 36-50 years, and 50 and more years. Most of the respondents from both countries were between 21 and 35 years old. Specifically, from CZE 86.7% and in the USA 91.7%. In the Czech Republic, the remaining 13.3% fell into the 36-50 years category. In the US, 4.15% of the category took less than 20 and 36-50 years.

6.: Graph n.2. - Employee health



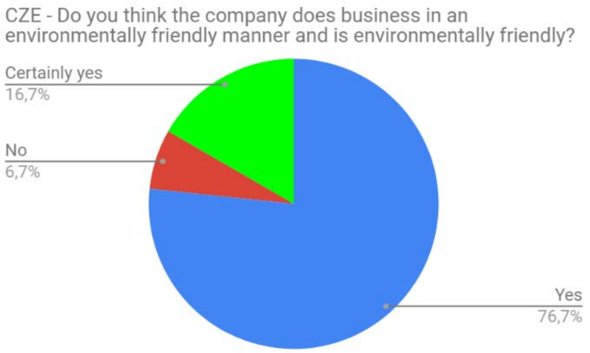
Another criterion we chose was the evaluation of the care of our healthy employees. The answers were sure to take care, yes, they care, don't care and they certainly don't care. At PEKO, 10% voted for yes, 86.7% for yes and 3.3% for them. At MBC, 12.5% voted for yes, 79.2% for yes and 8.3% for them. In comparison to both countries, we can see that there were 96.7% positive answers for PEKO. For MBC, 91.7% percent positive responses. As a result, the result was very similar in both countries, only slightly tilted to PEKO.

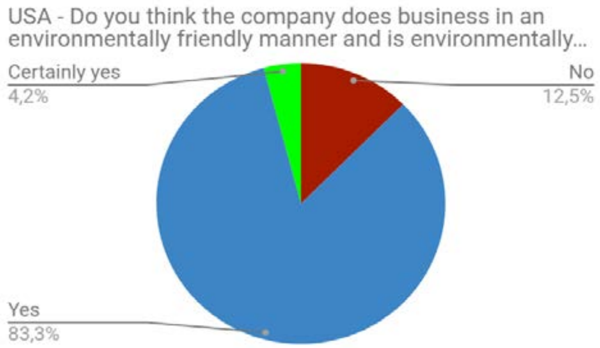
7.: Graph n.3. – Balanced Wages



The following graphical comparison deals with wage equality. Again, it was possible to choose from four answers, as in the previous graphic comparison. Looking at PEKO's results, we can only see positive answers, when 10% of the respondents certainly agree and 90% agree with it. Again, the answers from the American side are a bit more subversive. From this perspective, 16.7% certainly agree, 79.15% agree and 4.15% disagree. Again, we can evaluate this comparison as very similar in both countries.

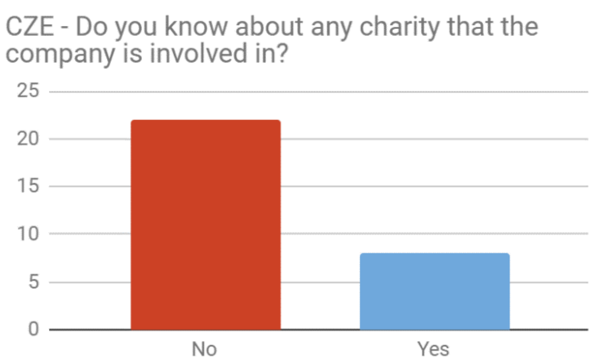
8.: Graph n-4. – Ecological environment

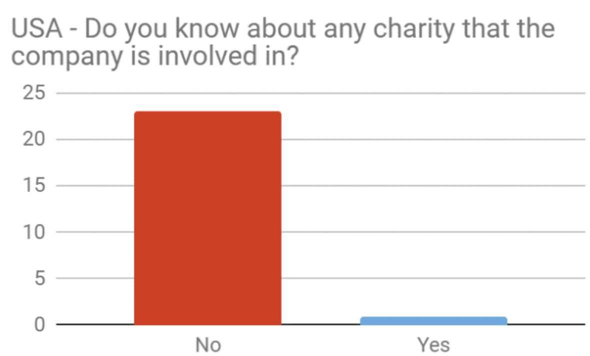




In the next graphical comparison of both companies we will focus on their behavior towards the environment. As in the previous two comparisons, there were 4 choices. PEKO has received 16.7% answers for sure, 76.7% for agree and 6.7% for disagree. MBC has gained 4.2% for sure I agree, 83.3% for agree and 12.5% for disagree. From this comparison, we can conclude that in this indicator, PEKO clearly outperformed MBC.

9.: Specific CSR activity





The last selected question for the graphical comparison concerned a particular charity event in which the company is involved. At PEKO 22 respondents do not know about any action and 8 replied that they know about charity. In the concrete answer, the help to homeless people was always mentioned, either directly or through the organization People in Need. There were 23 negative responses to MBC and only one positive response. This positive answer was to support local farmers. From this graphical comparison, we can see that the awareness of charity activities is more pronounced with PEKO, with about 27% of respondents reporting specific activity, while MBC is only 2,4% aware of charity activities.

5. Conclusion from the obtained data

In total, 54 respondents participated in the questionnaire survey. The majority age distribution was between 20-35 years, probably because the questionnaire was expanded through college students. On the Czech side, only 2 respondents who were 20-35 years old were not known about CSR. From the US side, only one respondent from the age group below 20 did not know this term.

Only one of the representatives from the country has always answered yes to all three questions on staff and health issues, and only one US representative did not agree with all three issues.

Concerning the focus on individual segments, the health of employees and their salaries were very similar in both countries. The most significant difference (but not particularly large) was in the area of environmental protection. When, on the Czech side, there were significantly more percentages of yes for half the percentage of negative responses (6%).

If we then look at the question of specific CSR activities of both companies, we can see that the Czech company PEKO, which is engaged in supporting homeless people in cooperation with People in Need, is more prominent in charity activities. In contrast, the American MBC does not show much activity in this area, as the results of a questionnaire mention only support for local farmers. In view of these results, I have undertaken my own research that we have focused on this subject, but we have not been able to track down any specific activity where the MBC would be willing or charitable.

6. Improvement Proposal

The following section deals with suggestions for improvements in CSR that businesses can use to deliver better CSR results.

6.1. Plastic Bags

Of the three basic pillars of CSR, the company was the worst environmental. We explain this result by excessive use of plastic packaging and plastic bags. In addition to selling fresh products, both companies offer the sale of some of the more durable ones packaged in plastic packaging. We would suggest either changing the packaging for paper or removing products from the sale. Since these products are commonly available in other stores and of the same quality, we do not consider them to be the core products of the portfolio.

Furthermore, both companies offer plastic bags in which goods can be taken away. We can see as positive that in both cases it is necessary to pay for the bag, but nowadays we would rather prefer paper bags or at least a more significant price increase of plastic bags in order to limit them. For the sake of imagination, the price of plastic bags ranges from 1 to 3 crowns. If this part were doubled, then the purchase of these supplementary products would probably be reduced, which could lead to a reduction in their production, while reducing plastic pollution of the planet.

6.2. Improve the knowledge about CSR activities

From our point of view, another big problem is the ignorance of CSR activities of companies. In the Czech Republic, awareness of specific activities is 30%, which is little for us. It is about 2.5% on the US side, which is a very negligible figure, giving the impression that MBC does not use this CSR rather than neglecting it. Therefore, our recommendation is to raise the awareness of the CSR activities of PEKO, which can also bring it to new customers who hear about such things today.

As far as the American parties are concerned, we would recommend greater engagement in the area, as we were not able to trace it ourselves. However, if they have some activities, we would also recommend that they inform the public about these activities, as this can be of benefit to them in finding new customers.

Conclusion

We worked well on the joint project and the goals we set for us, from our point of view,were fulfilled.

Unfortunately, the result of the questionnaire survey did not fully meet our expectations, as the number of respondents was not reached, with only 54 instead of 60. For this reason, we have to say that the number of questionnaires examined is relatively low, which reduces its value.

The results of the survey were then interpreted using graphs that were created in MS Excel and then compared the results of individual countries. From the results we received, we cannot say that any company would be much better, but rather the same results.

Two suggestions for improvement based on the conclusions drawn from the questionnaire survey can be used. First, the reduction of plastic packaging and bags, which today's society perceives as a polluting element of the ecological environment. The second proposal was to increase awareness of CSR activities, which is important and can affect the prosperity of society.

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List of pictures

Corporate Social Responsibility of Specific Microbreweries in the Czech Republic and in Milwaukee

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2019

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INTRODUCTION

In today's world full of technological achievements, that the previous generations did not even dream of, it is important to realize that nothing is eternal. Natural resources are not unlimited, as is the ability of the Earth to regenerate itself. The currently frequently discussed issue, which has been the subject of a number of researches, is whether there is a point beyond which there is no return back and the disappearance of mankind becomes inevitable. There are arising many schools of thought demanding that individuals as well as enterprises should be responsible for their actions in order to reduce the potential damage to the nature and society.

Corporate social responsibility is a term that stands for voluntary commitment of the enterprise to nature and society to act as responsibly as possible in the fields of ecology, human resources, community support, etc.

CSR has its origins in the US, but the practice has spread globally, though in different forms. There remains quite a strong debate on its effectiveness and benefits. The Nobel Prize winner for Economics, Milton Freedman is one of the strongest critics against CSR. Friedman believed that the only purpose of enterprise was to produce profit for its shareholders and that other usage of enterprises resources (than the one connected with generating more profit) was a threat to free market. As the recent researches show, the link between CSR strategies and improved financial performance is inconclusive. Partly the inconclusiveness is the result of the difficulties in the CSR understanding and furthermore because it is not easy to measure intangible values such as company´s reputation.

This paper aims to introduce the concept of CSR and its main principles. The primary goal is to identify CSR activities in selected microbreweries in the Czech Republic and in Milwaukee and to compare the results of individual findings.

This paper is focused on the CSR of microbreweries. There were chosen 3 microbreweries from each state (from the Czech Republic and from Milwaukee), where the aspects of CSR, that are part of the chosen microbrewery´s business, will be evaluated. The main reasons for this choice were the statement of European Commission that small and medium-sized enterprises are the most common type of businesses in the European Union (including the Czech Republic) and the fact that breweries have not only a long tradition in both countries, but also are very popular worldwide.

1 CORPORATE SOCIAL RESPONSIBILITY

This chapter is devoted to introduction of the term of Corporate social responsibility – to its definitions, main principles, potential benefits and possible problems of this concept implementation.

1.1 Corporate social responsibility definition

Nowadays there cannot be found any worldwide unified definition of Corporate social responsibility (CSR), mainly because it is based on volunteering principles, therefore there are no strict rules in this concept. Among the most commonly used definitions belong the definition of European Commission, that puts forward a definition of CSR as *"the responsibility of enterprises for their impacts on society."* According to the European Commission enterprises *"should have in place a process to integrate social, environmental, ethical, human rights and consumer concerns into their business operations and core strategy in close collaboration with their stakeholders, with the aim of: maximizing the creation of shared value for their owners/shareholders and for their other stakeholders and society at large; and identifying, preventing and mitigating their possible adverse impact "* in order to fully meet their CSR. The complexity of CSR politics depends on many factors such as the size of the enterprise, the nature of its operations or the specific market and general economic situation. (European Commission, 2011)

World Business Council for Sustainable Development (1998) defines CSR as follows: "*CSR is a continuous liability of firms to behave ethically, to contribute to economic growth and at the same time to fight for better life quality of employees and their* *families just as local community and society as a whole."* The degree of implementation of ethical programs and their communication to stakeholders differs according to cultural values of a certain society.

There is another term connected to CSR that is worth mentioning - Responsible business conduct (RBC), which is an alternative to CSR term introduced by the OECD. It was defined as *"making a positive contribution to economic, environmental and social progress with a view to achieving sustainable development and avoiding and addressing adverse impact related to an enterprise´s direct and indirect operations, products or services."* (European Commission, 2019)

1.2 The principles of CSR

The 3 main principles of CSR consist of transparency, sustainability and accountability.

Transparency means open policy of the enterprise about its own activities and their impact on society. Stakeholders should be able to make a complete picture of the company based on information published by the company in its reports, statement, websites etc.

According to Mason (2019) the most frequent way to define sustainability is still the definition of the UN Commission on the Environment (1987, p. 43), which states that sustainability is: *„development that meets the needs of the present generation without compromising the ability of future generations to meet their own needs."* Sustainability is concerned with the usage of raw materials, mainly the non-renewable natural resources such as oil and coal, that will have to be replaced by something else in the future, whether due to the total depletion of this material or its increased price due to the small amount remaining. Society should not use resources that cannot be regenerated in order to meet the sustainability principles. In terms of single entities should be considered the rate at which resources are consumed by the entity in relation to the rate at which these resources can be renewed. Operations that cannot be considered sustainable on the basis of that rate assumption should be minimized, ideally eliminated.

The concept of accountability is based on the assumption that the enterprise is fully aware of its influence on its internal and external environment and is willing to take responsibility for the consequences of its activities. The benefits of each operation should outweigh its costs, therefore all the aspects of operation should be quantified. (Crowther, Aras, 2008)

1.3 CSR model

Businesses are nothing but a full-fledged member of society, so they should not be only interested in their well-being but also in the welfare of others. Nowadays there are many CSR models, each has its supporters and opponents. According to Kaman (2015) majority of them put emphasis on the economic motive as the primary priority of business. Carroll´s model (see Fig. 1) is the most robust one. This model consists of four layers. The bottom layer stands for economic responsibility, that is about the responsibility of producing products needed by society and selling them to make a profit. Legal responsibility is connected to following the law and other restrictions (play by the book), because the disobedience can be very pricy. Higher level is represented by ethical responsibility. Carroll (1991) stated that *"ethical responsibility consists of what is generally expected by society over and above economic and legal expectations."* The top of the pyramid is made up of philanthropic responsibility. Philanthropic responsibility stands for improving the quality of life not of employees, communities and society in general.

Fig. 1: Carroll´s CSR model

Source: pharodix.com, 2019

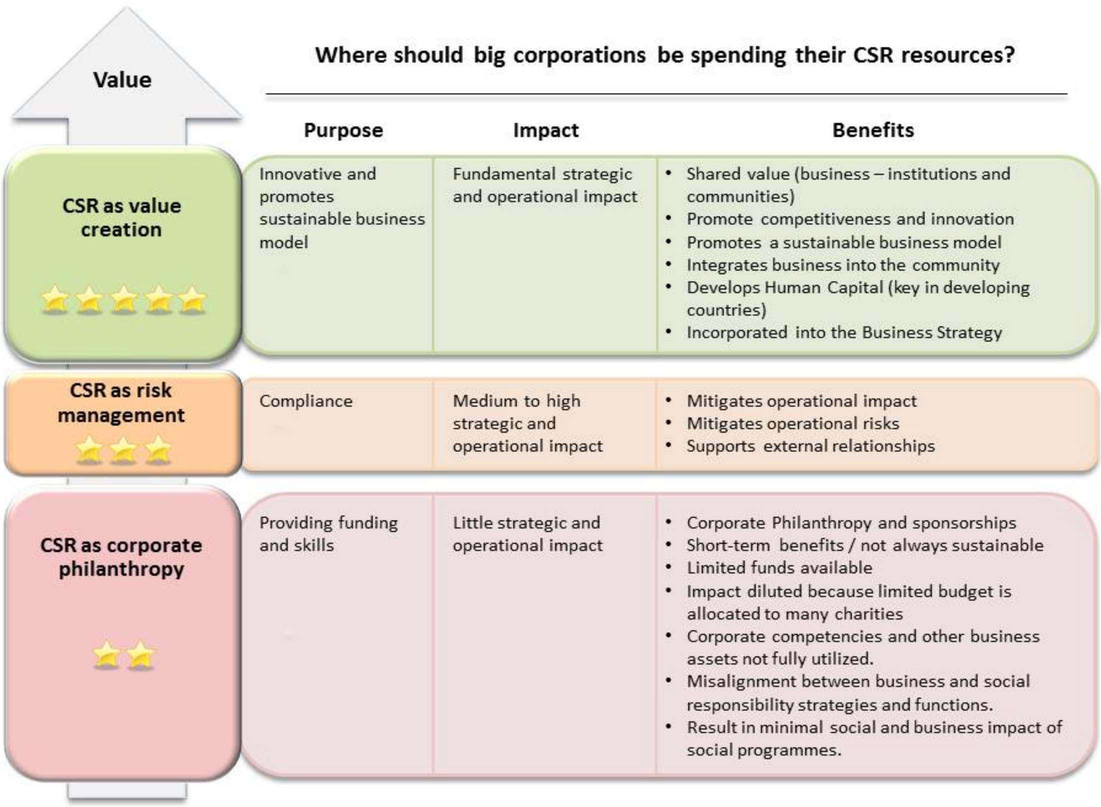
Because of the great controversy of the interpretation of the layer “philanthropic responsibility”, this layer is removed in the modern Carroll´s model because it is considered as a part of other layers.

Crowther and Aras (2008) say that the main business idea of this CSR concept is that consumers consider more than just quality of goods and services when choosing the brand. One of other aspects of brand that could be taken into account when deciding about which brand to choose is the CSR. This results in relatively higher financial performance thanks to the non-financial aspects of business activity. (Caramela, 2018)

1.4 Different levels of CSR implementation

There are many different ways of CSR implementation into business activities. The best way for enterprises is to implicate the CSR activities systematically and regularly as part of a corporate strategy – in Figure 2 is represented by the highest value creating level. CSR activities can be implemented also in other (usually less effective) ways in the terms of long lasting effects - systematically but not as a part of the corporate strategy; irregularly depending on the needs of interest groups; seldom or the CSR activities can be realized not at all.

Fig. 2: Different levels of CSR implications



Source: Wikipedia.com, 2019

CSR as risk management comes with compliance goals and has not fundamental strategic impact on business performance. The lowest value creating level of CSR implication is called “CSR as corporate philanthropy.

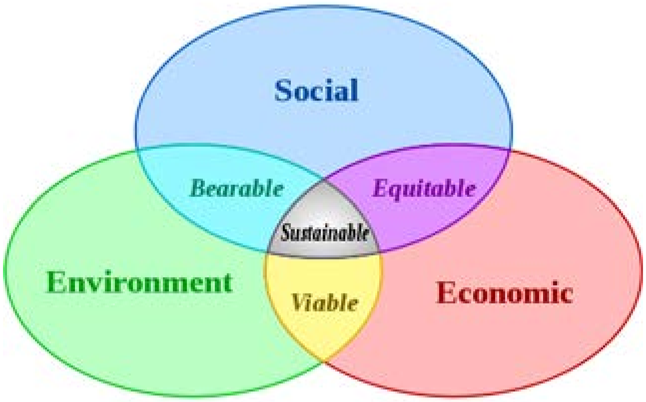
1.5 CSR and sustainable growth

The term CSR is sometimes misused instead of sustainability, alternatively it might be meant as social sustainability, which is one of components of Elkington´s approach to sustainable growth called “the triple bottom line”.

Sustainable performance according to Elkington (1997) consists of 3 main pillars - economic, social and environmental. The condition of sustainable business performance is met when all the pillars are in equilibrium - see Figure 3. At an equilibrium point located at the intersection of all aspects of sustainability, there is an enterprise that achieves excellent economic results and has achieved stable economic growth, all in combination with the environmentally friendly management of natural resources and addressing the needs of all. In order to achieve a sustainable balance, Corporate Governance needs to be added to the core pillars. Corporate Governance, on the one hand, is the way in which an enterprise is managed and, on the other, it is a system of managerial responsibility for corporate governance.

Pillars can also be seen as corporate responsibility - in the case of the economic pillar, it is market responsibility, the social pillar represents responsibility to society (workers and other stakeholders), and the environmental pillar displays environmental responsibility. Enterprise can voluntarily approach a kind of self-regulation that goes beyond the legislative framework. While the main condition for most companies (with the exception of the publicly beneficial) is to achieve the consistency between pillars, but still with an emphasis on the economic sphere.

Fig. 3: The main pillars of sustainable performance



Source: twink.org, 2019

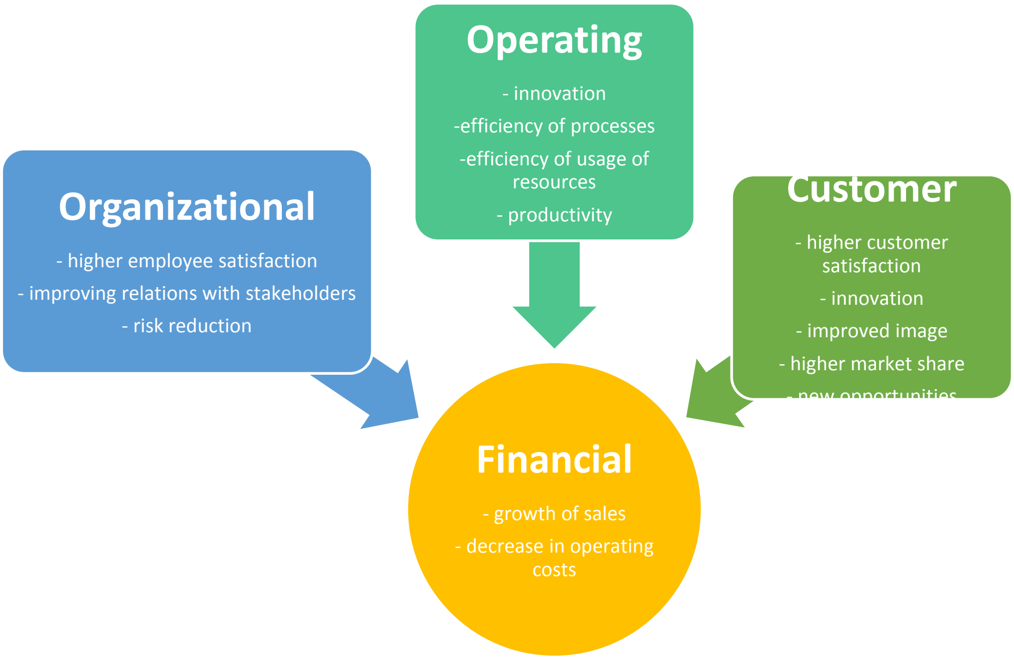
Individual spheres are intertwined. An example is the link between corporate governance and the economic sector, where the way corporate governance and management's responsibility for their own actions (corporate governance and performance) influence economic benefits. In his study, Milstein (2015) states that a business can be seen as on the right way to sustainability when corporate governance is appropriately set. As Camilleri (2017) and Gal, Akisik, Wooldridge (2018) correctly point out CSR plays a prominent role in the social field, but it is not its only aspect.

1.5.1 The importance of a sustainable performance concept for businesses

Epstein and Buchovac (2017) set out the reasons why a sustainable performance aspect for businesses is significant. The issue of sustainable business performance has become the subject of regulation by international organizations and, consequently, by individual states. If the company does not incorporate the concept of sustainability into its business and is mandated to do it by law, it is not only threatened by financial penalties, but also by increased costs with additional controls, potential closure of certain manufacturing operations and damage to reputation. Nowadays, the relatively close interconnection of the company with its surroundings provides many opportunities for the company as well as threats. If a company acts in a sustainable manner and takes into account its surroundings, it can, thanks not only to its positive reputation, be more prosperous, for example it can be gaining additional orders or increasing demand from stakeholders for its production. Otherwise, a company not applying sustainability elements in its business faces potential job losses or a decline in production demand. Companies, as well as individuals, have social and moral responsibility for their actions. The company influences its surroundings, whether it is a positive influence (increasing employment, increasing living standards, etc.) or negative (e.g. air pollution). The incorporation of sustainable performance into a business strategy should, when implemented effectively, promote a positive impact on the environment and eliminate or at least reduce the negative impact.

All of the above arguments usually lead to one fact - even if the company spends some financial resources to incorporate the sustainability concept into its business, it should result in greater benefits - whether by avoiding sanctions or other traffic restrictions, or by improving of the company's image and the increased demand for production. The benefits classified by business area are summarized in Figure 4.

Fig. 4: Potential benefits of sustainable performance implementation



Source: own processing based on Epstein and Buchovac (2017), 2019

1.6 Internationally recognized guidelines and principles connected to CSR

Of course there are some formal approaches to CSR, that are followed mainly by the large (usually multinational) companies. The most common internationally recognized guidelines and principles are:

- OECD Guidelines for Multinational Enterprises;
- ISO 26 000 Guidance Standard on Social Responsibility;
- United Nations Global Impact with its ten principles;
- United Nations Guiding Principles on Business and Human Rights;
- ILO Tri-partite Declaration of Principles Concerning Multinational Enterprises and Social Policy.

From the guidelines and principles mentioned above it is evident that CSR covers at least environmental issues, labor and employment practices, human rights and anticorruption measures. (gettingtosustainability.com, 2012)

2 THE CRAFT BEER INDUSTRY

2.1 History of the craft beer industry

In the late 1970's, brewing in the United States had shifted towards light, low calorie beers due to highly effective marketing campaigns. These campaigns phased out unique and diverse imported beers from breweries leading to high uniformity among product types offered by domestic breweries. Due to the relative standardization of beer preferences across the US, brewing companies began to shrink leaving only 44 domestic brewing companies remaining by the 1980's. Experts at this time predicted a further decline leading to the consolidation of about 5 central breweries across the nation. This absence of parity lead to the idea of homebrewing which quickly caught on throughout the US. The only way to experience diversity of flavor and beer type was to craft it individually. This concept turned into a rapid movement of individual homebrewers focused on creating unique, diversified beers. This allowed people of all backgrounds to brew their own exclusive beer stemming from a one-of-a-kind flavor or ingredient, to cultural influences.

This trend quickly caught on leading to the craft brewing boom that we recognize today. The variety and parity that we acknowledge as unique within the brewing industry primarily originates from the home brewing movement in the 1970's. These new flavors, ingredients, and types all contributed to the microbrewery expansion that has taken over the brewing industry today. Several microbreweries emerged and became staple domestic breweries that have further encouraged craft brewing in America. These brought along European influence and styles to create new, exclusive products to the previously barren domestic beer industry. By the mid-1990's, craft brewing began to experience exponential growth year-by-year. Consumers began to strongly identify with the smaller craft breweries leading to a growing support for the individual, unique beverages. Craft breweries today have experienced all-time highs in terms of variety and quality. There are over 7,000 craft breweries in the United States which all operate under their own guidance and separate business models. This schism from the large, operationally excellent breweries has signified the consumer's desire for variety and parity within the brewing industry. Craft breweries have brought a sense of personality to the brewing industry leading to a revolution in the way America drinks beer.

2.2 Modern industry operations and statistics

Craft brewery sales in the United States have risen 4% from 2017-2018 further strengthening the idea that the microbrewery movement will continue to be a force in the brewing industry. Overall, US beer sales were down about 1% over the past year, but the brewing industry still remains a huge economic factor at $114.2 billion in total revenue (2018). The fact that although total beer sales decreased in 2018, the market for craft beer within the bigger industry rose 4% shows the significance of the craft brewing trends in the US. Craft retail sales nationwide have risen to $27.6 billion which is just under 25% of all beer sales in America. The demand for craft beer expresses why over 7,000 microbreweries are currently in operation as of 2018, with over 1,000 more expected to open in 2019. There is a growing market for microbreweries all over the world which has led to a revolution of unique breweries with varying beers, flavors, themes, and brewing environments. Craft beer is generally characterized by highly original and innovative products in terms of ingredients, processes, and flavors. This diversification of beer across America has contributed to the rapid growth of the craft industry.

With 7,000 new microbreweries and counting, the impact on the industry and dynamic in the surrounding communities have vastly changed. Almost 200 craft breweries are currently operating in the state of Wisconsin putting it in the top 15 in terms of craft breweries per capita. This spike over the last few years in microbreweries has contributed a $2 billion economic impact towards the state. With most of these breweries located in more populated areas such as Milwaukee or Madison, there has been a much greater ability to affect the community in terms of corporate social responsibility. With such a high volume of individual businesses each integrated into their respective states, cities, and neighborhoods, the craft brewery scene comes with the capacity to influence the communities in which they operate. The triple bottom line of each company can be applied as they search for ways to cater to the environment, their stakeholders, and their own financial needs.

2.3 The craft beer industry and growing environmental concerns

One of the biggest movements across the world has been the growing concern for the planet and the detrimental impact of human activities. As these trends become increasingly present in the minds of consumers, we begin to make choices based on the environmental tradeoffs associated with our decisions. Many microbreweries have adopted a green approach to their CSR as an attempt to positively influence their community and the planet. This model has significantly contributed to the development of the craft brewing industry as both movements continue to grow. Maintaining a transparent, positive environmental presence has become a way for breweries to collaborate with other businesses, as well as market their brand to consumers. MKE Brewing Co., a craft brewery with several locations all around Milwaukee, has offered to purchase waste oil from nearby restaurants to use as a fuel for heating water in their brewing process. This is a very transparent method of recycling that benefits all parties involved, and most importantly, limits the waste and damage done to the environment by both companies.

As impactful and positive this business practice is, there is an element of marketing that helps the breweries target consumers. Customers that see a brewery focused on being a positive influence in the environment will likely support their efforts. This serves as a marketing tool by breweries and many other companies as they know consumers will appreciate their focus on being environmentally friendly. Even though this is an effective way to attract customers, the intention of these practices is primarily to benefit the planet and the community. The diversity of craft breweries allows customers to choose a company based on their mission. Many breweries will have a unique business model or theme which allows them to focus on an area within the community as an act of CSR. Lakefront Brewery has become a leader in the Milwaukee area in indigenous brewing. They have tried to work with local farmers and businesses to source all their ingredients from within the state of Wisconsin. Lakefront has also invested in the reintroduction of hops to Wisconsin farms. Hops, a main ingredient in the brewing process, used to be abundant within the state, but since prohibition have been almost completely removed. This sense of community outreach and sustainability shown by Lakefront shows how a single company can make a significant impact in a way that is unique to their community, customer base, or personal set of beliefs.

3 MICROBREWERIES

This chapter is devoted to microbreweries in the Czech Republic and in Milwaukee. At first there is some general information about current market situation, then there is an introduction of the microbreweries from each state, that were chosen for the further analysis and comparison.

It is necessary to mention the differences in the definition of microbrewery in the Czech Republic and in Milwaukee as well as the difference in units of measure. For better understanding 1 barrel represents 1,73 hl (hectoliters) and in barrel there are 42 gallons.

3.1 Microbreweries in the Czech Republic

On the 12th April 2019 there are 477 breweries in the Czech Republic, of which 181 are considered to be microbreweries, 250 “restaurant” breweries and 46 industrial ones. Figure 5 is devoted to map of breweries in the Czech Republic. Central-Bohemia region is region with the largest amount of microbreweries, there are about 60 of the total amount. The second region with the largest amount of microbreweries is South-Moravian region with its 58 microbreweries. (pividky.cz,2019; pivnici.cz, 2019)

Fig. 5: Map of Microbreweries in the Czech Republic in April 2019

Source: pivni.info, 2019

In 2016 there were only 348 breweries in the Czech Republic, of which 300 were microbreweries. On average there was one microbrewery per 34 717 inhabitants, in the Pilsen Region it was per 19 221 inhabitants. In the US there were approximately 4 300 microbreweries and “restaurant” breweries, in relative terms there was one microbrewery per 74 700 inhabitants. (pivo.cz, 2019)

Production of microbreweries takes about 2 % of market share. Research conducted in the Czech Republic as well as the experience from neighboring countries show that there is a space of up to 4% market share for the microbreweries. This corresponds to the fact that in the last two years, on average, one micro-brewery is founded per week. (teplickydenik.cz, 2018)

There are a number of different ways to classify breweries. For the purpose of this paper, the classification according to the size of production has been chosen, taking into account the fact that it is one of the most common ways. In general, the microbrewery is the brewery that produces less than 200 000 hl of beer per year, it consists of three different levels of production – home brewery, mini brewery and "restaurant" brewery. This division made by Verhoef is not defined by law, but is commonly accepted. Verhoef (2003) divided breweries according to its production amount to five categories – see Figure 6.

Fig. 6: Classification of Breweries according to its production scale

Category	**Production per year**	**Characteristics**
Home brewery	Less than 200 l	Homemade for own needs
Mini brewery	Less than 10 000 hl	Follow traditional practices
"Restaurant" brewery	Less than 200 000 hl	Connected to restaurant
Regional brewery	Less than 500 000 hl	The brand is regionally recognized
Industrial brewery	More than 500 000 hl	Large scale production

Source: Verhoef, 2003

Home brewery also called as "amateur brewer" is anyone who brews beer at home for his own consumption or for the relatives and friends. The brewed beer is not sold. It is important to point out the fact that many of those amateur brewers have founded their own mini brewery and therefore are responsible for the growth of the number of different varieties of beer that is sold.

The second category is mini brewery. Mini breweries are usually considered to be somewhere on the border between the commercial production and hobbies. They are the holders of traditional crafts, the brewed beer is more likely to be unpasteurized or

unfiltered and therefore it has its unique traditional taste. The variety of offerings is made possible by the small volume of production that allows for a higher degree of experimentation and faster menu innovation.
“Restaurant” breweries are the biggest microbreweries in the terms of the scale of a year production. “Restaurant” brewery is such a brewery that is connected with a restaurant, where is the brewed beer offered to the final customers.

Regional brewery can be described as a brewery that has regional impact and its brand is regionally recognized. The difference between regional brewery and industrial one is quite difficult to identify. Often the regional brewery is bought up by industrial brewery. At best, the local brand and the characteristics of the beer are retained – based on this principle a group called “skupina Pivovary Lobkowicz” was established. In the worst case, the regional brewery is absorbed by the industrial one in order to eliminate local competition – as an example can be used approach of internationally operating brewery Heineken. Regional breweries usually cooperate with local restaurants or bars, this cooperation is contractually regulated. (Stuchlík, 2016)

Industrial breweries are widely represented in the Czech Republic. These breweries produce more than 500,000 hl of beer per year and sell it at locations different from the production site. The emphasis is on durability of their product.

3.1.1 DUDÁK – Měšťanský pivovar Strakonice a.s.

DUDÁK – Měšťanský pivovar Strakonice a.s. was founded in 1649 as a joint brewery of brewers from Strakonice. Throughout its history, it has undergone several significant changes in ownership structure. In 1948 the brewery was nationalized, in 1990 it became part of a private company Pivovary České Budějovice s.p. Thanks to privatization process in 2005 it has been incorporated into the property of the town Strakonice. Town Strakonice leases this brewery to a company called “Měšťanský pivovar Strakonice, a.s.”, that was established for this purpose only. Nowadays town Strakonice is its 100% owner with equity CZK 125 000 000. Average recalculated number of employees was 60,28 in 2017. (Dudák, 2018; pivovar-strakonice.cz, 2019)

The company's mission is to maximize prosperity while ensuring the widest and highest quality offer produced beers and services related to major business partners in the area Prácheň, Šumava, Brno and Prague. In its business activities, the brewery focuses mainly on the Prácheň, Pošumaví, Prague regions, Brno and its surroundings. In 2018, as in previous years, a small part of our production was exported (Slovakia, Ukraine, Portugal, Russia and Spain).

The turnover has been slowly decreasing since 2013, the last accessible data from 2017 shows that its turnover was CZK 86 983 000, it is in correlation with the fact that its production has been annually decreasing in this period as well – from 63 263 hl in 2013 to 54 220 hl in 2017. In first half of 2018 this microbrewery was able to produce about 4 % more than in previous year thanks to increase in demand, this production growth is the first one since 2006. According to the classification method mentioned above is DUDÁK a microbrewery, to be more specific it is a restaurant brewery. There are 9 restaurants owned by DUDÁK in April 2019. (Dudák, 2018a; 2018b)

In 2017 the company was in red numbers (its loss was CZK 937 000), this is considered to be a result of mixture of causes. The main cause according to company´s statement are the legislative ones – there were significant changes in the compulsory online registration of revenues and the anti-smoking law, that forbids smoking inside the restaurants and bars. Besides these legislative changes there were made some investments into the reconstruction and modernization of the production line as well as investments into the opening of new restaurants and shop, that was opened in 2018. (Dudák, 2018a)

3.1.2 Raven

Raven (its official name is pivovar-raven.cz, s.r.o.) was established in November 2013, the first beer was produced in August 2015. Raven brewed the first Czech White IPA, Cream porter and later added the first Czech sour cream called „Pilsener Weisse". After 6 months they took the fifth place in the Czech Republic at Untappd.com and then they were mentioned in Forbes magazine amongst the top crafted beer. (Raven, 2019a)

Raven nowadays employs 16 people, but in 2017 the average recalculated number of employees was 7. Its equity values CZK 200 000. There are two co-owners with the same share (50 %). (Raven, 2018)

Its turnover was CZK 8 559 000 in 2017, almost twice as much as in 2016 (CZK 4 661 000). In 2017 the company was in red numbers (it loss was CZK 367 000), also thanks to the combination of legislative changes and investments to the new property and also to the reconstruction of currently owned property. In April 2019 Raven opened it second restaurant in Pilsen. (Raven, 2018; 2019b)

3.1.3 Beer Factory

BEER FACTORY was founded in 2015, the beer production started in 2016. With an annual production of 2400 hectoliters, it is the largest brewery in Pilsen after the Pilsen brewery. (Beer Factory, 2019a)

The brewery is located together with its only restaurant at the city center of Pilsen. Beer Factory´s equity is CZK 50 000, there are two co-owners with share 30 % and 70 % at the equity. (Beer Factory, 2019b)

Its turnover was CZK 17 340 000 in 2017, that was 8 times more than in previous year to that (in 2016 the turnover reached CZK 2 117 000). In 2017 the company was in red numbers (it loss was CZK 2 314 000), the legislative changes also harmed its financial statement. (Beer Factory, 2018)

3.2 Microbreweries in Milwaukee

3.2.1 Sprecher Brewing Co.

Sprecher Brewing Co. was founded in 1985. It is family owned, and it was Milwaukee's first craft brewery since Prohibition. In addition to craft beer, Sprecher's is also known for its variety of gourmet sodas. Its founder, Randy Sprecher, was employed by Pabst when he came to Milwaukee, before beginning his own company. Its production takes place in Glendale, Wisconsin, a north shore suburb of Milwaukee. The brewery offers tours of its facility, including souvenir glasses and drink tickets to try its beer and sodas in the beer garden. Its most popular brew is the Special Amber. Sprecher employees describe their brand as innovative, quality, and diverse.

3.2.2 Lakefront Brewery

Lakefront Brewery was founded not long after Sprecher, in 1987. Its annual production is 43,880 barrels. It was begun by brothers Russ and Jim Klisch, and Russ still serves as the brewery president today. The brewery is located on the Milwaukee River, in the Brewer's Hill neighborhood of Milwaukee. The facility also offers a popular tour of its production.

3.2.3 MKE Brewing Co.

Milwaukee Brewing Company began in 1997 as Milwaukee Ale House. Its founder Jim McCabe was an engineer and used his expertise to design a functional brewing facility. The business has expanded to include one brewery in Walker's Point and one in the Arena District just off Marquette's campus, and one restaurant in the Third Ward. It produces roughly 20,000 barrels every year in 300 flavors.

4 RESEARCH

4.1 Methodology

We created a brief survey in order to measure the awareness of and activities related to corporate social responsibility at microbreweries in the Czech Republic and Milwaukee area. Our questions explored the following:

- Perceived importance of socially responsible behavior
- Frequency of CSR activities, including whether or not they would be considered a critical part of a corporate strategy
- How explicitly CSR principles are defined and established
- Specific CSR activities the company supports, across a variety of concerns including environmental protection, ethical advertising, transparency, and treatment of employees
- Motivation for CSR activities
- Areas of production and business with sustainable practices
- Organizational response to negative issues associated with alcohol consumption, such as underage drinking
- Effectiveness of CSR activities
- Measurement and monitoring of CSR activities
- Promotion and reporting of CSR activities
- Company information

We sent this survey to between 30 and 50 microbreweries across the Czech Republic and the Greater Milwaukee Area. Because of the small, independent nature of microbreweries, most of the people responding to the survey were the owners of the companies.

In the Czech Republic the return of survey was almost none, therefore the main brewers or owners of the microbrewery were addressed in an interview. The survey questions were used for the interview. From Dudák, the main brewer Vlastimil Matěj was interviewed together with one of employees – David Chvosta, from Raven it was its co-owner Filip Miller and from Beer Factory its co-owner and brewer Petr Krýsl.

4.2 Findings in Czech Republic

4.2.1 DUDÁK

As mentioned before the main source of information for this research were its main brewer Vlastimil Matěj and David Chvosta, who is responsible for the warehouse as well as for the maintenance of filtration mechanism.

ENVIRONMENTAL ISSUES

Dudák cares about its impact to the environment and tries to minimize its negative aspects in many different ways. In the Czech Republic there are many statutory regulations focused on the waste material handling, which are of course followed by Dudák, but there are a lot of other activities this microbrewery does voluntarily.

Dudák focuses on the gentle handling of the waste materials of the manufacturing process as well as of the packaging of the brewed beer. According to Matěj all production waste is somehow recycled or disposed of in an environmentally friendly way. All drought is given to local farmers and serve as a food for their animals. Packaging of purchased raw materials (paper boxes, plastic film packaging etc.) is recycled. The wastewater is reused in the production process, then it passes through the sewage treatment plant that was built by the microbrewery in its premises. Dudák also has its own waterworks.

Dudák produces beer only in KEGs or bottles. Bottles as well as barrels are subject to a down payment, which is paid back when they are returned. These containers are recycled in a such way that they are thoroughly washed and refilled afterwards. In the first half of 2018 the total ratio sold cask and bottled beer is 54% in barrels and 46% in bottles. (Dudák, 2018b)

There have recently been several investments with an impact on the environmental sphere. The existing ammonia registers, which were in disrepair, were gradually replaced by a new system using plate cooler. This led to a reduction in the amount of ammonia in the refrigeration plant on the one hand, and energy savings should also be made. In the production section, the central cleaning station was modernized. This station secures cleanliness and hygiene of all technological nodes. Modernization consisted of software exchange and electrical switchboard, which was from a Czech company. (Dudák, 2017; Matěj, 2019)

SOCIAL ISSUES – PERSPECTIVE OF EMPLOYEES AND COMMUNITY OUTREACH

Employees

Care for employees and the benefits they receive for their work are lower compared to previous years, which can be seen as a result of the company's negative economic results.

At the end of each year employees receive financial bonuses in the form of part of their average salary. The employer also contributes to their supplementary pension insurance if employees themselves contribute to the scheme. Employees are entitled to have a lunch at a reduced price of approximately 20% of the full price of the meal. The travel insights are paid to drivers as well as the night shift staff receive meal vouchers.

In the context of work safety, employees are required to attend regular training sessions. All protective equipment is available to employees at any time they need. Several times a year, employees are sent to an excursion to another brewery. Employees are also encouraged to participate in training related to their expertise.

Business partners – suppliers and customers

Raw materials are mainly bought from local Czech producers. For example 50 % of malt comes from farmer in Humny, where the malt is handpicked. According to Matěj the quality of the raw materials purchased is one of the main criteria, but the price remains the decisive factor in most cases. Bottles and other packaging comes from the Czech glassworks.

The company has a sophisticated system of benefits for its customers, which depends mainly on the size of the amount of beer they buy in a certain period of time. If customers contractually agree to buy a specific amount of beer, Dudák can lend them a cooling system and almost all pub equipment (furniture, cooler etc.). Glasses, coasters, tablecloths and other promotional items are offered to customers for free. In the case of big regular clients there are specific sales offers (for example buy 10 and get 1 free).

Social events, sponsorship

The microbrewery organizes several social events, that are intended exclusively for its own employees or even for the general public. A brewing ball is organized once a year, which is designed especially for employees, but there is no restriction on public entry. Employees that are interested in the ball receive free tickets for themselves and their family, other participants have to buy tickets in advance or at the ball entry when there is some ticket left.

A meeting is held at the end of each year, exclusively for current and former staff and trade unionists, where the previous year is evaluated and the objectives for the next period are presented. There is a refreshment, including free entertainment, prepared for the meeting, which is fully covered by the company.

Each year Dudák also organizes a brewing fair. There is free admission for this event to the general public. There are sold all kinds of beers produced by the brewery. An integral part of the fair is the so-called “neckyáda”. “Neckyáda” is an event, when the entered teams will build a raft and tries to sail on the local river. The onlookers with the expert committee then declare the best vessel, based on several criteria such as appearance, originality, functionality, etc. Participants will raise material prizes in the form of brewing promotional items and beer as a reward for their participation. At the evening there are performing of live bands of local character, but also known nationwide.

In 2018, the first ever meeting of all 6 major sports (handball, floorball, ice-hockey etc.) teams from the town Strakonice took place under the auspices of the brewery. The outcome of this meeting is that some sponsorship relations between individual team sports were made as well as there was made a calendar. Money from the sale of this calendar will be used to support the sports grounds.

There are no other sponsorship relationships than the one with local sports teams. According to Matěj there is no consensus in the brewery management about whom to sponsor and how.

CSR AND CORPORATE STRATEGY

Dudák is familiar with the term of CSR, although its CSR activities are not mentioned in its publicly available reports. The social events are part of its corporate strategy, but there is no system of measuring and reporting its impact on the company (its financial and nonfinancial sphere).

As for campaigns focusing on the negative consequences of alcohol consumption, Dudák is not involved anything. According to Matěj it is obvious that the underage people should not drink the alcohol as well as the drivers or pregnant women and the microbrewery is not the one who should educate adult people.

4.2.2 Raven

The main source of information about CSR activities of Raven was its cofounder and co-owner Filip Miller.

ENVIRONMENTAL ISSUES

Raven follows all the obligatory regulations concerning the waste disposal, therefore this company gives drought to local farmers. According to Miller Raven tries to reduce its water consumption in order to be more environmentally focused as well as in order to reduce the costs. Raven produces beer only in KEGs or bottles.

SOCIAL ISSUES – PERSPECTIVE OF EMPLOYEES AND COMMUNITY OUTREACH

Employees

There are some benefits that employees have while working for Raven. Based on the company's prosperity, to employees are paid financial rewards. Pub workers are entitled to a discounted meal that is served in the pub.

Employees, mainly those working in the beer production, are encouraged to participate in training in order to improve their knowledge. All protective equipment needed for the job is offered to employees for free as well as their working clothes.

Business partners – suppliers and customers

The quality of raw materials is a main decisive factor in selecting a raw material supplier. Raven ´s suppliers come not only from farmers from the Czech Republic, but also from small farmers all over the world (Australia, the USA) – it depends on the current needs of microbrewery.

The regular pub customers can buy some promotional items in the pubs, to customers in the form of pub are offered promotional items for free with a purchase of certain amount of beer.

Social events, sponsorship

There is only one public social event that Raven holds and it is an event called Raven fest. The Raven fest takes place in Pilsen, the entry is free. There is sold its own beer. Local bands are invited to play here to entertain the visitors.

Raven does not financial sponsorship, although the microbrewery gives some beer for free to support the balls or some events.

The main event that is only for employees and their families is Christmas party, that is held every year before Christmas. There is free entertainment and food.

CSR AND CORPORATE STRATEGY

This microbrewery was not familiar with the term of CSR, but as it turned out they do some CSR activities. These activities are not considered to be a part of the business strategy and there is no mention of these activities online or at the brewery. There is also no measurement of impact of CSR on the company. Raven is not involved in any campaigns focused on the alcohol consumption.

4.2.3 Beer Factory

The main source of information about Beer Factory was its cofounder and current co-owner Ing. Petr Krýsl.

ENVIRONMENTAL ISSUES

Beer Factory follows all the obligatory regulations concerning the waste disposal, therefore it gives its drought to local farmers. According to Krýsl, Beer Factory is focused on water consumption, because it is one of its (and all of other microbreweries) biggest costs. Wastewater is therefore reused in the production process. The all beer production is consumed at the pub, so there are no other packaging than the beer tanks.

SOCIAL ISSUES – PERSPECTIVE OF EMPLOYEES AND COMMUNITY OUTREACH

Employees

According to Krýsl, all Beer Factory´s employees receive their wage legally, which is not always common in this field of business. Beer Factory encourages its employees to further education – to study at university in Prague or to take several courses in the Czech Republic or abroad. Krýsl does some training sessions himself. All protective equipment needed for the job is offered to employees for free as well as their working clothes.

Business partners – suppliers and customers

The quality of raw materials is a main decisive factor in selecting a raw material supplier, all of Beer Factory´s suppliers comes from the Czech Republic and are considered to be a family business with the handmade production of malt. Beer Factory´s only customers are the pub quests, therefore the microbrewery is focused on its employee´s skills and further development.

Social events, sponsorship

There are held no events or sponsorship by the Beer Factory. The reason is simple – there are no money left for such activities when microbrewery of this size follow all laws and regulations. According to Krýsl, from CZK 100 of sales CZK 54 goes to state to cover the taxes and insurance (social and health insurance of employees). The CZK 46 has to be enough to cover the costs, interest on the loan and loan repayment as well as to make some profit to company´s owner. Krýsl has been responsible for establishment of more than 70 microbreweries not only in the Czech Republic and presented figures are according to him similar for all microbreweries in the Czech Republic he helped to found or worked with.

CSR AND CORPORATE STRATEGY

Beer Factory was not aware of the concept of CSR. After further explanation of CSR and its main features was found out that they are involved in some activities. Their CSR activities are mainly based on the law restrictions because lack of finance for further involvement in CSR.

CSR activities (besides compulsory activities) are not part of business strategy and there are almost none. Impact CSR activities is not measured or reported. The only report Beer Factory does is report for its creditor (bank).

This microbrewery is not involved in any campaigns focused on the alcohol consumption for the same reasons as Dudák or Raven.

4.3 Findings in Milwaukee

4.3.1 Sprecher Brewing Co.

As the original microbrewery in Milwaukee, Sprecher might be a bit behind its contemporaries in specifically green initiatives. Nevertheless, it identifies sustainability and CSR practices as a priority to the business and a systematic part of its corporate strategy. Specifically, Anne Sprecher is responsible for the promotion of CSR activities to the public via social media channels. Its CSR principles are implicitly defined, built into the company's culture. Some CSR activities that Sprecher identified include fair employee treatment and working conditions, organizing and sponsorship of benefit events, and strong relationships with local non-profits. Sprecher leadership is motivated to enact socially responsible activities in order to remain competitive, but also in the interest of business ethics and because such activities often yield increased customer loyalty. The company practices sustainability across its production of both beer and sodas, as well as standing behind initiatives to promote responsible consumption of alcohol. Sprecher does not outright measure the influence of CSR involvement on its business, but believes it plays a key role in improving company image and stakeholder loyalty.

4.3.2 Lakefront Brewery

Innovation is an important part of socially responsible initiatives at Lakefront Brewery. In 1996, Lakefront was the first certified organic beer in the United States, made with 100% organic malt and hops. The owners of Lakefront were active in efforts for the USDA to require beer labeled as organic to contain organically grown hops, which it now does. Lakefront was also the country's first brewery to brew certified gluten-free beer. Brewery President Russ Klisch is also the person who brought the growth of hops and barley back to Wisconsin for the first time since Prohibition in order to use locally sourced ingredients. He worked closely with local farmers in order to make this happen.

One of Lakefront's biggest corporate social responsibility initiatives was its role as a co-founder of Local First Milwaukee, a group of independent Milwaukee business owners working together to make Milwaukee a more sustainable community. This organization provides a network of local business owners passionate about sustainable practices and buying local. Members of Local First support local charities and are active in many community events. Another focus of the organization is maintaining the character of the city itself while supporting the local economy. Lakefront is so passionate about supporting local business that when the brewery first opened in 1987, its beer was sold exclusively to taverns that were located within barrel-rolling distance of the brewery.

Lakefront Brewery has also been recognized for its environmental protection efforts. In 2007, Lakefront received the Travel Green Wisconsin certification, recognizing its efforts to reduce environmental impact through sustainable operations. This certification is awarded when several criteria are met, including demonstrated employee and vendor environmental awareness and reduced waste and energy consumption. Every Friday at 4:00 p.m., Lakefront President and Founder Russ Klisch gives a special environmental tour of the brewery, highlighting its green business practices.

4.3.3 MKE Brewing Co.

One of MKE Brewing Co.'s most evident CSR initiatives is reduction. This stems from its origins designed by an engineer who was careful to make production and operations efficient. Renovations to the facilities over time continue to enhance sustainable practices, such as reduced electricity. The brewery takes special care to reduce the amount of resources that are impacted during production. MKE conserves water through both traditional and non-traditional methods, most notably treatment and distribution of water when it its both on its way into the brewery to be used in production and on its way out of the brewery as waste water. Such treatment reduces the brewery's environmental impact significantly. MKE Brewing reuses waste vegetable oil from Milwaukee Ale House and other local restaurants to offset petroleum use in production. This responsible use of fuel also allows MKE to partner with local businesses. MKE also uses its waste grain in compost that helps provide fresh vegetables to the local community in Milwaukee. Finally, MKE's sustainability is evident in its packaging, too. Its packaging products are all sourced in the Midwest. Furthermore, the "Craft Can" used by MKE is the most recycled package in the world. Its light design means it requires less energy to ship, and it uses less energy in production that a bottle would. Cans are also safer than glass bottles because they do not shatter or chip. MKE Brewing also established the Crate Club, which is an initiative that allows members to visit the brewery once per month with an empty crate to mix and match beer directly off the line, which reduces wasteful packaging and builds customer loyalty and community.

CONCLUSION

Our research conducted in microbreweries in the Czech Republic has confirmed the EU claim, that the small and medium enterprises usually are not aware of the term of CSR, however this does not mean, that they are taking no action in this area. The process of meeting their social responsibility goals is for them informal and intuitive. We might say, that their close relations with stakeholders are results of their naturally responsible approach to business. Czech Microbreweries usually do not report any kinds of information connected to CSR activities they do. Tax and legislative system in the Czech Republic differs from the USA, as well as there are some cultural and value differences. The microbreweries usually do not have money left for a sponsorship, therefore there are not many activities in this area of interest.

In Milwaukee, microbreweries support various corporate social responsibility initiatives as part of implicit company culture as a form of marketing and brand differentiation. Milwaukee microbreweries view community as an important part of CSR. Many are family-owned, so there is an emphasis on local business and resources as part of the strong community ties. Identity is important to Milwaukee craft breweries, so their commitment to sustainable business practices is often closely related to their brand and as a way to connect with customers.

We identified certain areas of improvement for the microbreweries we studied. First, we believe it will be helpful for them to identify their CSR activities more explicitly. It will clarify to both internal and external stakeholders the issues that are important to the company, as well as better guide sustainable and ethical decision making for leadership.

We also think it would be useful for the breweries to monitor CSR activities more closely and report on their results. Currently, most microbreweries are putting processes in place to yield more sustainable outcomes, but the companies do not systematically track the influence of these activities on business. Finally, we recommend connecting more closely with customers and other key stakeholders regarding CSR activities. It will help the businesses to better align their CSR activities with stakeholder needs and industry-related concerns. As a result, microbreweries can continue improving brand image and customer loyalty by involving their businesses in issues that matter to customers.

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Data mining as a competitive advantage for emerging and fast-growing companies

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Content

Introduction

With the development in the field of information technologies and increasing amount of data that companies must handle, the possibilities how to process and analyze those data increases as well. It is the effective and efficient processing of data of each company that can lead to future success and competitive advantages. One of the methods how to process a large amount of heterogeneous data is data mining.

In this work, category of small, fast-growing companies were selected. By this definition, this group of companies has high potential for further growth and efficient usage of data mining can enhance the ability to achieve demanded goals. On the other hand, start-ups are still vulnerable in this stage and not yet mature enough in many aspects.

Therefore, the aim of this paper is to explore the possibilities of using data mining in this group of enterprises. Examine whether data mining is an adequate tool for these businesses. In addition, the secondary aim is to find out how companies are advanced for data analysis and what are related barriers for that kind of data analysis.

Based on the presented methodology, partial data mining projects will be implemented in selected companies and the results of those projects will be subsequently analyzed. The final part of this work will consist of the evaluation of all the above-mentioned specifics.

1. Theoretical background

In this section the theoretical basis for processing data mining projects in companies will be presented.

1.1. Emerging and fast -growing companies

Small businesses are a specific part of market and are regarded as one of the engines of market itself and innovation. Small businesses are considered as private enterprises with fewer employees and low annual sales. (Freel, 2018)

The boundaries of small businesses themselves vary by region. The table below shows a comparison for the small business definition in the US and the European Union.

Table 1: Small business definition

Area	By annual net income	By net worth or balance sheet total	By employees
United states of America	≤ $6.5 million in last 2 years	≤ $19.5 million	Industry related
European Union	≤ € 10 milion	≤ € 10 m	≤ 50 employees

Source: own processing based on Congressional Research Service (2019), European Commission (2019)

According to statistics from 2017, 67% of all European Union employees were employed by SMEs. In the United States, 47.5% of employees were employed in small businesses in 2015.

Growth factors

In this work small fast-growing businesses are analyzed. But what aspects do small business growth affect?

The growth of organization can be evaluated by two basic aspects - employment growth or sales growth. Despite this fact, growth alone is caused by the ability of start-ups and small businesses to make use of their own resources - physical, financial, or human capital. (Adomako et al., 2018)

The factors themselves are not clearly defined and depend on the angle and perspective from which growth is perceived. One of the basic models is based differentiation whether the growth of the company takes place internally (organically) or externally. In the case of the company's external growth, the growth consists of acquisitions of another smaller companies. With regards to the selected topic, however, the relevant procedure is second, namely that the company grows internally from its own resources. In this case, the growth factor is determined by the following three factors, which also include subregions:

- Growth opportunities
- Company's specialized resources
- Managerial Skills (Adomako et. Al, 2018)

The combination of these three factors leads not only to growth but to the success of the company itself. Within the scope of opportunities, it is about the market and industry in which the company operates.

The second area is the specialized resources available to the company. These are primarily human resources. The key area is gaining special knowledge. One strategy for organic growth is training your own workforce, where companies are usually not attractive enough for skilled workers. However, the effect of training on the performance of the company was not fully confirmed. (Adomako et al., 2018)

The third prerequisite area is managerial skills, in the case of small growing companies it is mostly entrepreneurs. At the same time, the ambition of the entrepreneur, who is an initiating force not only in terms of the growth of the company, but also of its innovation, has a great influence. (Freel, 2018)

Growth barriers

In addition to the aspects that support growth, there are a number of factors that hinder the rapid growth of companies. In addition to the groups that can be considered as an opposition to the aforementioned factors that support growth, there are others that have a major impact on slowdown of growth. (Adomako et al., 2018)

Deficiencies in financing are defined as the most important obstacles to growth. So whether the company can finance its growth. At the same time, this factor is cited as one of the barriers to innovation itself. Here the problem can be seen from two angles. The first is whether the company is seeking external funding or relies on its own free funds. In the latter case, this growth is usually slower. The second issue of financing is the issue of finance supply and whether the company has access to any external financing. (Adomako et al., 2018; Freel, 2018)

1.2. Data mining

The origins of data mining have been sought since the 1980s, but in the 1990s, many of the data mining industries were still in its infancy. Its rapid development in recent years has been related to the development of technologies that enable an increasingly large and sophisticated volume of data to be processed more efficiently. (North, 2012)

Initially, data mining was designed to find data patterns from data warehouses. Thus, the defined algorithms have been adapted to process a constantly increasing amount of heterogeneous data. At the moment, efficient and targeted business data processing can lead to business development across sectors. (Bhatia, 2018)

Data mining can be defined as follows:

„Data mining is a collection of techniques for efficient automated Discovery of previously unknown, valid, novel, useful and understandable patterns in large databases. The patterns must be actionable so the may be used in an enterprise´s decision making.“ (Bhatia, p. 17, 2018)

By definition, data mining finds its application in a wide range of business sectors, such as:

- Loan / Credit card approvals
- Market segmentation
- Fraud detection
- Better marketing
- Trend analysis
- Market basket analysis
- Customer churn
- Website design
- Corporate analysis and risk management (Bhatia, 2018)

Although data mining allows you to describe relationships and patterns between data, it is still not the only required activity. The key is the actual setting of this process so that the information provided is valid and correct. Thus, successful data mining builds on the good knowledge and understanding of the data being processed, the appropriate use of analytical methods, and the knowledge of the enterprise as a whole in order to provide the right context. At the same time, data mining information may not always lead to action or behavior change. The main prerequisite for data mining is to expand the enterprise knowledge base. (Bhatia, 2018)

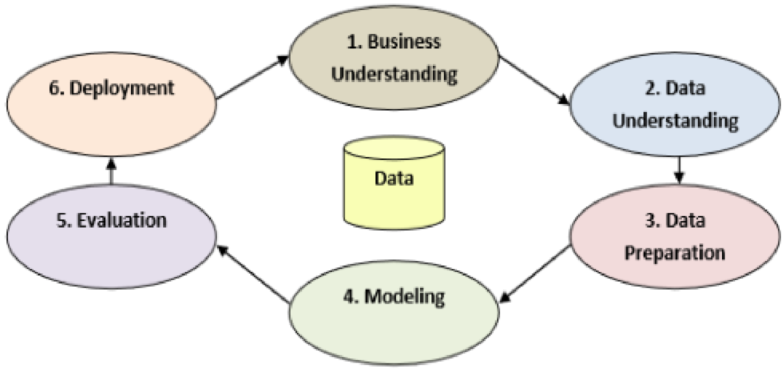
Data mining process

The process of extracting new information from our own warehouses has gone through its own development, beginning with one-off ad hoc outputs. (North, 2012)

At the end of the last century, to streamline all activities, the process was standardized to provide a universally applicable methodology for all sectors. One of them is the Cross Industry Standard Process for Data Mining (CRISP-DM) methodology developed by Daimler-Benz, OHRA, NCR Corp. and the creator of SPSS, Inc. This standard has been further innovated and expanded within the ASUM standard in recent years. (North, 2012; IBM, 2015)

In the process model, the steps may vary. In this work, an outline of the North (2012) approach will be used. The step of the data mining process according to the CRISP-DM standard is shown in the following figure.

Picture 1: Data mining process



Source: Data mining for the Masses (North, 2012)

I. Business understanding - the first step is an effective understanding of the business patterns and understanding of the mutual links between individual activities and processes
II. Data understanding - collecting the data needed for data mining and analyzing their capabilities
III. Data preparation - transformation of data into the final form
IV. Modeling - application of algorithms for obtaining future results
V. Evaluation - evaluation and analysis of model success
VI. Deployment - use of process information. The result can be either a report or a more advanced project design

2. Data mining projects

The aim of the practical part of this work is the application of data mining tools and activities to real enterprises. Examine the possibilities of application about new growing businesses and the limits that prevent success of applications.

The projects are based on the approach outlined by the CRISP-DM methodology so that the proposed and implemented activities are supported by the environment of selected small and fast-growing enterprises. In addition to the actual implementation, this part also includes an outline of the possibilities of future activities and development within the data mining of selected companies.

2.1. Czech company

The company Dům a zahrada Ježek s.r.o. was selected for the data mining project because it meets the given characteristics, when it is either fast growing, small size company.

In the framework of this project, the key areas for data mining involvement will be defined and analyzed using the CRISP-DM methodology.

2.1.1. Informace o společnosti

Dům a zahrada Ježek s.r.o., based in Ledce near Pilsen (Czech Republic), was established in April 2014 with a share capital of approximately $ 12,000, operating on the market since July 2017, when the company formed a four-member team. The company mainly deals with online sales of products for house and garden. (Justice.cz, 2019)

Revenue for the first year was $ 100,000 (excluding VAT), with the company earning one million dollars (excluding VAT) the following year. In this way the company increased its turnover more than tenfold year on year. From another perspective, however, the company has not yet made a profit. The main part of the company's sales was the sale of garden greenhouses, houses, garden equipment and stoves, and this trend continues in 2019. Throughout its operations, the company has expanded its product portfolio. It currently offers more than 8,000 different products, including workshop equipment. 9 employees are currently involved in the development of the company.

2.1.2. Business understanding

For a deeper description of the company, a SWOT analysis was compiled, which describes the current state of the company, when the strengths and weaknesses of the organization are defined. There are also mentioned possible opportunities and threats with medium and long-term development. The SWOT matrix was elaborated by one of the authors of this work, while other key employees of the company participated in its processing. The built-in SWOT matrix is shown in the following table, highlighting in green the factors that data mining can provide the solution for.

Table 2: SWOT analysis of Dum a zahrada Jezek

	Positive	Negative
Ext.	Machine learning (Artificial Intelligence)	Competitors (big companies)
	Off-line market:	Services by suppliers
	• Off-line marketing	Financial struggles of suppliers
	• Own retails	Market decline
	Innovative products (f.e. internet of things)	Deterioration of credit conditions
	New services for customers	Loss of costumers´ trust
	Focus on branding	Partial dependence on supplier services
	Brand marketing orientation	Data loss
	Own brand products	Current web solution
	Deeper supply-chain cooperation	Unproportional rise of costs
	Broader supply-chain cooperation (product suppliers, transport companies)	
	Own web solution	
	External human capital (mentoring or coaching)	
Internal	Fast sales growth	Negative cash-flow, no profit
	Appreciated customer care	Reporting (data-based business knowledge)
	Employees´ competencies and attitudes (built on own know-how)	Cost scaling
	Culture within the company	Market analysis
	Data-based cooperation and coordination with suppliers (warehouses)	Forecasting
	Business flexibility	Limited funding
	Performance marketing (PPC)	Limited human resources
		Low level of gross margin
		Off-line sales

Source: own processing

Strengths

When it comes to the market, the company relies on several strengths based on the characteristics of its business. The company's key strengths include its ability to continually increase its sales and gross margin.

Given the nature of the business, where the vast majority of deals are on-line, the company's strengths lies in cooperation with suppliers, where the company is currently connected to more than twenty of its suppliers who provide information on the products offered, their current prices, stock availability or, for example, shipping conditions. As a result, the company implements a portion of its business through drop shipping. This situation is advantageous for the company, especially in terms of the complexity of managing its own warehouse

Weaknesses

Due to its rapid development, the company faces several problems. So far, the company has only been operating with early-start-up funds and overdraft loan, which, combined with zero profit, results in limited funding opportunities. This fact is also related to the relatively low occupation.

Although the company increased its turnover more than tenfold year-on-year, its gross margin is below 20 percent of sales. From a cost perspective, the company does not map all its costs.

As part of its own maturity, the company has not yet developed its own reporting system to provide the company with a comprehensive and complete view of the business, which limits possible strategic decisions that are made. Nor is a forecasting system designed to help the company prioritize its tasks.

Opportunities

The opportunities identified concern both the business itself and the development of e-commerce with respect to Industry 4.0.

Such identified opportunities include the so-called machine learning, where three major aspects have been identified that influence the growth of the organization. (Kolathayil, 2019) In the future, machine learning applications can provide companies with the opportunity to automate their own marketing processes. There is another opportunity to do so, namely to provide and sell innovative products.

Among the company's perceived business opportunities, we can mention the expansion of the offer with our own brand products and the company's support for the brand. The company's strategy thus defined will provide an opportunity to increase its own gross margin in view that there is a lower selling price pressure for own products. Another opportunity in the supply area is to expand the product offerings and to sell additional services.

As mentioned above, the company cooperates closely on an information basis within the supply chain. Enhancing collaboration with other company information can streamline and streamline the process. However, there are some limitations, especially compatibility with external systems and limited possible connectivity.

In addition, the company is continuing to expand its chain to offer a complete range of home and garden products.

In terms of strategic goals, external human capital is another possible opportunity.

Threat

The identified threats to society are mainly related to competition pressure, changes in potential customer preferences, and changes in funding conditions.

2.1.3. Data understanding

In this section, the individual subsystems with which the company operates on a daily basis will be described. Information will be outlined and processed by each platform. At the same time, links between other systems will be described. Always looking at receiving data. Thus, where the information provided is received and how.

Shoptet (website)

This is a boxed solution that runs the company's website. In addition to customizing the site, it also provides information that is ready for further analysis. The following list defines individual data modules:

• Product information (all available information presented on the web)

• User Information (list of registered web users and record of their orders

• Order information (customer name and surname, ordered products, transaction time, sales price, gross margin, purchase price)

• Web user information

• Statistics - Traffic Information (here linked to Google Analytics)

DUEL (accounting system)

• Accounting operations (acquisition of goods, purchase price, stock)

• Customer Transactions (here imported automatically from websites)

• Real stock of the company

Google analytics

• Web site traffic measurement

• Measuring visitor behavior

• Logging an online transaction

• Provides more advanced analytics tools

• Direct connection to Google Ads

Google Ads and Sklik

• Systems for optimizing marketing campaigns on Google and Seznam.cz search engines

• Pay-per-click campaign clicks recorded

• Marketing campaign costs (aggregated and disaggregated) recorded

• Conversion measurement based on marketing campaign

• Evaluate campaign success (cost of conversion / revenue)

XML feeds

• Provided information from vendor sites to share product information, cost, and current stock availability

• Each supplier's feed is unique, always has a different structure

PowerBI

• Business Intelligence Tool

• Currently used only for inventory update

The company uses several dozen other web platforms, which are usually automatically linked to a web interface or accounting system. However, they will not be further described for the purposes of this project.

2.1.4. Data mining projects

For a better understanding of the company, a SWOT analysis was prepared in the previous section to describe the main aspects of the company's business. On this basis, and taking into account the company's strategic objectives, this section will define the key areas that the data mining project will address and the project itself.

A. Customer Analysis

The goal of this subproject is to identify the key customer qualities that will help companies segment their own potential customers and better target advertising based on the data they have obtained for a sufficiently long period of time.

- Data source

The analysis will be based on data from Google Analytics, which captures information about site visitors. Audience data will be extracted for further analysis, and information will be captured for visitors who are signed in to your Google Account at the time of the visit.

- Period researched

The data will be reviewed for the period from 3 October to 31 March can provide sufficient information from a sufficiently long period to include seasonal fluctuations and changes in traffic.

- Independent variables

The data will be divided into two groups, that is, the group of visitors to the site who have made the conversion and those who have visited the site without the conversion completed.

In the measurement period, these are 77,696 visitors who have not made any purchases, and 1,613 visitors who have made a conversion, i.e. completed the order.

- Methodology

Selected sets of data will be examined in isolation from the point of view of individual selected demographic and technological characteristics, based on individually performed tests of independence, the so-called chi-square test. Their evaluation will be based on the alpha significance level. (Freisl, 2014)

- Definition of hypotheses

Hypothesis 1:

- Ho: There are no differences in age distribution among site visitors.
- H1: There are differences in age distribution among site visitors

Hypothesis 2:

- Ho: There are no differences in age distribution between male site visitors.
- H1: There are differences in the age distribution of men among site visitors.

Hypothesis 3:

- Ho: There are no differences in age distribution between female site visitors.
- H1: There are differences in the age distribution of women among site visitors.

Hypothesis 4:

- Ho: There are no gender differences.
- H1: There are no gender differences.

Hypothesis 5:

- Ho: Visitors who have converted use the same technologies as visitors who do not purchase.
- H1: Visitors who have converted do not use the same technologies as visitors who do not purchase.

Hypothesis 6:

- H0: There is no relationship between location and number of purchases.
- H1: There is a relationship between the site and the relative number of purchases made.

Based on the extracted data, the key interests of the site visitors who have made the conversion will be further identified. On this basis, the psychological segmentation of the target group will be carried out.

• Limitations

The results are only extracted for users of the site who were in their Google Account at the time of signing in. As a result, the results do not include the psychological and demographic data of all other users who are either not a Google Account user, or who could not link that user to his account. As a result, 49.9% of all results are included in the results.

B. Margin reporting

The aim of this subproject is to generate a summary of gross margin for products sold within each category and subcategory based on the data collected. Based on the tool thus provided, scaling and prioritization will be improved within tasks and activity planning. At the same time, it will be possible to evaluate the sales performance of individual products in terms of sales.

- Data source

The source of the data is the used Shoptet system, which captures all information about completed orders. From the file, the sales prices of the products within the completed orders, their purchase prices, product placement within each category, the timing of the order made, will be extracted.

- Period researched

The report will include data from the beginning of 2019, due to the fact that in the previous period the data for the intended analysis were not adequate (missing actual purchase prices for the products sold).

- Tools

The report will be processed in PowerBI, where the data will be processed and individual reports will be created.

- Reports proposal
  - Gross margin over time - a comparison of the total margin for the selected period (day, week, month, quarter, marketing year)
  - Gross margin overview for main categories - Performance comparison of major business categories (garden assortment, stove assortment, workshop assortment)
  - Sales and Gross Margin Overview for Sub-Categories - Compare performance of categories within lower-level categories
  - Relative development of total gross margin - monitoring of gross margin developments during the marketing year
  - Relative gross margin for major categories

It will then be possible to analyze additional data for the selected categories and time periods when editing individual report filters.

C. Analysis of other costs

The objective of this sub-project is to identify and quantify individual cost items that are not yet analyzed in the company's reporting. The aim is to identify the possible cause of zero profit for the company

- Data source

Data from the DUEL accounting system will be used for the analysis.

- Tracked cost items
  - Return Costs - Extract costs that are spent on products sold that are not subsequently collected or returned within the statutory period.
  - Complaint costs - costs arising from substitute performance against the customer based on a legitimate claim.
  - Free Shipping Costs - As part of its marketing activities, the company guarantees free shipping with orders exceeding CZK 2,000. The aim is to find out the economic impact of this marketing activity.

2.1.5. Results

Based on the analyzes and subprojects performed, the results will be presented in this section, which will also be interpreted.

A. Customer analysis

A total of 7 independence tests were conducted on the basis of the project proposal. The table below shows the results for each test. The results of all partial tests are listed in the appendix.

Table 3 Tests of independence

Variable	Main observation	Transaction vs. No transaction	P-value
Age	48% of customer are between 25-44	Same for both groups	0,03
Men by age			0,19
Women by age			0,15
Sex	Men 55%, Women 45%	Same for both groups	0,22
Location (lands)	64% Bohemia, 29% Moravia, 7% Silesia	Same for both groups	0,21
Location (big cities)	Divided proportionally	Same for both groups	0,00
Technology		Desktop significantly higher within the customers (72% vs. 57%)	

Source: own processing, 2019

Significant differences were found only in the tests of independence according to the technology used. The remaining results, despite the relatively high level of significance, did not show differences between visitors with conversion and no conversion.

In terms of age, there were no differences between visitors. The P-value ranged from 0.03 to 0.19. In a closer analysis, we can find partial differences in sets by gender, with a slightly higher proportion of shoppers up to 34 years of age, approximately 2 percent in total representation. This may be due to the more frequent use of electronic means of purchase in the younger generation than in the older generation. At the same time, consider that results are only captured for Google Account users.

In terms of gender, no differences were found in extracted groups again. Generally, there are relatively more visitors among men who make up about 55 percent of all traffic. Based od the P-values, partial differences can be found within group of women that made 0.2 percent more purchases than men.

Another test performed was a test based on visitor's residence. In this section, two characteristics were tested, namely the division based on the size of the town and the municipality and the distribution based on the historical division of the Czech lands (Bohemia, Moravia and Silesia). No difference was found in terms of residence size. Thus, the size of a city or municipality has no effect the user purchases in the store or not. In the analysis according to the historical country, partial differences were observed, mainly by lower representation of shoppers from Silesia. Thus, the hypothesis can be rejected at a level of significance that is higher than 79.04%.

The last test performed was an analysis based on the technology used. There have been great differences between desktop and laptop users, mobile phones and tablets. It is clear from the results that significantly more visitors who use the computer then make a purchase. The following table shows the conversion ratio (customers / all users) for each device type. Regardless of the proportional distribution of technology used, computer customers buy almost twice as often as mobile phone visitors and more than half more often than tablet users.

Table 4: Conversion ratio by technology used

Technology	Conversion ratio
desktop	1,96%
mobile	0,99%
tablet	1,26%

Source: own processing, 2019

In the second part of the customer analysis, data on the hobbies and interests of the group of users who completed the order on the site were further extracted. In the results below, the 12 most frequently (i.e. at least half of the customers) most frequently encountered buyer interests, including their frequency, are mentioned.

Table 5: Interests of customers

Interest	Made transaction
Cooking Enthusiasts / 30 Minute Chefs	1266
Avid News Readers	1192
TV Lovers	1004
Business Professionals	818
Do-It-Yourselfers	802
Value Shoppers	674
Outdoor Enthusiasts	617
Auto Enthusiasts	616

Source: own processing, 2019

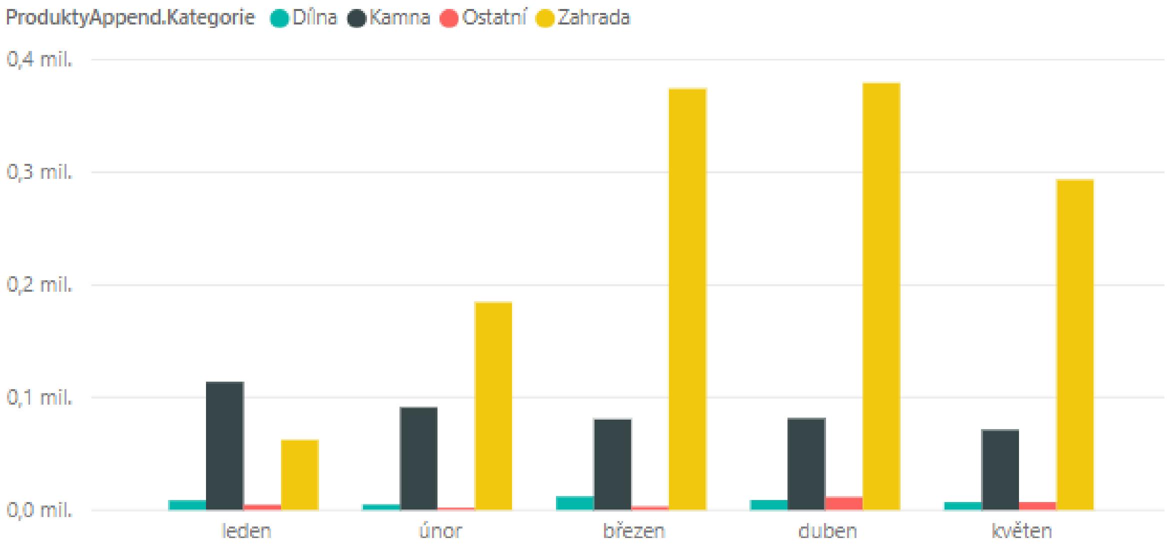
The above results allow the appearance of the customer characteristics. Based on these results, a company can better target its ad, both online and off-line.

Compared to users who have not made purchases on the site, there is a relatively higher frequency of users with hobbies to monitor business trends. In the wider analysis, there is a smaller proportion of active sports and users watching the sport among customers.

B. Margin reporting

Based on the assignment, a report created in PowerBi allows to company to insight the performance within each category. The graph below shows the relative gross margin development for each month. These results are expressed in Czech crowns.

Graph 1: Monthly gross margin by categories



Source: own processing, 2019

Table 6: Translation of legend

Axis X	Categories
Leden = January	Zahrada = categories with garden products
Únor = February	Kamna = categories with stoves related product
Březen = March	Dílna = categories including workroom product
Duben = April	Ostatní = unsorted products
Květen = May	

Source: own processing, 2019

The table above shows the development of the gross margin for each category within a given month. Based on this output, the company can better plan for seasonal fluctuations. Compared to the report, it also contains a fourth category called "Ostatní". This section includes all other recorded product purchases that do not fall into the categories defined so far.

All processed reports are displayed in the attachment of this work.

C. Cost analysis

The most problematic part of the results was a deeper analysis of company costs, which are not adequately measured by the company. The main barrier to processing the analysis was the extraction of the data itself with an accounting program that did not adequately export data from the system.

For this reason, the results cannot be introduced at this moment. However, the following section outlines a description of how the future could be addressed.

2.1.6. Discussion

Three different data mining projects were processed within the project. This section will assess how the objectives have been achieved and what tools and procedures are recommended for the future.

A. *Customer analysis*

In the first project, differences between customers who made the purchase and who did not were tested using the independence test. Based on the above-mentioned results, the analysis provided did not prove to be entirely useful when it was not possible to differentiate between buyers and non-buyers based on the available data. In this case, only the testing based on the types of equipment used brought clear results. Here one can say that there is a dependency. In this case, the fact is that the site is optimized for this source of visits at the expense of others.

A possible barrier to the relevance of the remaining tests is the available data that is aggregated in this section. However, analysis of the same type could bring more meaningful results, but on deeper segmented data sets. The following summary shows possible future statistical tests that could lead to better results:

- Segmentation of users based on traffic sources (by campaign, media)
- Segmentation of users based on pages visited (categorized by affinity)
- Segmentation of users across age groups
- Testing the relationship between user preference and his / her affinity for purchase

In the case of the last type of analysis, it is the testing of each interest. However, here is the fact that Google Analytics currently defines 117 different interests for company pages, and such a type of testing could be time consuming. At the same time, the effectiveness of the tests carried out must also be perceived, ie that the results obtained are properly used.

B. Margin reporting

Within this section, all the intended objectives were processed. As part of future efforts, PowerBI reports can be scaled even more by category to product level.

Another long-term improvement can also be the continuous measurement of other costs. Currently, it actually compares two indicators - the selling price and the cost of goods sold. In the future, it would be advisable to measure other cost items as well. In the following list, other relevant variables are mentioned, including a resource that could be linked to the program:

- Online marketing costs (data from Google Ads, Sklik, Biano, Shopalike and others)
- Off-line marketing costs (radio spots, TV spots, billboards, magazine ads)
- Cost of Human Resources (resources spent on editing pages, products, and other project-related activities)

However, there are some barriers to the above cost items that would require a more complex change in metrics to make the performance of each category and product addressable.

Another barrier to potential expansion is the potential incompatibility of the PowerBi system with the above-mentioned tools and systems, which do not yet allow their direct connection..

C. *Cost analysis*

In the previous sections, barriers have been described which have led to the inability to adequately measure costs over the previous period. Therefore, it was not possible to determine the cost of the selected sub-activities. In this section, a possible outline will be described so that the selected indicators can be measured. For a future solution, the use of a source other than an accounting system that is completely inappropriate for reporting automation is assumed. To calculate not only the aforementioned costs, it is considered an extension within this work of processed reporting.

- Costs on returned products

In the future, it is necessary to define the monitored variables first. In order to measure the cost of returned goods, it is necessary to separate this set from the remaining cost items.

$$Cost\ on\ returns = total\ freight\ costs - expected\ freight\ costs$$

In this case, the total shipping cost is given by the total amount invoiced by the shipping companies. The expected costs are then given by the sum of all transport costs charged (for example the transport cost * the number of transports delivered for delivery). The results of the second variable will be cleared of orders that were canceled before the actual shipping.

- Costs on complaints

If the goods are damaged, they must be shipped repeatedly and recorded in the Shoptet ordering system. The current model of margin reporting already contains this kind of cost, but those costs cannot be currently extracted from the remaining orders. Thus, the revised model will measure the cost of goods sold, which was shipped at zero selling price.

- Cost on marketing policy

In this case, the total number of orders over 2000 CZK will be measured, the total value will be multiplied by the average cost per freight to the customer.

3. Identified barriers

Within the framework of the performed activities and regarding to the characteristics of the selected companies, two groups of barriers have been identified with an impact on the potentially full use of data mining in emerging companies.

- Organization-related problems

The first group are the barriers that are directly related to the stage of maturity that the company is currently in. As the activities carried out showed, differences can be found between selected companies, especially in terms of their funding. In one case it was a company without a larger investment, in the latter case it was a company with a higher invested capital.

In the first case, limited resources, both human and financial, are a fundamental barrier to the use of data mining. In this case Dům a zahrada Ježek s.r.o. does not work with sufficient financial and human capital to allow someone to pursue data mining within the company, which was already defined by the SWOT analysis of the company.

Another barrier is lack of skills, while data mining is a relatively specialized matter.

However, the underlying barrier to emerging companies is the fact that there is no longer-term strategy, and in this case, business data management strategies. Thus, in the case of project processing in individual enterprises, the fact that the purpose of the project needs to be defined is not a barrier. It is also necessary to work with less consistent data that can be hardly interconnected and analyzed.

- Data-related problems

The second group of barriers are the data itself, which, as mentioned above, need not be strategically managed. Regarding to CRISP-DM model, the problems observed in the stage of data preparation. In view of the characteristics of small enterprises, data-related problems were identified as follows:

  - Small sample size - the company does not work with enough data for a long period of time to work with the data
  - No available data - some data is not actually captured. Individual metrics cannot be parsed
  - Unclean data - data is captured, but not in a form that could be subsequently evaluated and analyzed.
  - Problems with extracting data - data is processed within systems that do not allow them to be extracted / exported to a system in which it could be further evaluated and analyzed.
  - Compatibility issues between softwares - the tools used are not mutually adequately interconnected, although the systems used fully measure the required data, but it is not possible to combine them with resources from other systems. The problem is mainly based on an undefined business management strategy.

4. Conclusion

The aim of this work was to analyze the use of data mining in small fast-growing environments, which was researched both from a theoretical and a practical point of view.

In the paper, the cases of two companies - one American and one Czech - were compared. When analyzing and performing data mining projects themselves, the differences in funding may cause the different data management concepts of companies. Considering the example of Czech company, the lack in funding has been proved as a limiting factor for deeper analysis and overall management of own data - both in terms of costs and prioritization of tasks. Nevertheless, data mining subprojects can be successfully implemented anyway.

In general, it has emerged that maturity of information management goes hand in hand with the maturity of the business itself. In this case, companies are lagging behind with deeper analysis, and the analysis itself is usually hindered by misalignment and incompatibility of their own data or the insufficient amount of data samples.

Despite all the pitfalls, even a less complex solution and even in the case of small firms can lead to new useful knowledge, using a relatively low investment in terms of time and money.

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Annex

Annex A: (Results of tests – part 1)

	Test on age						
	18-24	24-34	35-44	45-54	55-64	65+	
Made transaction	151 *121.06* (7.40)	408 *398.25* (0.24)	377 *372.55* (0.05)	278 *280.14* (0.02)	235 *265.64* (3.53)	164 *175.36* (0.74)	**1613**
No transaction	7165 *7194.94* (0.12)	23659 *23668.75* (0.00)	22137 *22141.45* (0.00)	16651 *16648.86* (0.00)	15818 *15787.36* (0.06)	10433 *10421.64* (0.01)	**95863**
	7316	**24067**	**22514**	**16929**	**16053**	**10597**	**97476**

χ^2 = 12.182, df = 5, χ^2/df = 2.44 , P(χ^2 > 12.182) = 0.0324

	Men by Age						
	18-24	25-34	35-44	45-54	55-64	65+	
Made transaction	70 *52.57* (5.78)	202 *209.37* (0.26)	225 *225.14* (0.00)	179 *173.15* (0.20)	131 *141.71* (0.81)	92 *97.06* (0.26)	**899**
No transaction	3140 *3157.43* (0.10)	12583 *12575.63* (0.00)	13523 *13522.86* (0.00)	10394 *10399.85* (0.00)	8522 *8511.29* (0.01)	5835 *5829.94* (0.00)	**53997**
	3210	**12785**	**13748**	**10573**	**8653**	**5927**	**54896**

	Women by Age						
	18-24	25-34	35-44	45-54	55-64	65+	
Made transaction	81 *69.09* (2.05)	209 *191.14* (1.67)	151 *147.71* (0.07)	99 *106.73* (0.56)	107 *127.81* (3.39)	75 *79.52* (0.26)	**722**
No transaction	4012 *4023.91* (0.04)	11115 *11132.86* (0.03)	8600 *8603.29* (0.00)	6224 *6216.27* (0.01)	7465 *7444.19* (0.06)	4636 *4631.48* (0.00)	**42052**
	4093	**11324**	**8751**	**6323**	**7572**	**4711**	**42774**

χ^2 = 8.138, df = 5, χ^2/df = 1.63 , P(χ^2 > 8.138) = 0.1488

	Test by sex		
	Made transaction	No transaction	
male	883 *907.18* (0.64)	55133 *55108.82* (0.01)	**56016**
female	751 *726.82* (0.80)	44128 *44152.18* (0.01)	**44879**
	1634	**99261**	**100895**

χ^2 = 1.473, df = 1, χ^2/df = 1.47 , P(χ^2 > 1.473) = 0.2249

Annex B: (Results of tests - part 2)

	desktop	mobile	tablet	
Made transaction	1818 *1459.88* (87.85)	558 *881.39* (118.65)	144 *178.74* (6.75)	**2520**
No transaction	91164 *91522.12* (1.40)	55579 *55255.61* (1.89)	11240 *11205.26* (0.11)	**157983**
	92982	**56137**	**11384**	**160503**

χ^2 = 216.657, df = 2, χ^2/df = 108.33 , P(χ^2 > 216.657) = 0.0000

	By lands			
	Bohemia	**Moravia**	**Silesia**	
Made transaction	1716 *1704.62* (0.08)	776 *762.94* (0.22)	191 *215.44* (2.77)	**2683**
No transaction	97995 *98006.38* (0.00)	43852 *43865.06* (0.00)	12411 *12386.56* (0.05)	**154258**
	99711	**44628**	**12602**	**156941**

χ^2 = 3.125, df = 2, χ^2/df = 1.56 , P(χ^2 > 3.125) = 0.2096

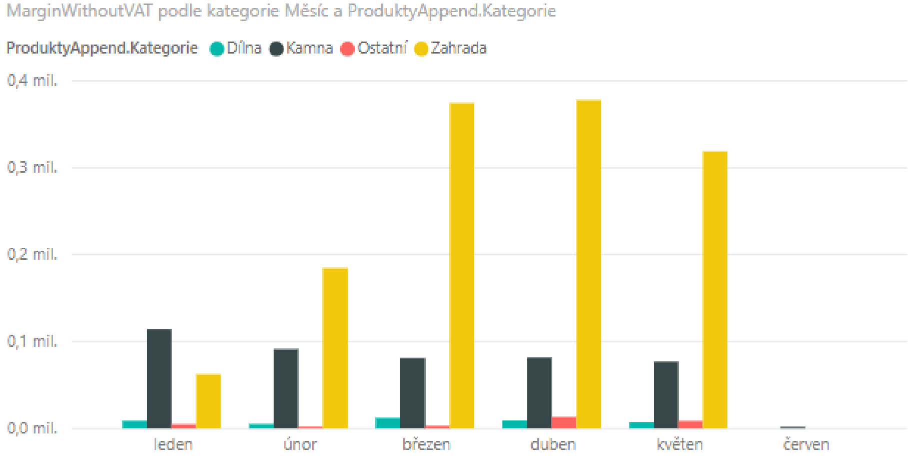
	By municipality size						
	0 - 5000	**5001 - 10000**	**10001 - 50000**	**50001 - 100000**	**100001 - 1 mil.**	**Prague**	
Made transaction	259 *247.05* (0.58)	327 *337.32* (0.32)	856 *753.54* (13.93)	302 *322.18* (1.26)	298 *311.15* (0.56)	659 *729.77* (6.86)	**2701**
No transaction	13923 *13934.95* (0.01)	19037 *19026.68* (0.01)	42402 *42504.46* (0.25)	18193 *18172.82* (0.02)	17564 *17550.85* (0.01)	41234 *41163.23* (0.12)	**152353**
	14182	**19364**	**43258**	**18495**	**17862**	**41893**	**155054**

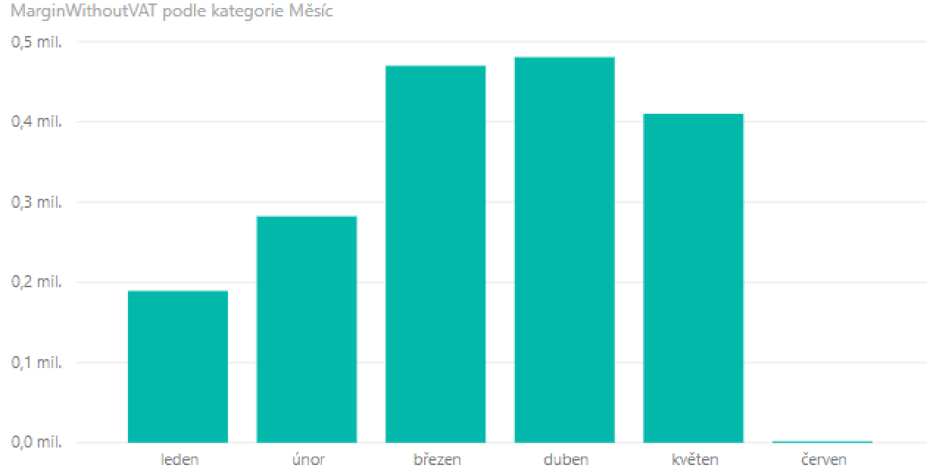
χ^2 = 23.923, df = 5, χ^2/df = 4.78 , P(χ^2 > 23.923) = 0.0002

Annex C: Hobbies

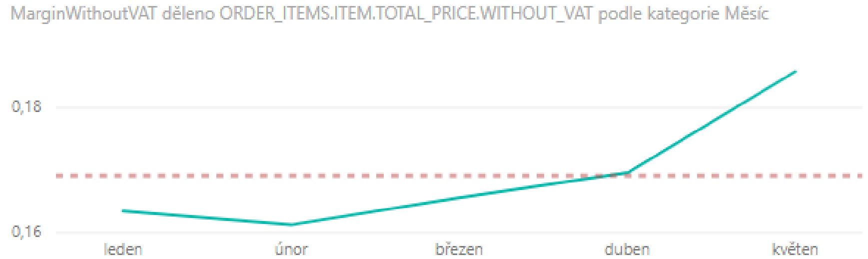
Interest	Made transaction	No transaction
Cooking Enthusiasts / 30 Minute Chefs	1266	82892
Avid News Readers	1192	74052
TV Lovers	1004	59703
Business Professionals	818	46006
Do-It-Yourselfers	802	53526
Value Shoppers	674	46505
Outdoor Enthusiasts	617	42429
Auto Enthusiasts	616	39033
Entertainment News Enthusiasts	604	40402
Book Lovers	593	36533
Bargain Hunters	567	31834
Pet Lovers	523	32268
Shopaholics	485	26206
Sports Fans	426	22959
Family-Focused	425	27484
Green Living Enthusiasts	422	25952
Travel Buffs	419	27544
Avid Investors	395	24340
Music Lovers	383	16854
Mobile Enthusiasts	376	27071

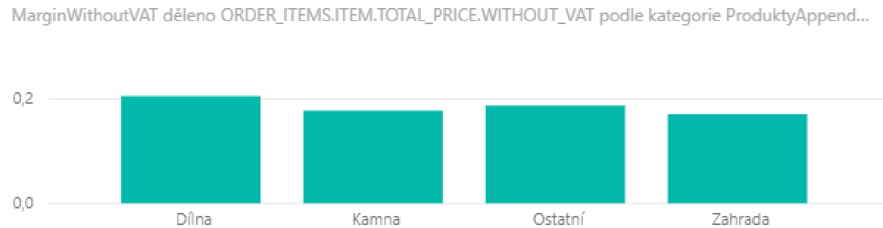
Annex D: Dashboard in PowerBI





ProduktyAppend.Kategorie2	MarginWithoutVAT	ORDER_ITEMS.ITEM.TOTAL_PRICE.WITHOUT_VAT
Zahradní skleníky	620 518,62	3 998 597,44
Krbová kamna	202 105,61	1 260 466,44
Zahradní stavby	170 826,05	1 119 799,19
Zatravňování	146 927,02	443 727,35
Sporáky na tuhá paliva	128 931,54	765 011,71
Zahradní technika	87 200,79	695 625,58
Ploty a pletiva	68 424,88	430 343,06
Grilování	62 064,33	257 547,30
Zavlažování	59 000,53	213 712,10
Zahradní příslušenství	35 173,61	124 768,65
Ostatní	31 157,96	170 168,10
Kompostéry	28 196,73	137 456,23
Kouřovody	27 527,32	97 720,71
Smazané produkty	25 212,23	155 308,03
Ruční zahradní nářadí	24 422,74	121 547,46
Bazény a zastřešení bazénů	22 761,46	127 815,71
Dílenské stroje	16 394,21	73 038,01
Lisy, drtiče a loupače	16 127,25	73 511,55
Dílenské vozíky na nářadí	9 932,21	41 981,80
Příslušenství	8 009,86	28 466,88
Celkem	**1 833 366,14**	**10 601 487,62**





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Email Marketing

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Email Marketing

Entrepreneurs and businesses communicate with their customers in many different ways, basic way to build a trustful and strong relationship is email marketing. Email marketing itself is not just sending random emails to random people, to be successful in this field we have to follow a good strategy. The main goal of a business in this field is to gain a relevant email address of a relevant customers. The best known strategy to achieve this goal and start building profitable email database is to drive clients to our website. We do so mostly by using PPC ads by facebook, google or pure czech service Sklik. Once we drive traffic to our website, called landing page, we do not sell products at first. Our very first goal is to attract website visitors with a valuable content, which is offered for free. The web page basically says: "Download our ebook / manual / podcast / etc. for free now. To which email address can we send you the free content?" After being through this step, the customer has downloaded the free content and provided us with his email address. Once we gained the email address, we can start building a trustful and strong relationship. It can take several days / weeks / months, it depends on chosen strategy. The most important thing is to keep the audience engaged and make them opening our emails. While sending valuable content, we also send from time to time a special email, offering our products or services for limited time or reduced price. After developing relationship and gaining the trust of our potential customers, it is very likely for them to purchase. It means our strategy was successful, but it is not the end. The main goal is to make the customer to buy again and increase customer's lifetime value for our company. Case studies say, that it is many times cheaper to make our customer buy again, than to gain a new buyer.

Best EM SW in in the Czech Republic

In the Czech Republic is the market dominated by company SmartEmailing, this email marketing provider is taking advantage from his product portfolio. Besides email marketing tool, they provide also pay gate (FAPI), and web creator (MioWeb). Those three tools are very good integratable, which means are working perfect together. It is not difficult to connect them, and they are programmed so, that even a regular customer can start using them and manage them on his own. There is no IT knowledge required. Smartemailing has a perfect support web page, where we can find a huge range of manuals. Those manuals are created by using videos or screenshots and everything is well organised as well as easy to understand. The pricing of SmartEmailing is $125 / month for having 10.000 subscribers. This fact is making SmartEmailing the most expensive software in this field in CZ.

Except SmartEmailing there are few more companies providing similar services on the Czech market, but their market share is much lower. For example company Ecomail is providing email marketing software for $41 / month for having 10.000 subscribers.   Other company MailKomplet is providing similar services for $56 / month. Next Czech company is Email Machine with pricing $86 / month and also Incomaker $55 / month.

As we can see from the text above, SmartEmailing has the biggest market share even though it is the most expensive software on the Czech market. The reason for that is the great ability of integration with website and pay gate, and also the features SmartEmailing has. The options we have as marketers in SmartEmailing are really useful and are helping to increase our efficiency.

Best EM SW in in the United States

Email marketing is the most basic level, where email is used to promote business. Through this type of marketing we build relationship with potential customers, keep current customers informed and updated on brand. In the U.S., the top three email marketing software are ActiveCampaign, Constant Contact, and SendinBlue through analyzing cost, deliverability, ease of use, and customer support. In terms of cost, there are three main categories, which are monthly price for 2,500 contacts, monthly price for 10,000 contacts, and monthly price for 100,000 contacts. The price for 2,500 contacts for these three companies are about $40. However, the price for 10,000 contacts of ActiveCampaign is much higher than those of others because they provide a better service. Deliverability rate is about how many emails accepted by servers. According to Venture Harbor Research, the deliverability rate is 96% (2019). In order to increase the deliverability rate, email marketing management department will do several things. For example, it will build reputation for IP address, do regular review of the customers, and monitor blacklists and problematic customers. For the ease to use, the whole content section of the email will be made based on the size of the phone screen. In this way, content can be automatically adjusted based on the display. Whether on a computer or a mobile phone, the overall structure of the email is well structured, with different content separated by a navigation bar, which is a friendly reading interface. Each module is also arranged independently with simple lines. In addition, the white background better highlights the product picture as well as text and links, so that people can see at a glance. Web links are clearly visible, making it easy for consumers to click on, which can stimulate consumption. Good customer support can improve customer satisfaction and gain customer loyalty. ActiveCampaign only take 10 mins of support response time, which is able to solve customers' questions and needs in time.

The history of Email Marketing

In 1972, Larry Roberts invented the first E-mail management system that allowed users to select, forward, and reply to messages (The History of Email Marketing, 2018). In 1996, Microsoft released Internet mail and news 1.0, later renamed Outlook; At the same year, Hotmail began offering free email anywhere, and Email marketing was born (The History of Email Marketing, 2018). At the same time, email is slowly becoming a part of everyday life, such as work and personal communication. In the years that followed, email marketing has improved. For example, Can-Spam system was introduced in the United States, which set the standard for email marketing and gave people the option of unsubscribing email. Many companies have incorporated email marketing into their corporate strategies. Email marketing is great for companies because when people open it, it drives visitors to their sites and generates profit for their businesses.

The introduction of online entrepreneur and his business in Czech Republic

Pavel Riha is currently the best paid online entrepreneur in the Czech Republic, that is the reason, why we chose him for our seminary work. Mr Riha started from scratch, nowadays he became online strategist and mentor promoting his main idea: “Be paid for your existence.” It means that you should do what you love and be paid for it. As we already mentioned at the beginning he used to have no money, no skills and no confidence. Now he is helping his customers to develop their own businesses. He already provided his services to more than 10.000 customers. Pavel earned his first million CZK (over $44.000) at the age of 22. Since 2013 Mr Riha earned more than 1 million $ over the internet. We qualify this entrepreneur as an experienced marketer and an excellent salesman, using modern technology to increase efficiency of his online strategy.

His email marketing strategy is to keep the audience engaged, he is sending valuable content 2-3 times a week, trying to keep the CTR (click through rate) as high as possible. Through his emails he is driving the audience to his website and blog. Few months ago he also started his own online show. Each thursday he organises a live webinar and invites guests, every episode has a topic discussing relevant issues. On the other hand his email marketing strategy is similar to the US one. In doesn't matter, if you are Czech or US entrepreneur, your goal is to have profit.

The introduction of online entrepreneurs and their business in the United States

We signed up two online entrepreneurs: Tim Ferries and Tony Robbins. Tim Ferries is a famous American podcaster and author. He is famous for his written work "The 4-Hour Workweek". In his emails, we received weekly review and summary of the person he had interviewed. He provided links, and people can just click on a link one time and see it on YouTube. Also, people can also download it as an MP3. Moreover, he advertises for sponsors, introduces some of the applications' advantages, and offers free trials, such as FreshBooks. At the bottom of the email, there is a section called the question on the day. In addition, we got an email called 5-bullet Friday, which introduces what he is watching, what he is reading and listening to, the wine he is enjoying, quote he is pondering, and most popular on social media. Moreover, he shares with people the lessons he has learned in life, such as the importance of giving and the way of handling pressure He asks the receiver to provide feedback on Twitter and give advice.

Tony Robbins is an American author and life coach. He is famous for his infomercials and self-help books. His emails were more focused on money, which aims to find financial freedom. For example, he would suggest how to plan for a vacation or financial future. Also, he advertises his books, which teach people how to have a better life. In most of his emails, he briefly introduces LIVE training program and invites people to join it. His value is that people should be ambitious about their future. If a person wants to succeed, even if he or she cannot run a big business, at least give the family a stable life. He mainly promotes these courses in his emails, and sometimes recommends recent events or lectures related to his career.

Analysis of Email Marketing Strategy in the United States

When looking at the United States, companies, marketers, and individuals will do whatever it takes to make sure that email reaches the end user. The five email marketing strategies that entrepreneurs are using to try to get customers are personalized and segmented emails, drip campaigns, full-funnel campaigns, interactive campaigns, and A/B testing campaigns. Though there are many more than these five options, it is interesting how these different strategies play a role in getting the end users to communicate back to the sender. First, it is important to lay groundwork to get an understanding of just how big email marketing is within the United States and the world. Email marketing is by far one of the best options when it comes to marketing strategy. The reason for email marketing being so popular among companies and entrepreneurs is because the ROI (return on investment) is quite staggering, "Email drives an average ROI of $44 for each $1 spent" (Campaign Monitor). Furthermore, the active number of email accounts are expected to hit 5.5 billion by the end of 2019 (Statista). This ever-increasing rise in number of email users is a great thing because the number of people you can reach makes it easier and more affordable.

Additionally, it is important to focus on the increase of mobile email marketing. With the recent eruption of cell phone manufacturers, but more specifically Android and iPhone devices only happening within the last decade, many companies and entrepreneurs are trying to reach the end-users anyway possible. When developing how you want your email marketing strategy to be implemented, you cannot focus strictly on the desktop computer side. Businesses need to adapt to the change in market and change in consumer electronics to allow for email strategies to tailor to specific customers. If they do not, it is possible that the customers they are trying to reach will never view, open, or respond to your email marketing campaign. Pew Research recently put out a study that shows people in the United States are using their mobile devices more often and for longer periods of time than any other electronic device. The study states that, "The vast majority of Americans – 95% – now own a cellphone of some kind. The share of Americans that own smartphones is now 77%, up from just 35% in Pew Research Center's first survey of smartphone ownership conducted in 2011" (Pew Research). With this rapid increase to 77% in just 8 years the need for email marketing strategies to be diverse to reach not only a number of different people but also a number of different devices, not just computers, are more important now than ever. Moreover, the number of emails being opened by mobile devices in 2018 was, "46% mobile 35% webmail and 18% desktop" (Litmus). Finally, it is important to note that, "more than 50% of those in the U.S. check their personal email account more than 10 times a day" (Campaign Monitor) which means having the right email strategy to get users to view their phones and respond to their offers is more important than ever.

Now that we have an understanding of just how big email marketing is within the United States and the number of people that use different devices to view emails, looking at the different strategies to get them to respond we will first look at personalized and segmented emails. Personalized and segmented emails is a strategy that many email marketers use to get the consumers to view their emails. The purpose of this strategy is to send a personalized email to people as well as segment them based on a variety of characteristics. What this does is it sends out a specific email only to relevant subscribers which you choose to send the email to which can offer significant returns on investment. With emails being segmented to specific customers it allows for the enhancement of click-throughs. Customers love when they feel the brand understands them. With customers that feel they are more in touch with the brand, "78% of customers stated that they're more likely to buy from a company that sends them more targeted offers" (Marketo). Given the need for customers to feel wanted by a company, it is surprising to see that the number of companies that don't send out personalized emails given the statistics backing strategies like this up is surprising, "Personalized emails deliver 6X higher transaction rates, but 70% of brands fail to use them" (Marketing Land). Given that this information is out there yet so many fail to capitalize on it is staggering. There are many different ways that a company or entrepreneur can segment their email subscriber list. The most popular way to segment an email is by demographics. Emailers can target specifics like age, gender, job title, sex, and education levels. An example of a demographic segmented email strategy would be Marquette University targeting people in there late 20s to mid-30s for applications to be sent to Marquette's MBA school if people are interested in getting an MBA. Additionally, email marketers can also segment based on location, interests in subscriber list, and customers in different phases of the life cycle. Another example of emails being sent to people at different stages in the consumer life cycle would be someone who just started to use a product or service that would get a welcome email compared to a customer who has been with the company for many years that might get an email about a new product offering or free trial period of a product.

Moving onto the next type of email marketing strategy we can look at drip campaigns. A drip campaign, "is a set of scheduled marketing emails sent out automatically after a particular trigger" (Marketo). The main use of a drip campaign is to identify a large number of potential prospects and transform them from leads to consumers given the automation of emails sent out through the drip campaign. The drip campaigns are completely customizable and can be set up to run autonomously in a variety of different metrics and ways. The campaigns can be setup in ways to send a certain number of emails per day, per week, and per month. The campaigns can also be set up to send out the email information at different times for different hot areas throughout the day to lead to the best potential opportunity of reaching that consumer. Though the main focus of a drip campaign is to turn prospects into leads, "98% conversion rate of qualified leads thanks to email education drip campaign" (Marketing Sherpa). With the help of drip campaigns companies and entrepreneurs are able to target email marketing strategies that can help increase a number of different metrics including moving leads through sales funnel, re-encourage customers that have been inactive, and reward those customers who have been engaged from the beginning. In short, developing those relationships with buyers every step of the way is possible through a drip campaign.

The next type of email marketing strategy that we are going to talk about is the full-funnel campaign. A full-funnel email marketing strategy is a strategy that focuses on spending time and money on the most profitable returns. The idea of the full-funnel email campaign is similar to the use of sales funnels. The full-funnel campaign allows for the company to get a visualization and target of the different stages that consumers go through during the purchasing and post purchasing process. In short, it's called a funnel because the chance of a prospect moving from one part of the funnel to another part of the funnel with every email sent decreases exponentially over time whereas with the number of emails that it would take for a prospect to move to a different stage increases causing a grey area within the company email strategy. Companies must decide how many emails to send to a specific person depending on their place in the funnel to get the best opportunity to move them to the next stage. Marketo describes the process of the full-funnel campaign as 6 core stages, "Awareness, engagement, purchase, retention/loyalty, growth, and advocacy" (Marketo).

Moving onto the most popular type of email marketing strategy is the interactive campaigns. The whole goal of the interactive campaign is to get the end-user to interact with the email through a variety of techniques. Some of these techniques include "pings, alerts and beeps vying for the customers' attention" (Marketo) to open the email. They also have included things such as interactive videos in the emails that end-users will receive that they can interact with to learn more about a product. It is important to note, the reason for the interactive campaign being the most successful of all email marketing strategies is because it gets the customers to do three things. First, open the emails themselves. Second, have information that pertains to them. And finally the consumer can interact with the email through video, surveys and many other ways. When looking at the different interactive content consumers can interact with it is important to note that these emails are not sent to be strictly sales emails. Most of them are sent to provide interactive entertainment for the consumers to get in the habit of opening emails from that company because you enjoy the emails. Furthermore, once the company has a consumer that enjoys the type of emails you send them because they are actually opening and reviewing what is sent, that is the time to send the sales email.

The final type of email marketing strategy is A/B testing campaigns. What this strategy does is focus on what type of emails that get sent to consumers and whether they open, view, and reply to the different type of emails sent. The A/B tests are sent to two different groups of consumers with the same type of different information in them. The only difference is the types of styles the emails are written in and how that specific information is displayed. Some of the different types of variables that can be changed in an A/B test email are the subject lines, messaging, target audience, design, and images in the emails. In short, the whole goal of an A/B testing campaign is to monitor the click-through rate of the emails. Whichever email strategy is best at the end of the campaign is the one that the company should use going forward to contact the consumers.

Now that we have discussed all the different types of strategies used in email marketing campaigns, it is important to see how these work in real world situations. Lin and I signed up for a variety of different US entrepreneurs with different backgrounds to see how their newsletters used email marketing strategy and the variety of frequencies they used to reach us. To start, I want to discuss Tony Robbins. As Lin mentioned, in the part of US entrepreneurs, Tony Robbins has been a top selling author, philanthropist and life coach for years. It is no surprise that Tony Robbins has an email marketing strategy to retain current customers, but also acquire new ones. Over the course of the 3 months, we collected 53 emails from Tony Robbins. This broke down to about 17 emails from Tony Robbins per month and 4 emails per week between the two of us with $\approx$ 2 per week between the pair. Though, it is important to note that some weeks I would receive more emails from Tony Robbins than Lin and vice versa. The emails that both Lin and I had received were of different content and a different frequency. This means that Tony Robbins had identified Lin and I as different users and had sent personalized and segmented emails to both of us. Tony Robbins would do things in the emails that would personalize them with things such as “Dear Kevin” and make it feel like he had a connection with me. Furthermore, it was interesting to see that a majority of the emails were not personalized and segmented and can be identifiable as mass emails that were sent to a large number of the subscribers. In these emails, Tony Robbins would use the interactive strategy by using a variety of images, stories, and videos from other well-known people or people that have succeeded from the Tony Robbins' product.

Difference in Email Marketing in Czech Republic and the USA

As a criteria we chose to compare monthly costs of email marketing software. We examined price per month for 10.000 subscribers.

We got following results:

Illustration No. 1: Monthly price of email marketing SW per 10.000 subscribers

Price per 10.000 subscribers					
USA	Price $/month		CZ	Price $/month
ActiveCampaign	111		SmartEmailing	125,0
Constant Contact	95		Ecomail	40,9
SendinBlue	66		MailKomplet	56,2
Ontraport	297		Email Machine	86,2
SendX	59		Incomaker	54,6
Mailchimp	75		Clipsan	86,2
MailerLite	75			
GetResponse	95			
Aweber	69			
Sendgrid	80			

Source: own processing

To execute statistic methods we decided to exclude the extreme value **$297**, we defined it as an outlier.

In the next step, we proved if the data came from nominal distribution, we used Lilliefors Test.

We formulated hypothesis:

H0: Data come from nominal distribution

H1: Data doesn't come from nominal distribution

Illustration No. 2: Formula used for Lilliefors Test

$$D = \underset{pro\ i=1,\ 2,\ \dots\ ,\ n}{maximum} \left(\left| F_0(x_i) - \frac{i-1}{n} \right|, \left| \frac{i}{n} - F_0(x_i) \right| \right)$$

Source: own processing

Illustration No. 3: Calculations based on formula from Illustration No. 2 for prices in the Czech Republic

CZ						
i	Price $/month	(i-1)/n	i/n	F(x)	((i-1)/n)-F(x)	(i/n)-F(x)
1	41	0	0,16667	0,13389	0,13389	0,0328
2	55	0,16667	0,33333	0,25366	0,08699	0,0797
3	56	0,33333	0,5	0,2711	0,06224	0,2289
4	86	0,5	0,66667	0,64467	0,14467	0,0220
5	86	0,66667	0,83333	0,64467	0,02200	0,1887
6	125	0,83333	1	0,94937	0,11604	0,0506
average	74,9					
stand. dev.	30,59802				D (MAX)	0,2289
n=6						

Source: own processing

Critical interval for alfa = 0,05 and n = 6 based on Lilliefors Test Table (see in attachment) was:

<0,319;1>

<u>Value of statistics</u> D (MAX) is 0,2289

<u>Result</u> D (MAX) is not in critical interval, it means that we did not reject hypothesis H0 (on alpha = 5%).

Illustration No. 4: Calculations based on formula from Illustration No. 2 for prices in the US

USA						
i	Price $/month	(i-1)/n	i/n	F(x)	((i-1)/n)-F(x)	(i/n)-F(x)
1	59	0	0,11111	0,09765	0,09765	0,01347
2	66	0,11111	0,22222	0,19092	0,07981	0,03130
3	69	0,22222	0,33333	0,24376	0,02153	0,08958
4	75	0,33333	0,44444	0,36927	0,03594	0,07517
5	75	0,44444	0,55556	0,36927	0,07517	0,18628
6	80	0,55556	0,66667	0,48669	0,06887	0,17998
7	95	0,66667	0,77778	0,80726	0,14059	0,02948
8	95	0,77778	0,88889	0,80726	0,02948	0,08163
9	111	0,88889	1	0,96631	0,07742	0,03369
average	80,5556					
stand. dev.	16,6442				D (MAX)	0,18628
n=9						

Source: own processing

<u>Critical interval</u> for alfa = 0,05 and n = 9 based on Lilliefors Test Table (see in attachment) is: <0,271;1>

<u>Value of statistics</u> D (MAX) is 0,1863

<u>Result</u> D (MAX) is not in critical interval, it means that we did not reject hypothesis H0 (on alpha = 5%).

In this step, we proved, that both data groups come from nominal distribution, and we can continue with our statistical research in following way.

In the next step we proved the equality of variance and equality of mean values. We used the data from **Illustration No. 1** (note. red marked No. 297 has been excluded, after being defined as a outlier).

The equality of variance

In this step we proved the equality of variance using function Two-sample F-test for variances. Alpha = 0,05

H0: sigma^2_0 = sigma^2_1

H1: sigma^2_0 ≠ sigma^2_1

Illustration No. 5: F-Test Two-Sample for Variances a) for alfa = 0,025 b) for alfa = 0,975

alfa 0,025		
F-Test Two-Sample for Variances		
	Variable 1	*Variable 2*
Mean	80,5556	74,8563
Variance	277,028	936,239
Observations	9	6
df	8	5
F	0,29589	
P(F<=f) (1)	0,06171	
F crit (1)	0,20759	

alfa 1-0,025=0,975		
F-Test Two-Sample for Variances		
	Variable 1	*Variable 2*
Mean	80,5556	74,8563
Variance	277,028	936,239
Observati	9	6
df	8	5
F	0,29589	
P(F<=f) (1)	0,06171	
F crit (1)	6,75717	

Source: own processing

<u>Critical interval</u> <0;0,21 > U <6,76;1>

<u>Value of statistics</u> F=0,29589 is not in critical interval, it means that we did not reject hypothesis H0 (on alpha = 5%).

After we proved that Variances were equal (for alfa = 0,05), we did t-Test: Two-Sample Assuming Equal Variances to prove if the mean values are equal (also for alfa = 0,05).

H0: μ0 = μ1

H1: μ0 ≠ μ1

Illustration No. 6: t-Test: Two-Sample Assuming Equal Variances

t-Test: Two-Sample Assuming Equal Variances

	Variable 1	*Variable 2*
Mean	80,555556	74,856322
Variance	277,02778	936,2386
Observati	9	6
Pooled Va	530,5704	
Hypothesi	0	
df	13	
t Stat	0,4694574	
P(T<=t) (1)	0,3232596	
t crit (1)	1,7709334	
P(T<=t) (2)	0,6465193	
t crit (2)	2,1603687	

Source: own processing

<u>Critical interval</u> (-inf;-2,6> U <2,6;inf)

<u>Value of statistics</u> t Stat = 0,495 is not in critical interval it means that we did not reject hypothesis H0 (on alpha = 5%).

<u>Conclusion:</u> Our research did not confirm, that the average price for email marketing software in USA and CZ were different (for alfa = 0,05).

Email Marketing Laws

As for the laws restricting email marketing, there is only one major law which all people must abide by when sending newsletters to consumers. That Law in place by The United States Federal Trade Commission is called the, *CAN-SPAM Act: A Compliance Guide for Business* which is a law signed by President George H.W. Bush in 2003. The law sets a variety of rules, “law that sets the rules for commercial email, establishes requirements for commercial messages, gives recipients the right to have you stop emailing them, and spells out tough penalties for violations” (Federal Trade Commission) to protect the consumer and even business-to-business email. If there is any violation of the *CAN-SPAM Act* you are subject to fine up to $42,530 (Federal Trade Commission).

Looking more in depth of the *CAN-SPAM Act* people must not use false or misleading header when sending emails. This means that things such as domain name and email address must be represented accurately and identifiable by the person or business who is sending the message. The next potential violation is that you cannot use deceptive subject lines. This is very straightforward and the message must reflect the subject line of the email and not add any other information that is not relevant to the email. The next potential violation is the company needs to identify the message as an ad. What this means is that the message should be able to be recognizable as a message of advertisement by the person receiving the message. If not, then the sender of the email needs to alter the email and make sure its respondents and understand the content. The next potential violation is that the company needs to tell recipients where the company is located. This is fairly straightforward as the only requirement is that the company must include the valid physical postal address of the company. The next potential violation of the law is that the company must tell recipients how to opt out of receiving future emails. This violation is clouded as most companies try and get around this by making it harder for consumers to unsubscribe from their emails. Companies are required by the law to explain how to unsubscribe from the email lists and that they cannot use spam filters to block opt-out messages. The follow-up and next violation is that the company must credit the opt-out request promptly. In short, companies must honor the request within 10 business days or are subject to additional penalties and fees. The final potential violation is that companies must monitor what others are doing on their behalf. What this means is that if they are using a 3rd party company or software to send the emails to consumers, they must monitor and track emails to make sure that they are not violating any laws. Even if the company breaks the law, it is the company's fault whose name in on the email and not the sender.

Conclusion

In this seminary paper we compared email marketing in the United States and the Czech Republic, we chose the biggest email marketing software providers and described them. We focused mainly on their price policy. According to the price policy, we did statistic research, by using multiple steps and calculations. The result was, that the average price for email marketing software in USA and CZ were not different (for alfa = 0,05). This result was gained after excluding one significantly high number from the USA data population. We defined that number as an outlier. In the last part of our seminary work, we focused on laws restricting email marketing.

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Attachments

Attachment No. 1 Lilliefors Test Table

Lilliefors Test Table

The table gives the critical values $D_{n,\alpha}$ for the Lilliefors test for normality, as described in Lilliefors Test. Table 1 is the original table from Lilliefors, while Table 2 is a revised version from Abdi and Molin.

Table 1

n\α	0.01	0.05	0.10	0.15	0.20
4	0.417	0.381	0.352	0.319	0.300
5	0.405	0.337	0.315	0.299	0.285
6	0.364	0.319	0.294	0.277	0.265
7	0.348	0.300	0.276	0.258	0.247
8	0.331	0.285	0.261	0.244	0.233
9	0.311	0.271	0.249	0.233	0.223
10	0.294	0.258	0.239	0.224	0.215
11	0.284	0.249	0.230	0.217	0.206
12	0.275	0.242	0.223	0.212	0.199
13	0.268	0.234	0.214	0.202	0.190
14	0.261	0.227	0.207	0.194	0.183
15	0.257	0.220	0.201	0.187	0.177
16	0.250	0.213	0.195	0.182	0.173
17	0.245	0.206	0.189	0.177	0.169
18	0.239	0.200	0.184	0.173	0.166
19	0.235	0.195	0.179	0.169	0.163
20	0.231	0.190	0.174	0.166	0.160
25	0.203	0.180	0.165	0.153	0.149
30	0.187	0.161	0.144	0.136	0.131
OVER 30	$\frac{1.031}{\sqrt{n}}$	$\frac{0.886}{\sqrt{n}}$	$\frac{0.805}{\sqrt{n}}$	$\frac{0.768}{\sqrt{n}}$	$\frac{0.736}{\sqrt{n}}$

Source: http://www.real-statistics.com/statistics-tables/lilliefors-test-table/ (30//05/2019)

CSR activities in sector of building efficiency, automotive and power solutions: Case study of Johnson Controls and Siemens Czech Republic

Yujie Wang and Kristýna Machová

Introduction

This case study is focused on corporate social responsibility in the globalized world. Almost everyone today, whether students, employees or managers, has heard something about the notion of corporate social responsibility (CSR). They could hear about this concept, for example, from the media, in the business community or even within popular culture. A search in 2018 on Google revealed over 5 million hits for the term.

Many attempts have been made to define the concept of CSR and sustainability, to develop discussion on their importance and hence to widespread this approach into broader business practice. The concept of CSR, more precisely of sustainable development (sustainability), is certainly not new, but there are many definitions in various dimensions. Numerous definitions of CSR are offered by commentators, academics, business, civil society, governmental and consulting organizations. At its core, CSR concerns the ways in which companies manage their relations with society. One of the pioneer CSR scholar, Archie Carroll (1979, pp 499) defines CSR as *"the economic, legal, ethical and discretionary expectations that society has of organizations."*

Another definition of CSR could be also mentioned. The Commission of the European Communities (2001) defines CSR as a voluntary commitment of company focused to maximize its benefits and minimize negatives on society. But the economic success is not eliminated. CSR is viewed as a key business contribution to sustainability development business (Kolk, Lenfant, 2010). The concept of CSR is built on pillars of sustainable triple-bottom-line. The concept of triple bottom line is referred to as the 3P. It represents people, planet and profit (Roberts, Cohen, 2002).

At the beginning, paper focuses on theoretical findings related to CSR and sustainability topics. The main part of this paper provides analysis and comparison of CSR and sustainable activities in sector of building efficiency, automotive and power solutions. Two important business players were chosen for this purpose: (a) Johnson Controls and (b) Siemens Czech Republic. A special focus is placed on highlighting common and different aspects. At the end of this paper there are provided summary of discovered findings.

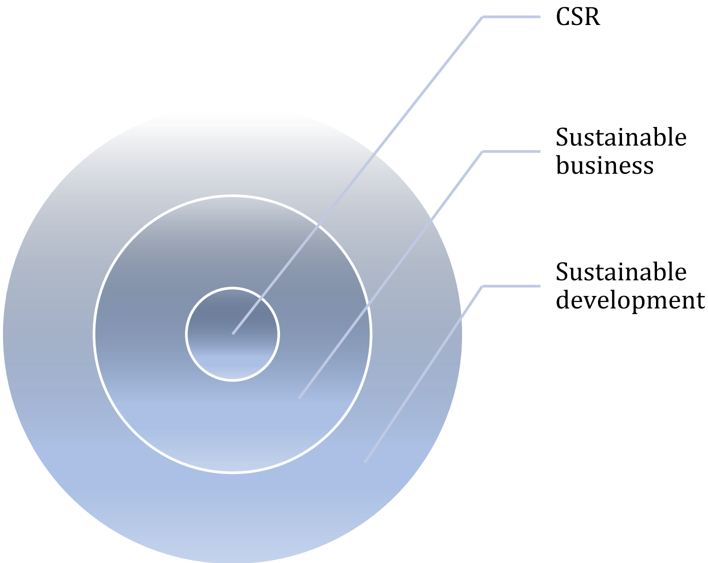
1 Theoretical background

It is stated in the introduction, CSR is closely linked to the wide-ranging issue of sustainable development that affects social life. Sustainable development is a society-wide concept for which society as a whole is to create conditions. Since the 1980s, this concept has been seen as the only direction for the future development of the world, or human society.

The principles of sustainable development themselves are used for the daily operation of businesses. If environmental and social levels are applied in business, it is possible to talk about sustainable business. This means that the concept of sustainable development is transformed into business. A sustainable business is conducive to achieving sustainability development goals. Within the company, sustainable business is promoted, for example, by the concept of corporate social responsibility. CSR is a practical tool that is unique for every business and responds to the company's current challenges. CSR activities are part of almost every business. And current businesses are mainly sustainable and long-term oriented. CSR activities of companies differ for each company, sector and business environment. And CSR themes are changing. They depend, for example, on national legislative requirements, ethics and moral rules across society. There are several discussions about these terms and how they come together (e.g. Van Marrewijk, 2003, or Wright and Bennett, 2011).

In the last two decades, corporate social responsibility has been developing rapidly. And it uses the terminology associated with sustainable development that it has adapted to the business sector. Both concepts have a different origin, but both of them are based on three pillars: (a) economic, (b) social and (c) environmental. It is also known as 3P ("people, planet, profit") in the concept of CSR. The interrelationship of CSR, sustainable business and sustainable development is illustrated by Figure 1. The basic terminology associated with these concepts is explained below.

Figure 1: CSR, sustainable business and sustainable development



Source: own, 2019

1.1 Sustainable development

First, let´s start with sustainable development (sustainability). Sustainable development or sustainability are generally accepted terms and are commonly understood as synonyms. It is a complex area and addresses a large number of topics, both global and local. This topic has been very much discussed since the second half of 20^{th} century. It is mainly linked to the day-to-day operations of states, businesses and households and focuses on their impact on the economy, society and the environment. Definition of sustainable development (sustainability) varies. For example, World Commission on Environment and Development (1987, pp 16) defines it as *"development that meets the needs of the present without compromising the ability of future generations to meet their own needs".* More details on the development of sustainable is shown in Table 1.

Table 1: Main pillars in sustainability development

Year	Document	Description
1970s-1980s	*"The Limits to Growth"*	Infinite growth is not possible in a limited resource environment and has addressed the possibilities of creating conditions for environmental and economic stability that are sustainable and the risks to the continued existence of humanity and the biosphere.
1992	*"Declaration on Environment and Development"*	It contains 27 principles of sustainable development and the "Agenda21", a detailed environmental action plan. The aim is to reconcile economic and social development with effective environmental protection.
2000	*"Millenium development goals (MDGs)"*	Preserving a sustainable future has been described as the most urgent challenge of today.
2002	*"World Summit on Sustainable Development"*	It stressed the essence of sustainable development in ensuring the balance of the three fundamental pillars: social, economic and environmental
2012	*"The Future We Want"*	UN Member States adopted this document. And they decided to launch a process to develop a set of SDGs to build upon the MDGs and to establish the UN High-level Political Forum on Sustainable Development.
2015 - 2030	*"Transforming our World: The 2030 Agenda for Sustainable Development"*	All UN Member States, representatives of civil society, the business community, academia and citizens from all continents participated in the formulation of SDGs.

Source: own based on Meadows, 1972, UN (1992; 2012; 2019a), WHO (2002)

The 2030 Agenda for Sustainable Development provides a shared blueprint for peace and prosperity for people and the planet, now and into the future. It is the last movement in sustainability concept. More information about sustainable development concepts are in the next paragraphs. Sustainable Development Goals (SDGs) are an urgent call for action by all developed or developing countries in a global partnership (UN, 2019b). These SDGs are considered as a key, common future direction of sustainability. They represent overall program for all countries implementing economic, social and environmental aspects of sustainability. These SDGs are represented by 17 icons shown in Figure 2.

Table 2: Sustainable Development Goals (SDGs)

Source: UN (2018, pp 11)

1.1.1 Concepts of sustainable development

Sustainable development (sustainability) is frequently explained in 3 possible ways. The 1st general concept of sustainable development (sustainability) is based on definition of World Commission on Environment and Development (1987, pp 16) that defines it as *"development that meets the needs of the present without compromising the ability of future generations to meet their own needs"*. It is the best known definition of sustainable development (sustainability).

The 2nd concept of sustainable development (sustainability) is based on balance of 3 pillars: (a) economic, (b) social and (c) environmental. The aim is that the development in some pillar does not develop at the expense of others. 3 pillars of sustainable development are derived from different definitions of this term. It is achieving a harmonious state of the environment, social environment and economic development, with an emphasis on the priority importance of the development of human personality in terms of democracy. The advantage of the concept of sustainable development is precisely this complex three-dimensional view, where individual pillars are not understood in isolation but as mutually influencing areas and factors of development (Kunz, 2012).

The 3rd concept of sustainable development (sustainability) is based on capital assets such as: human, social, natural, productive and financial capital is being considered. If aggregate capital is growing in the long term, development is considered sustainable (Ministry of Regional Development, 2012).

Sustainable business is closely related to sustainable development and it means that environmental and social levels are applied in business.

1.2 Sustainable business

Business is a part of the economic pillar and the word sustainable is the expression of the need to integrate the environmental and social pillars into business activity (Cooney, 2009). Table 2 represents principles of sustainable business according Cooney (2009).

Table 2: Principles of sustainable business

The principles of sustainability are part of every business decision.
Company supplies environmentally friendly goods or services. These goods or services are an alternative to less sustainable options.
Company is more sustainable than its competitors.
Company declares commitments to environmental principles in commercial operations.

Source: own based on Cooney (2009)

The principles of sustainability are used in daily operations almost in every business. Because this concept helps them to optimize operational processes and reduce production costs. It also motivates employees to perform better and brings a more favorable investment climate. It means that this concept brings sustainable economic development for businesses.

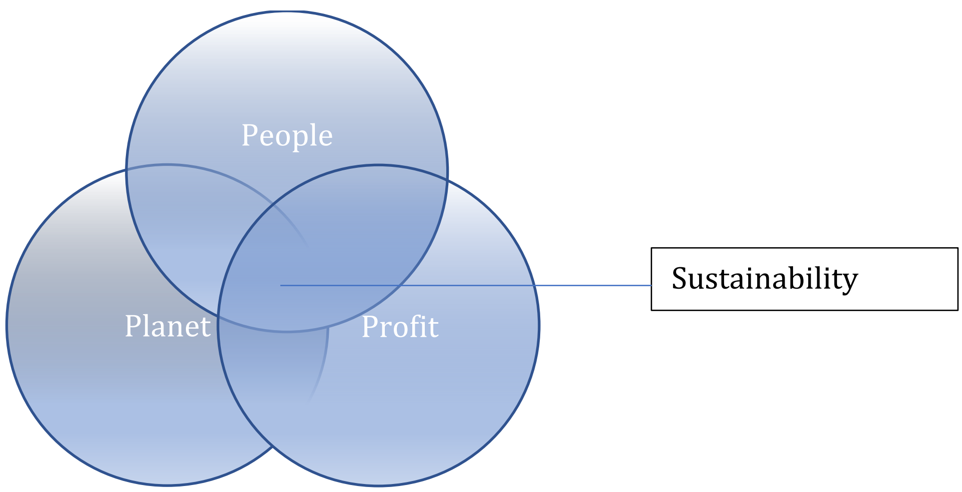
The practical tool of sustainable business concept is Corporate Social Responsibility (CSR) and other voluntary tools – quality, environmental management system.

1.3 Corporate Social Responsibility (CSR)

Numerous definitions of CSR are offered by commentators, academics, business, civil society, governmental and consulting organizations. One of the pioneer CSR scholar, Carroll (1979, pp 499) defines CSR as *"the economic, legal, ethical and discretionary expectations that society has of organizations."* But the term of CSR was first used in 1953 when H. R. Bowen used it in his publication "Social Responsibilities of Businessmen". CSR was described as a concept by which companies on a voluntary basis integrate social and environmental aspects into mainstream business operations and interaction with stakeholders. There are a lot of other definitions such as CSR is a voluntary commitment of company focused to maximize its benefits and minimize negatives on society. But the economic success is not eliminated (Commission of the European Communities, 2001).

CSR is commonly connected to economic, social and environmental pillar and it is usually defined as company responsibility for their society influence. It can be said that it is based on the same basic pillars as sustainable development (sustainability). It is based on triple bottom line – people, planet and profit (Roberts, Cohen, 2002). Triple bottom line is illustrated by Figure 2.

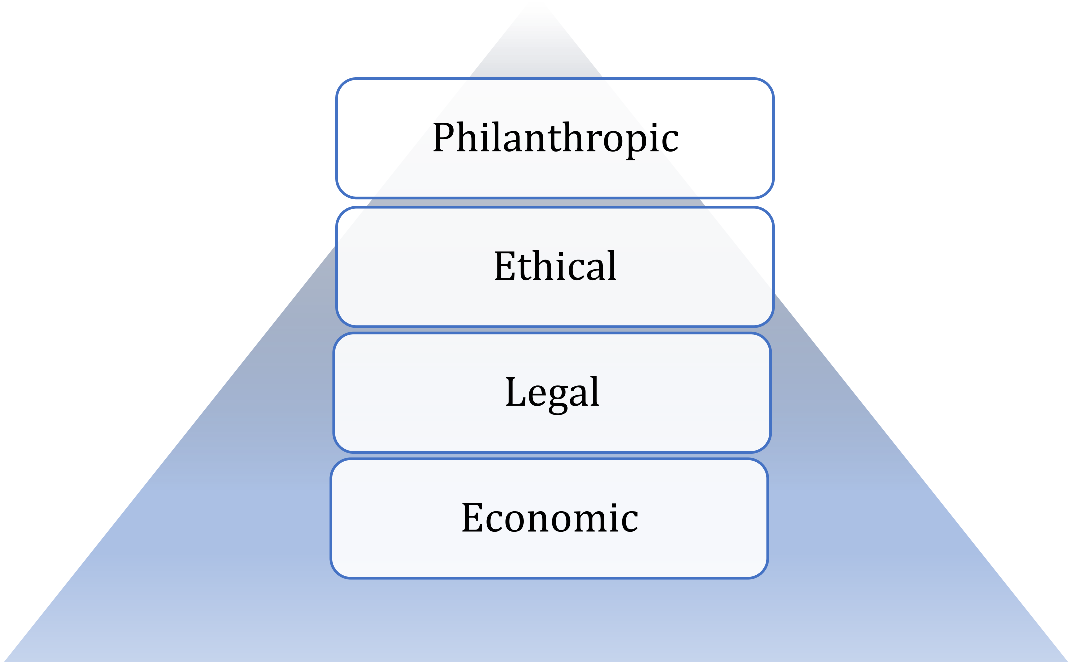
Figure 2: Triple bottom line



Source: own based on Roberts, Cohen (2002)

Corporate social responsibility can also be seen as a summary of philanthropic, ethical, legal and economic responsibility - the so-called Carroll's social responsibility pyramid (Carroll, 1991) which is shown in Figure 3.

Figure 3: Carroll's social responsibility pyramid



Source: own based on Carroll (1991)

The Carroll`s Pyramid of CSR is divided into 4 levels that represent four different responsibilities such as:

- Economic responsibility: be profitable / useful
- Legal responsibility: listen to the law
- Ethical responsibility: do what is right, fair, fair, avoid injustice
- Philanthropic responsibility: be a good citizen, contribute to the community, improve quality of life (Carroll, 1991).

It is clear that there is no single definition. These different definitions are offered by commentators, academics, business, civil society, governmental and consulting organizations.

2 Case study

The main part of the project provides analysis and comparison of CSR and sustainable activities in Siemens Czech Republic s.r.o. and Johnson Controls plc. A special focus is placed on highlighting common and different aspects. The final part of the project provides summary of discovered findings.

2.1 Siemens Czech Republic s.r.o.

Siemens Czech Republic s.r.o. is one of the largest technology companies in the Czech Republic. It has been part of Czech industry for more than 125 years and a guarantee of innovative technologies. And it has four main divisions: (a) building technologies & solutions, (b) power solutions, (c) transport and public infrastructure and (d) healthcare. Czech Siemens is also a pioneer in Industry 4.0 and Smart Cities. It means that brings customers comprehensive digital products and services (Siemens, 2019a).

The company is actively interested in social responsibility. It focuses on three core areas of CSR: (a) environment (reduction of environmental footprint of their products and services), (b) responsible business practices (ethical, transparent corporate governance) and (c) business to society (creation of jobs, support education) (Siemens, 2018). It creates Business for Society Report which maps activities in activities in different fields such as: (a) strengthening the economy, (b) developing local jobs and skills, (c) driving innovation, (d) sustaining environment, (e) improving the quality of life and (f) societal transformation (Siemens, 2019a).

2.1.1 History of Siemens in the Czech Republic

The first representation was opened in Prague and Brno in the autumn of 1890. Activities of Siemens Group have a long tradition in the Czech Republic. The first representation was opened in Prague and Brno in 1890. Siemens built a number of municipal power plants, put public lighting into operation in several cities, built a tram service in Prague and Olomouc, and electrified the steam railway in Ostrava at the turn of century. After the establishment of Czechoslovakia, Siemens established several large plants in which it produced both heavy-current equipment for power plants, industrial plants, mines, metallurgical works and electric railways, as well as electric motors and generators, telephones and switchboards, medical devices, gate equipment for railways, measuring instruments, electrical household appliances and appliances. In 1945, the company's representation, including production facilities, was nationalized. The revival took place in the late 1960s. In 1971, Siemens opened a technical consulting office and resumed deliveries of modern technology. Siemens returned to Czechoslovakia in December 1990 and quickly expanded into a group of business and service companies and manufacturing plants. Nowadays, Czech Siemens is a pioneer in Industry 4.0 and Smart Cities and leader in corporate social responsibility activities in the Czech Republic (Siemens, 2019a).

2.1.2 CSR activities in Siemens Czech Republic

CEO of Siemens Czech Republic, Eduard Pelíšek is *"convinced that a company is successful and socially beneficial if it does not look only at its economic prosperity also at how it contributes to the society"* (Siemens, 2018, pp 3). Also, the founder of Siemens, Werner von Siemens (Rainey, 2010, pp 235), said: "*I won't sell the future for a short-term profit*." Siemens evaluates its contribution to the society through Business for Society Report. This Report does not look only the volume of investment. On the other hand, the Report looks at the value of its activities in different fields such as: (a) strengthening the economy, (b) developing local jobs and skills, (c) driving innovation, (d) sustaining environment, (e) improving the quality of life and (f) societal transformation (Siemens, 2019a). In order to further discuss how Siemens Czech Republic engages in CSR activities, it will be discussed it through three aspects as follows, environment, social and economic performance.

- *Environment performance*

First, let´s start with the perspective of environment, Siemens Czech Republic makes a lot of achievements in protecting environment. It reduces the energy demands, water consumption and waste and greenhouse gas production of industrial companies. For example, it recycles 97% of the waste it produces and 100% of the energy for its own consumption is from renewable sources. In 2015, it started programme to make all of its activities CO_2 neutral by 2030. For instance, during the years 2014 to 2015, Siemens saved 345 tons of CO_2 trough fleet optimization. It also uses water management solutions that reduce water loss by up to 30% (Siemens, 2018).

- *Social performance*

Siemens Czech Republic is also committed to philanthropy and taking social responsibility. Siemens develops local jobs and skills of its employees. For example, it employs almost 11 000 people and invests CZK 44 million in the training and education of its employees per year. It also improves the quality of life. For instances, a special programme for homeless people which is called "Siemens@Restart", "Siemens Aid Fund – We Help the Helpers" that supports nongovernmental organizations that help those who cannot help themselves. Of course, Siemens supports volunteering. Its employees can devote up to 2 working days to volunteering per year. Siemens opened corporate kindergartens in Prague and Ostrava. Both of them are adequate preschool facilities and toddler care and accept children from the age of 18 months (Siemens, 2018).

- *Economic performance*

From the economic perspective, Siemens Czech Republic prefers to get environmental goal rather than financial goal. Siemens Czech Republic has been inseparable part of the Czech economy society. For instance, it paid CZK 300 million in income tax in Czech Republic in 2016, it exported goods and services CZK 10 billion from the Czech Republic in 2016, it bought goods and services from Czech suppliers CZK 7 billion in 2016 and it contributed 32 billion towards Gross Domestic Product in 2015 (Siemens, 2018).

For the operation of the company, it stresses the governance of ethical and transparent in its business. Siemens is a founding member of Coalition for Transparent Business and a member of the Czech Compliance Association (Siemens, 2018).

Furthermore, CSR activities will be discussed according to the sector of business such as building efficiency, power solutions and automotive.

- *Building Efficiency*

Siemens Czech Republic offers a wide range of products, systems and comprehensive solutions for building technology management. Siemens Czech Republic succeeds in reduction of energy efficiency of buildings (EPC). For example, Siemens Czech Republic delivered smart building solutions to 17 public facilities in Pardubice Region – 13 new boiler rooms, 3 cogeneration units, 2900 light fixtures and 3300 heating devices, photovoltaic panels for generates energy and 2200 faucet areatos reduction of water consumption and 480 toilet water savers. These solutions are cotrolled by 7 energy consumption systems. The contract cost CZK 55 million but it will be saved CZK 71 million over 10 years (Siemens, 2018).

The newest technologies help people to transform their buildings and cities into places where it will be better to live and work. For instance, Siemens Czech Republic is a pioneer in smart cities. Smart city has optimized infrastructure and maximizes its efficiency and services that it provides for its citizens. It improves city services for better life for its citizens (Siemens, 2019b).

Siemens Czech Republic offers a unique solution for health care institutions that helps them to change hazardous waste into fuel with the same calorific value as the one of lignite. This device is called “Converter”. It is effective, economic and environmentally friendly solution. (Siemens, 2019b)

- Power solutions

Power solutions is currently undergoing substantial change. The energy sources and the production methods are changing. Siemens Czech Republic offers a complete portfolio of power products, delivering turnkey solutions from power generation through distribution to customers’ individual needs. (Siemens, 2019c).

Siemens Czech Republic is a leader in the integration of renewable energy in the Czech Republic. It is more and more important topic for the future sustainable development. Siemens Czech Republic has some solutions and components to produce renewable energy such as biomass power, hydro power, solar power, wind power, hydrogen solutions and wave energy applications (Siemens, 2019c)

For instance, between the years 2006 to 2008, Siemens Czech Republic reconstructed the ČEZ company’s Dlouhé stráně hydro power plant that has environmental importance. It has led to a substantial decrease in the demand for coal-fired power. Also, Siemens Czech Republic renovated the Prunéřov Power Plant. It was complete renovation. It was reduced the emissions of harmful substances such as CO2, NOx, SOx and particulate matter (Siemens, 2018).

- Automotive

The Czech Republic is the hearth of European automotive industry. Siemens Czech Republic has Siemens digital factory in ŠKODA AUTO. It is represented by digital factory solution which is called "Tecnomatix". The whole production line is virtually planned and simulated. And workplace has the lowest negative impact on the health of employees. Also, Siemens Czech Republic created a digital solution for the Kvasiny paint shop. Siemens realized complete modernization of paint shop operations. It led to maximalization of economic and energy efficiency (Siemens, 2018).

A study carried out by the Technical University of Munich has shown that better traffic means reduction of NO_x emissions approximately about 30%. On the other hand, areal speed reduction in cities to 30 kilometers per hour did not reduce nitrogen oxide or carbon oxide emissions. It is clear that intelligent transport systems and the creation of "green waves" are the best ways to achieve cleaner air in cities. Therefore, Siemens offers a range of smart transport solutions. For instance, a special technology - "V2X" (Vehicle – to – everything) communication which includes "V2I" (vehicle-to-infrastructure) and V2V (vehicle-to-vehicle) communication. V2X allows vehicles to communicate with all static and dynamic objects around it. V2V identifies inter-vehicle communication. On the other hand, in V2I, vehicles communicate with transport infrastructure such as smart parking systems and traffic lights. It is a part of efficiency-enhancing solutions transport systems (Siemens, 2019d; Visionsmag, 2019).

Last but not least can be mentioned "Sitraffic Scala". It is a unique application for monitoring and controlling traffic in cities. It serves to manage urban traffic. For example, the traffic signal is automatically or manually optimized. (Siemens, 2019e).

2.2 Johnson Controls

Johnson Controls is a global technology leader. It involves many industries, including building efficiency, global workplace solutions, power solutions and automotive experience. All of these are the main business operation segments of Johnson Controls. Becoming a competitive leader and excellent industry model for diversity and inclusion is one of the most important mission of Johnson Controls. Johnson Controls dedicates to create smarter and more user-friendly and efficient solutions to improve operational growth, and efficiency. In order to build clever cities and societies, Johnson Controls is creating smart buildings, useful solutions and integrated infrastructure to make future more convenient, intelligent, and sustainability (Johnson Controls, 2018).

2.2.1 History of Johnson Controls

Johnson Controls was founded in 1885 by professor Warren S. Johnson. The company become a technology leader since 1885. It has made automated building thermal control systems and has made several major acquisitions in the coming decades.

For example, in 1978, Johnson Controls made acquisition with Globe-Union and it entered the automotive battery industry. Currently, it is currently a leading manufacturer of lead car batteries.

In 1985 Johnson Controls made other acquisition with Hoover Universal. It brought Johnson Controls into the automotive seat industry. In these days, Johnson Controls is the world's largest car seat manufacturer (Johnson Controls, 2018; Wikipedie, 2019). More information will be mentioned in the next paragraphs.

2.2.2 CSR Activities in Johnson Controls

Johnson Controls began protecting the environment in 1885. Electronic thermostat is a successful sign that it begins to protect the environment. Producing products and providing services by consuming less energy and preserver resources have become an pivotal value that crosses the whole company's operation. Johnson Controls emphasizes the importance of sustainability in their operations, and regard it as the company's essential values. In order to facilitate sustainability development, Johnson Controls makes a lot of efforts. For example, in the internal of the company, it develops a sustainable culture, appealing more and more people not only employees but also customers to involve. At the same time, it pays attention to enhance their operational efficiency to reduce their environmental footprint. More importantly, it attracts or appeals their stakeholders to be more active in resolving environmental problems. All of these behaviors are aimed to raise the conscious of protecting environment and sustainability for people (Johnson Controls, 2018). In order to further discuss how Johnson Controls engages in CSR activities, it will be discussed it through three aspects as follows, environment, social and economic performance.

- *Environment performance*

From the perspective of environment, Johnson Controls makes a lot of achievements in protecting environment. For example, Johnson Controls have decreased their energy intensity by 47% and reduced greenhouse gas intensity by 41% from 2002 to 2017. Moreover, in 2017, Johnson Controls accepted a new 2025 Sustainability Strategy, which associated with energy, water, gas emission, and etc. Solutions, partnership, people, performance, and governance are key aspects that the Sustainability Strategy mainly stresses. For environmental issues, Johnson Controls' positive and great achievements in developing sustainable development are inseparable from their outstanding leadership. For example, Global Sustainability Council and Manufacturing and Operations Council will provide sustainable strategy and solutions for the company when it operates their business. Also, the company will strengthen environmental education to make their employees having more comprehensive understanding of human rights and sustainability (Johnson Controls, 2018).

- *Social performance*

Johnson Controls is also committed to philanthropy and taking social responsibility. One of the most important organization of Johnson Controls is Blue Sky Involve. Blue Sky Involve is a global organization that inspires Johnson Controls’ employees to form volunteer teams to help people around the world. Volunteers work with the local non-profit organizations in support of education, environment, social services and others. Every employee in the team can not only use their strengths to help people who are in need but also connect their skills and interests to help them get exercised and improved. According to the statistics of Johnson Controls, from 2006 to 2014, employees of the company started over 780 Blue Sky Involve programs in China and contributed over 137471 hours. This achievement makes Johnson Controls build an excellent model in protecting environment and become one of the most socially responsible in China. Besides, Johnson Controls has its own foundation, which distributes funds every year to support local communities and help children get higher education and get better academic achievements (Johnson Controls, 2018).

- *Economic performance*

From the economic perspective, Johnson Controls prefers to get environmental goal rather than financial goal. The company extremely values ethics and integrity. It dedicates to bring as much benefits as it can to the whole society through doing the right things. Johnson Controls is recognized as a one of the "2018 World's Most Ethical Company" and "100 Best Corporate Citizens" (Johnson Controls, 2018). For the operation of the company, it stresses the governance of ethical and transparent in their business, which not only can improve their reputation, but also productivity.

Furthermore, CSR activities will be discussed according to the sector of business such as building efficiency, power solutions and automotive.

- *Building Efficiency*

Johnson Controls succeeds in heating, ventilation, and air conditioning (HVAC), security, fire protection, and building management system. In order to create more sustainable and comfortable environments, Johnson Controls offers the most comprehensive solutions to optimizing buildings and improve building performance. An HVAC system is designed to control the working environment, like controlling the temperature of a room or controlling the humidity level, and HVAC system can also ensure the air in the room is clean (Johnson Controls, 2018). In order to improve the building efficiency, Johnson Controls builds more intelligence in the building system and make it become more connected with others functions. For example, Johnson Controls constructs building wide system integration (BWSI) into Jiahui International Hospital in Shanghai, China. BWSI system is mainly used for serving patients. Working with the integrated infrastructure building system generates a lot of benefits not only for the hospital but also for patients. For example, a comprehensive system can save a lot of cost in the long run, and it can simplify workflow and communications to help people work and communicate more efficiently (Johnson Controls, 2017).

The other updated technology is YORK residential heating and cooling systems, which adds more functions and features. For instance, customers can monitor and control the system over the Internet. Then, it can dynamically change airflow and capacity. Moreover, this new residential system not only can save energy cost by 50%, but also it can adjust the air flow to make it more accurate and quieter (Johnson Controls, 2017).

- *Power Solution*

Johnson Controls is the world's largest automotive battery manufacture, which has over one hundred years of experience in providing automotive batteries to meet the changing needs of its customers. Johnson Controls creates almost 154 million batteries a year that occupies nearly one third output of the industry. Johnson Controls provides power for various passenger vehicle, like motorcycle, golf cars, heavy and light commercial truck, and etc. Johnson Control dedicates to developing, producing, and distributing the world's most intelligent combination of lead acid and lithium iron technology, which promotes distinctive sustainable performance (Johnson Controls, 2018).

Johnson Controls offers a lead-acid batteries for a wide range of vehicles. There are several types of batteries, including flooded lead-acid batteries, enhanced flooded batteries, and absorbent glass mat battery products (AGM). Different batteries have different effectiveness. Customers can choose them based on their needs. Firstly, flooded lead-acid batteries have reliable quality around the world. For instance, flooded lead-acid batteries have strong structure and clean construction. It uses the Power Frame patented grid technology that has a better durability and corrosion resistance. Moreover, Power Frame manufacturing can reduce energy consumption by 20% and greenhouse gas emissions by 20% (Johnson Controls, 2018). Compared with standard lead-acid batteries, enhanced flooded batteries provide higher quality and consistency. Enhanced flooded batteries products support applications that operate under partially charged conditions and do not need the deep cycle characteristics. In addition, enhanced flooded batteries can make the engine work longer. The design of enhanced flooded batteries improve thermal stability for the engine compartment and hot weather. At the same time, enhanced flooded batteries are also suitable for start-stop vehicle technology (Johnson Controls, 2018). Lastly, AGM plays an important role in start-stop vehicles. AGM batteries deliver exceptional performance, and it have enormous output energy.

For instances, AGM batteries are twice the life of standard flooded lead-acid batteries even under the worst conditions (Johnson Controls, 2018). According to Johnson Controls business sustainability report (2017), it is estimated that there are almost 82% cars in EU28 will be produced with start-stop technology by 2020. In this situation, the company plans to increase the capacity of AGM battery, from 17 million in 2016 to 50 million in 2020. Overall, all of these batteries discussed above have superior durability, safety, and longer life. High quality power solutions make Johnson Controls offer higher reliable performance and produce more environmentally friendly products.

On the other hand, Johnson Controls also offers lithium-ion batteries. Lithium-ion batteries are more suitable for advanced start-stop vehicle, hybrid electric vehicles, and micro-hybrid vehicles. Lithium-ion batteries products are better in improving electric driving range and fuel efficient than normal vehicles (Johnson Controls, 2018).

Johnson Controls is not only famous for the world's largest manufacturer but also for an recycler of traditional vehicle batteries. Vehicle battery recycle is an important decision and action for the company. There is a "closed-loop recycling system" in Johnson Controls, which moves from manufacturing, retailing to recycle them and reuse them again (Johnson Controls, 2012). This action is economical and sustainable because every vehicle battery materials can be continually recycled and reused all the time. Johnson Controls makes efforts to improve their operations to ensure their design, products, transport and recycle batteries in the safest and most sustainable way. Paying attention to recycle batteries is an efficient strategy to facilitate the environmental footprint of the company. For instance, in United States, the return rate of lead-acid automotive batteries exceeds 97%. Moreover, World Wildlife Fund also has recognized the ecosteps® battery collection system of Johnson Controls (Johnson Controls, 2012).

- Automotive

Johnson Controls' business reaches all over the world, which is more convenient for the company to provide services for their customers. In addition, in order to make sure all customers can get the same high quality products around the world, Johnson Controls shares and standardize their practices and facility processes (Johnson Controls, 2012). Automotive Experience of Johnson Controls helps Johnson Controls consistently improve its products and services. More importantly, it helps the firm to reach out higher requirements in function and sustainability. For instances, Johnson Controls innovates multilayer cluster advances 3D technology to help drivers access to information and views from the road very quickly and clearly. All related information can be clearly and specifically displayed on the screen. Real-time feedback makes customers have more pleasant user experiences when they are driving, which not only improve driver efficiency but also enhance safety (Johnson Controls, 2012).

In order to promote sustainability development, Johnson Controls is committed to using recyclable materials to design the elements of vehicles. For example, Johnson Controls cooperates with Harrison Spinks Ltd. – a mattress maker to invent thinner seats—are called ComfortThin Automotive Seat. This invention is aimed to use 100% recyclable materials to produce seats, reducing the seat weight by 5% to 20%. The vehicle manufactures will also effectively utilize the savings space to adjust seats and reduce the weight of vehicles furtherly. The other good example of sustainable activity for Johnson Controls is that the firm gets the "2012 Automotive Award in Interior Systems" by cutting the weight of BMW through utilizing renewable material- fiber substrates (Johnson Controls, 2012). All design displays the sustainable value and goal of the company.

2.3 Comparison of CSR activities

In case study, authors discussed it through three aspects as follows, environment, social and economic performance. For more detailed analysis, authors divided CSR activities into 3 parts according to sectors of business such as building efficiency, power solutions and automotive.

Through analyzing Siemens Czech Republic and Johnson Controls, authors found a lot of examples of CSR and sustainable activities. These activities are different but the long-term goals are the same. It means that both companies want to do their business more sustainable for future development. But they use different ways for it.

First, let's start with environment performance, both companies reduce water, energy consumption, waste and greenhouse production. Secondly, from social performance, both of companies employ and educate people. These companies support volunteering of their employees. In companies, there are exist special funds which help those who cannot help themselves. Of course, companies support education – Siemens has own kindergartens and Johnson Controls helps children to get higher education. Thirdly, from economic performance, both companies prefer to get environmental goals rather than financial goals and have been inseparable part of economy society. Companies contribute towards income tax and Gross Domestic Product. Last but not least CSR activities of companies are connected with the governance of ethical and transparent business. More detailed information about their CSR and sustainable activities are mentioned above and are divided into 3 parts according to sector of business.

Conclusion

To sum up, sustainability is frequently explained in 3 possible ways (Ministry of Regional Development, 2012): (a) based on World Commission on Environment and Development (1987, pp 16), (b) based on 3 pillars and (c) based on capital assets (human, social, natural, productive and financial). And the sustainability is promoted by the concept of corporate social responsibility.

Based on the analysis of above, authors conclude that CSR and sustainability are common topics in the world now. The two concepts are both more and more essential for companies and humans in order to achieve the long-term goals.

In addition, positively promoting and developing sustainability and protecting environment make Johnson Controls and Siemens Czech Republic get more insights and opportunities to develop themselves in the world. Improving building efficiency, power solutions and automotive experiences are the strengths for these companies.

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The Use of Data Mining for Online Marketing Purposes

Michal Braun, Ruoshui Liu

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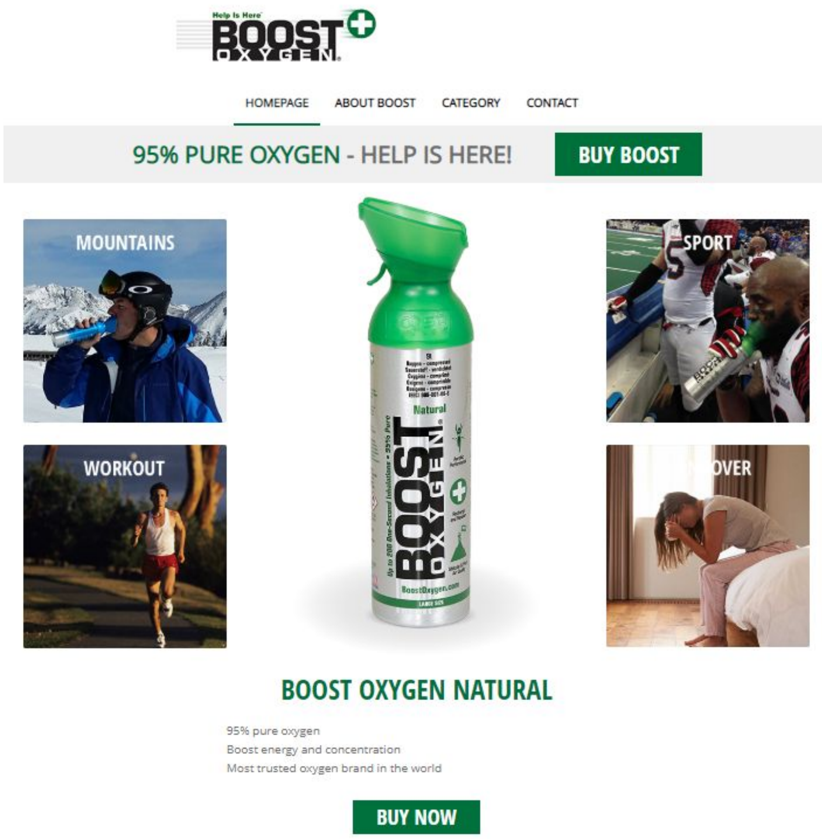
Introduction

It all started with Boost Oxygen's expansive strategy from the US market to other countries. Boost Oxygen is the canned oxygen producer. English speaking countries were the first clear choice. Canada, United Kingdom, South Africa or Australia. After being represented in these developed countries, company management has decided to expand into the European Union. Specifically, to Germany, France, Italy, and Spain. For this purpose, the European branch (Boost Oxygen Europe) was established in the heart of Europe - Prague. Coming to the European market, the company began to face the obstacles with non-English speaking markets. European countries speak almost different languages. Localization and adaptation to different world languages is a very challenging task, market research in different countries is even more challenging.

The Internet is moving the world, so for Boost Oxygen is it one of the main distribution channels. In addition to this, business agents also play an important role, trying to find the distributors in different countries and thus establishing better regional cooperation. For example, in European countries, it has already established cooperation with agents in the Netherlands, Germany, and Bulgaria. E-shop pulls direct sales to consumers. Boostoxygen.com gets traffic mostly from organic Google search. The second strong channel is Amazon.

If a customer from Europe comes to boostoxygen.com and wants to buy the product, he is redirected to the European subdomain shop.boostoxygen.com, where he is already buying directly from Boost Oxygen Europe. Most payments are made instantly thanks to the option to pay by credit card.



The home page of the shop.boostoxygen.com subdomain for European consumers

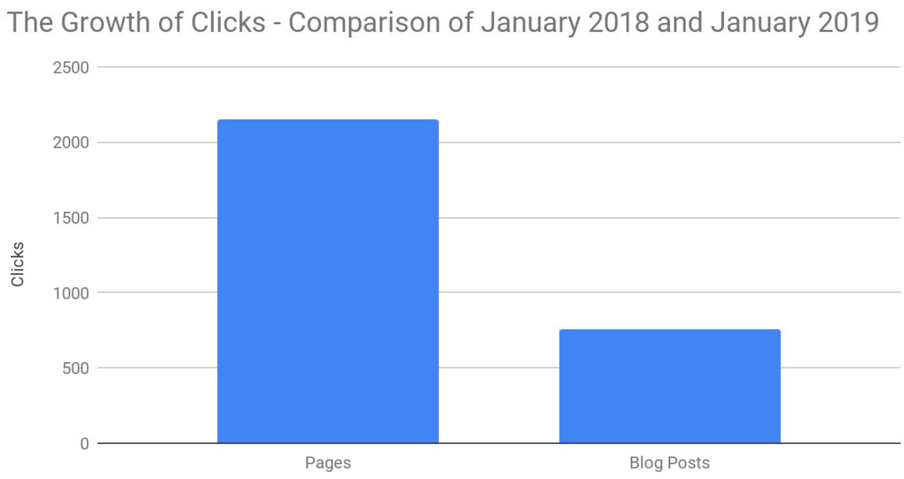
Website traffic from organic searches is increasing. Compared to last year, the company recorded a 45% increase in attendance. According to our analyses, several factors have had the greatest impact on growth. The main two factors are sponsorship and blogging activities. The company selects sports teams, events that are sponsored. These events are often very famous. There are often good articles about them in popular Internet magazines. There are also backlinks to Boost Oxygen as a sponsor of these events in these articles. In this way, the number of backlinks continues to grow, with a very close link and a steady growing web authority. It is perceived by Google and it is then displayed above. This effect is the main driver of increasing traffic.

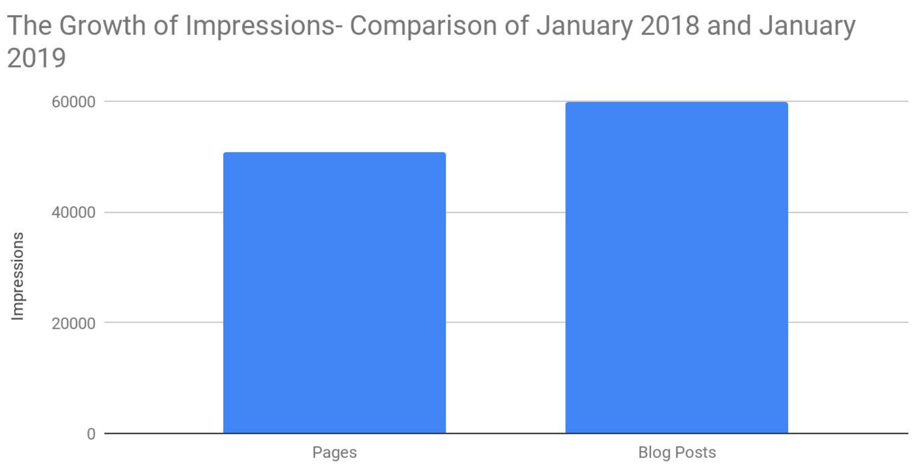
However, the increase in traffic is not only due to one factor. Blogging also had a big impact. However, if we want to evaluate its influence, we have to look at the data. How many of the incoming visitors really came from the blog and how many of them came from new links to important sites on the web? How do I recognize it?

We worked with Google Search Console to retrieve data. This is a tool from Google for analyzing organic traffic in more detail than is possible only through Google Analytics. We divided the pages into two groups. The first is "static" pages, which are edited only irregularly, and the other is blog posts. We have analyzed whether traffic increases come from pages from the first group, or if visitors come to blog posts. The results from the following table are clear, though very surprising.

The Comparison of January 2018 and January 2019		
	Growth of	
	Clicks	Impressions
Pages	2 152	50 875
Blog Posts	753	59 817

Source: Google Search Console, boostoxygen.com





Now let's look at the charts. How is it possible that blog posts caused more impressions to accrue compared to regular pages, but didn't receive so many clicks? The answer is hidden in the Google Search Console. How does Google count on organic search impressions? Imagine a situation where the user searches for the keyword "canned oxygen". Ideal for Boost Oxygen. At the same time, let's assume that Boost Oxygen will not have high authority and will appear on the 4th page worse than the 30th position. However, the user only looks at the first page and chooses one of the first three results. This happens in 58% of cases. Even in this case, Google Search Console will count impressions. However, the chance that a website gets clicks is slim. To increase chances, the site must also earn better positions on the first page. Ideally, between the first three. The high increase in impressions caused by blog posts, as well as the low increase in clicks, shows that blog posts are not that high in authority. While writing new blog posts, there is always an increase in the amount of text that is on the web. This always causes an increase in the number of potential keywords a site can display. Blog posts often touch on topics that are not so close to products or only marginally. They often describe company activities. Or answer customer questions and help them solve their problems.

Source: kaushik.net

If we compare visitors to the SEE-THINK-DO-CARE model from Avinash Kaushik, we see a big difference between people who come from keywords "canned oxygen" and "altitude sickness". In the first case, they are people in the "DO" phase. Conversely, in the latter case, they are people in the “SEE” or “THINK” phases. Their distance from the shopping decision is much longer, even though it is also heading for it. A very common mistake for companies is that they do not run out of cheaper chances of gaining customers in the "DO" phase and will start to focus too quickly on the first two phases. However, these are always associated with lower efficiency. The purchase path is much longer. We need to use tools like remarketing and keep reminding them of it.

In practice, everything is very beautiful to see when comparing traffic from Google.com to Amazon.com. The percentage of people who buy on a website is called a "conversion rate". When there is a large proportion of visitors from the "DO" phase, the conversion rate will be higher than when they are from the "SEE" and "THINK" phases. When we compare the conversion rate on a website, it is often around 2% of users. When promoting on Amazon, we are able to reach numbers between 10-20% of users in Europe and even lower costs. But everything has its pros and cons. On Amazon, sales are very limited by the number of European Amazon users. It is still not a hegemon in Europe and other distribution channels are needed. In addition, the sales on Amazon are associated with very high commissions that need to be paid for each sale.

If a firm fails to determine if it has exhausted all the opportunities to get more cost-effective customers, it can very quickly engage in activities that target customers in the early stages of “SEE” and “THINK,” and the corporate cost of goods sold will rise.
This introduction helped us to see how powerful data for online marketing and decision making could be. But we will focus more on the practical way which data will need a CEO and to better understand his company situation.

Objectives

Data mining tools are diverse. Some are suitable for one type of task, the other for another. We cannot find a universal tool that would give us all the data that we need. So we will focus only on three basic areas in our paper.

- Market research
- Competition analysis
- Planning and strategy development

Eventually, however, we will select those tools that are most interesting for Boost Oxygen CEO and are applicable in both European and American environments. From the data from these tools, we will create a dashboard in Google Data Studio that can be viewed by the CEO. The data in it will be automatically updated.

Market Research

It is very important for companies with international targeting to identify the potential of different markets. The choice of these markets cannot be purely intuitive, but it is necessary to get a better idea of the interest in the market and the possibilities of gaining a strategic position here. That is the field where can data mining tools help. Some of these tools are:

- Google Ads
- Google Suggestion
- Keywords Everywhere

Competition Analysis

There is competition in every market. Some competitors may be considered direct, others indirect. However, it is always necessary to have an overview of their strategy. If we know what they did right and wrong, we can learn from their performance and mistakes.
This implies the need for several different tools. The first must clearly show which of the competitors is more successful. So, we need a tool to measure competitor performance without accessing their internal reports.
On the other hand, another tool should help uncover the strategy of the most successful. How do they proceed? How can we learn from their successes?
These tools are very effective when we compare our own company and competitors.
Examples of these tools:

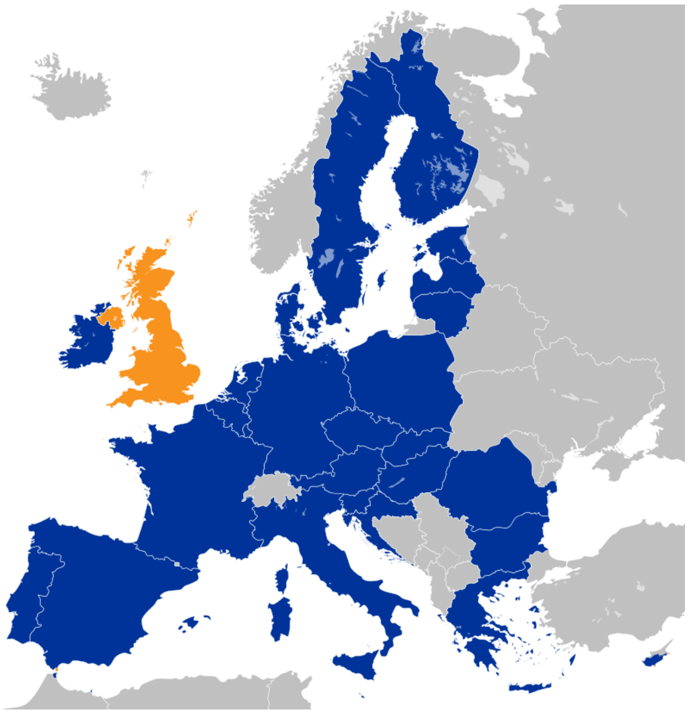
- SEMrush
- MajesticSEO
- MOZ

Planning and strategy development

The analysis is great, but without further progress, it lacks more meaning. The results that the analytical part will bring us to apply to the current environment. Planning and strategy design is the final piece of what we would like to provide to Boost Oxygen.

Finally, the dashboard should be in Google Data Studio. Here, management would see all the important numbers, target values and what needs to be done to achieve them.

The US and the European Union



Source: Wikipedia.org, 2019

Markets in the US and the European Union are very different. The tools used in the US sometimes cannot be used equally effectively for the European market. The main obstacles are the different languages used in Europe. Much of it is understood in English. However, it is not convenient for them to order in this language, so it is necessary to translate and examine the individual countries separately.

Analytical Part

The US

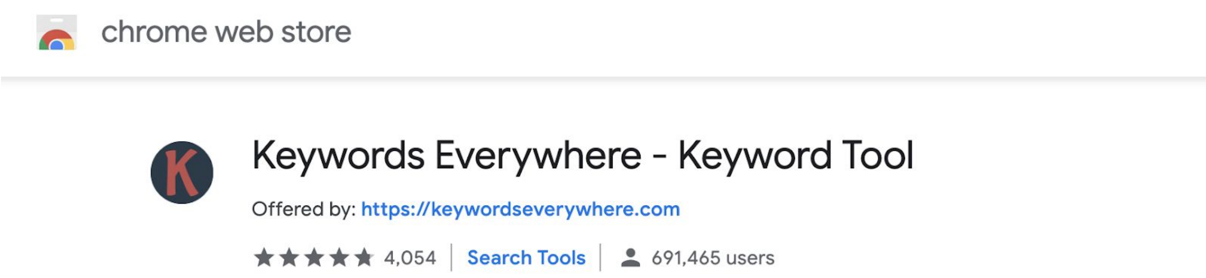
Boost Oxygen possess significant market in the US, so the tools used to analyze the US market are important to Boost Oxygen and can help them improve their performance among the US market. Therefore, we will introduce some effective keyword research tools and competitor analysis tools.

Keyword Research Tools

Keyword research is always important for digital marketing as a company tracking what people type on research to getting the website. We will introduce the three keyword research tools of their different functions: Keywords Everywhere, Google Analytics and Google Search Console.

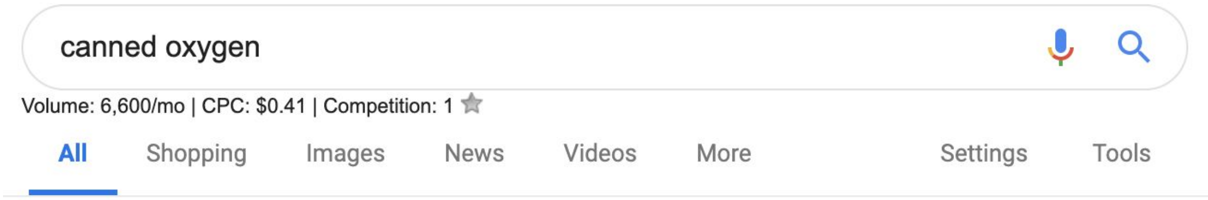
Keywords Everywhere

Keywords Everywhere is a useful tool especially when you use Google Chrome to searching for things. The company can always add it to Google Chrome as Extensions like the screenshot shown below. The Keywords Everywhere extension is free and supports more than 15 websites like Google Search, Google Search Console, Google Analytics, YouTube, Amazon, eBay, etc. The tools detect keywords very well in English.



Source: Google Chrome Web store, 2019

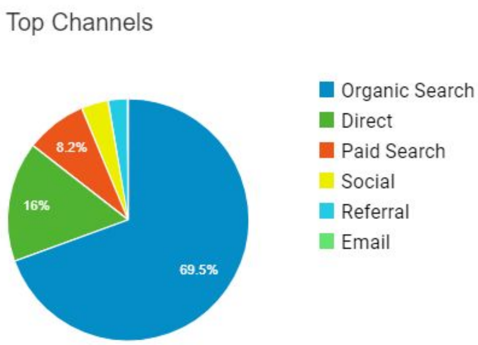
After adding it as an extension, it will show the useful google keyword search volume and cost per click data on multiple websites. For example, when we search "canned oxygen" in google search, the information shown below the search box. We can see the volume data of 6,600 per month and cost of $0.41 per click. The same results would apply to YouTube, Amazon research also.



Source: Google Search, 2019

Google Analytics

Google Analytics is a powerful tool that not only helps the company gathering data like monthly traffic, landing pages, visit channels for company's website pages, but also analyzing and visualizing those data using different ways to best suit company's business requirements. Therefore, Google Analytic is very useful and important for digital marketing analysis, and it does use by millions of companies. According to BuiltWith.com, there are almost 30 million websites are using Google Analytics to track their website data. The following screenshots show what specific information Google Analytic could bring to the company. (Coren, 2015)



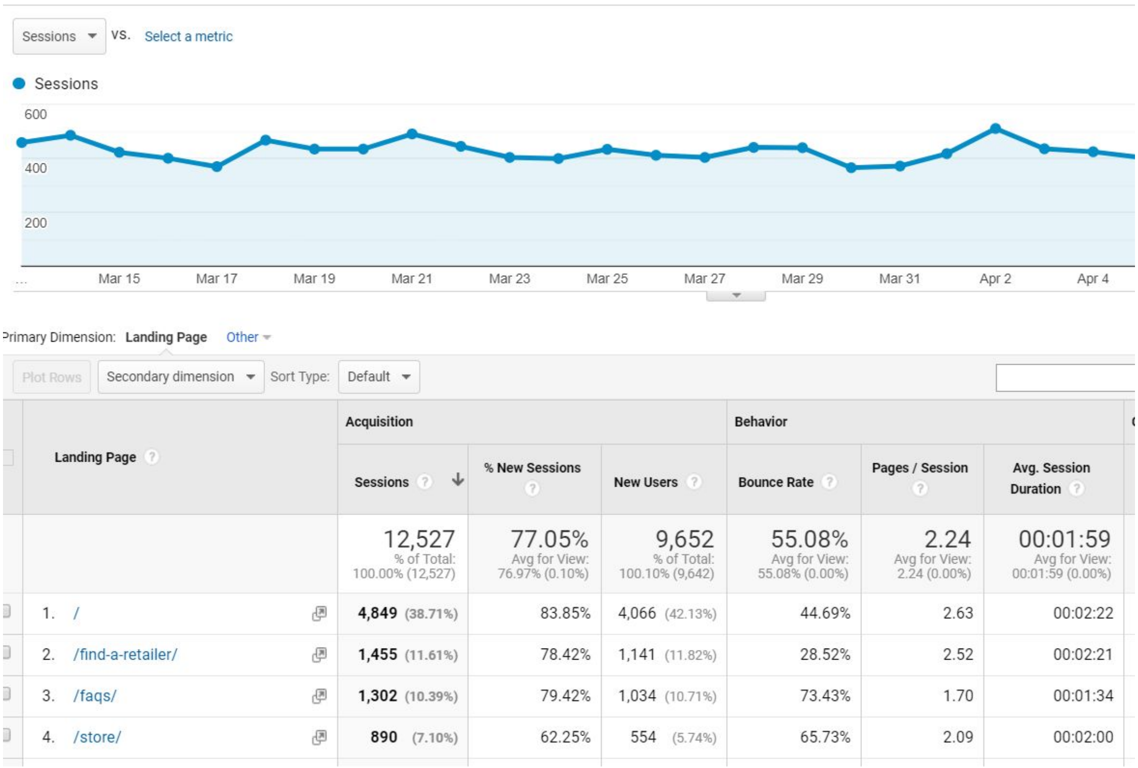
Source: Google Analytics, 2019, Boost Oxygen

The above screenshots show how people find the website. As for digital marketing, the first things you should know is how people get to know your website and then your product, so you can do marketing in specific ways. For example, the screenshots above shows there are

69.5% of people access Boost Oxygen's website using organic search, which means clicking the link in search results. In this case, the company could focus more on the search pages like rank higher for the position of your website on the research page to attract people to visit your website and then increase the website traffic. Other ways to access their website could be by directly typing the website into search (Direct), clicking the link from some paid ads (Paid Search), from social media (Social), from other websites (Referral) or from email. The company could always check this pie chart to recognize which part of their efforts are working. (Hicks, 2018)

Besides knowing how people getting to your website, the company should also aware that whether people will stay around at their website. Google Analytics can provide related information also. As the screenshot shown below, it tells the information of landing page for Boost Oxygen, which means what pages people visit first on the website. The "Acquisition" section informs the information on how the visitors found this page, but the "Behavior" section provides what people do using the bounce rate of each page. Bounce rate means the percentages of visitors who visit the pages and then leave instead of continuing on to view other pages of your website. As you can see on the screenshot, the lowest bounce rate would be "find a retailer" page. Homepage with a "/" has a fine bounce rate, but the company should redesign or improve the content to decrease the bounce rate of the homepage, since homepage rank the No. 1 among landing pages. This information actually helps the company get the awareness of which parts of their website are the most attractive page.

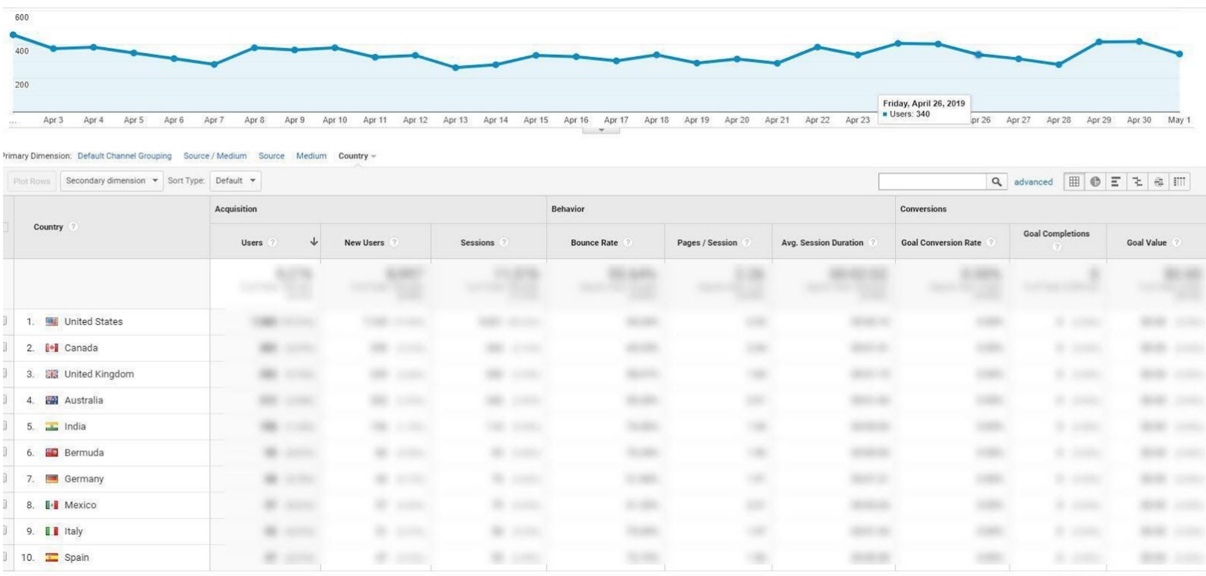
Except for information about landing pages, Google Analytics can provide the related information on the pages that have the most traffic on your website. Therefore, the company would not only know which pages rank first as landing pages but also the page that brings significant traffic to the website, the page that helps you convert visitors to customers.



	Landing Page	Acquisition: Sessions	% New Sessions	New Users	Behavior: Bounce Rate	Pages / Session	Avg. Session Duration
		12,527 % of Total: 100.00% (12,527)	77.05% Avg for View: 76.97% (0.10%)	9,652 % of Total: 100.10% (9,642)	55.08% Avg for View: 55.08% (0.00%)	2.24 Avg for View: 2.24 (0.00%)	00:01:59 Avg for View: 00:01:59 (0.00%)
1.	/	4,849 (38.71%)	83.85%	4,066 (42.13%)	44.69%	2.63	00:02:22
2.	/find-a-retailer/	1,455 (11.61%)	78.42%	1,141 (11.82%)	28.52%	2.52	00:02:21
3.	/faqs/	1,302 (10.39%)	79.42%	1,034 (10.71%)	73.43%	1.70	00:01:34
4.	/store/	890 (7.10%)	62.25%	554 (5.74%)	65.73%	2.09	00:02:00

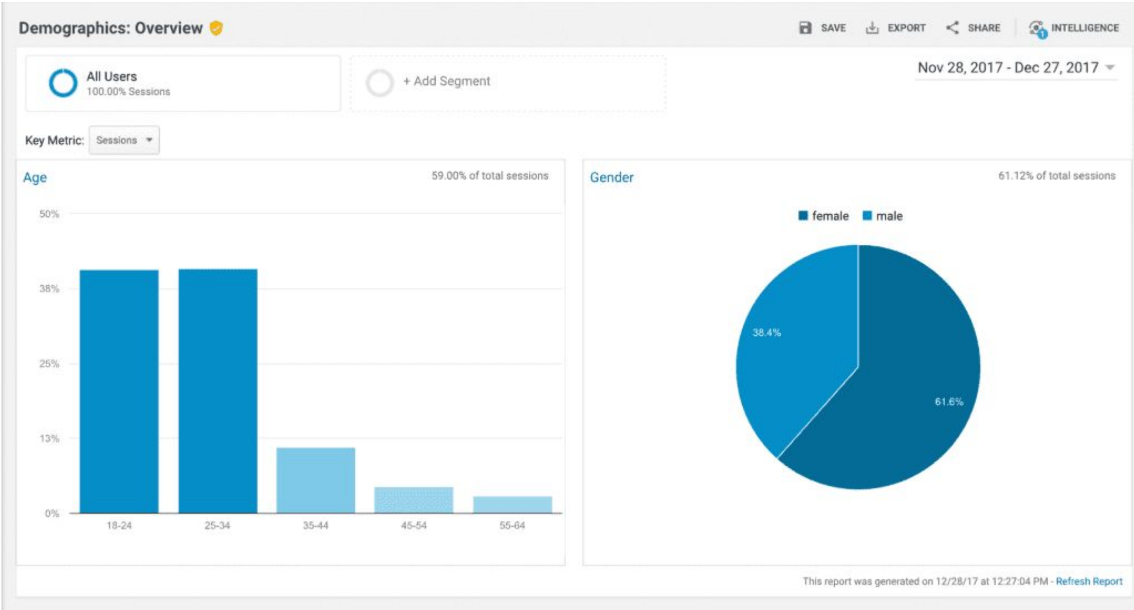
Source: Google Analytics, 2019, Boost Oxygen

After the company knows how people getting to the website and what people do on the website, they should know which group the target customer is, and which country has the largest potential market. As you can see in the screenshot below, the US market ranks the first to Boost Oxygen, and then Canada, UK, and other European countries.



Source: Google Analytics, 2019, Boost Oxygen

Besides the above information that Google Analytics could track, it also can nail down the country's information to visitor's information, which could be their most valuable groups. For example, it can track information of visitors in accordance with demographics, geography and their interest online. By tracking this specific data, the company could make a better decision on how to optimize the target groups of visitors (Hicks, 2018).



Source: Hicks, 2018

Google Search Console

Google Search Console used to name as Google Webmaster Tools in order to attract a wider variety of users. It could from small business owners to marketers, SEO experts, programmers or developers. This tool can perfectly integrate with Google Analytics. It's way easier for a company to look at more data analysis at the same site so they are able to keep all most powerful website data all in Google Analytics. Google Search Console is complemented with Google Analytics for a fuller view of the company's performance and help to make better decisions by understanding how Google sees the site. For example, Google Analytics provides information of total volume for a keyword across the web, but Google Search Console can tell more detailed information about the significant keywords people search as the screenshot shown below (Readz, 2019).

Vyhledávací dotaz	Vol	CPC	Comp	Clicks	Impressions	CTR	Position
boost oxygen ☆	8 100	$0.61	1	1 800	5 397	33,4 %	1,1
where can i buy boost oxygen near me ☆	0	$0.00	0	142	456	31,1 %	1,1
oxygen in a can ☆	6 600	$0.41	1	141	1 153	12,2 %	1,6
oxygen boost ☆	320	$0.61	1	127	707	18 %	1,4
oxygen can ☆	740	$0.41	1	109	1 188	9,2 %	3,5
boost oxygen near me ☆	480	$0.30	1	94	222	42,3 %	1,1
oxygen canister ☆	1 600	$0.99	1	80	1 162	6,9 %	2,4
boost oxygen reviews ☆	720	$0.52	1	69	323	21,4 %	2

Source: Google Search Console, 2019, Boost Oxygen

Apparently, “boost oxygen” is the most significant words people search on Google Search related to Boost Oxygen Website. It shows its monthly search volume of 8,100 and actual click volume of 1,800. The impressions are only 5,397, which means sometimes people type the words “boost oxygen” but search result showing them the Boost Oxygen product from Amazon. It’s maybe an indicator for Boost Oxygen that they should improve their website content to better shown up when people type those words on Google search.

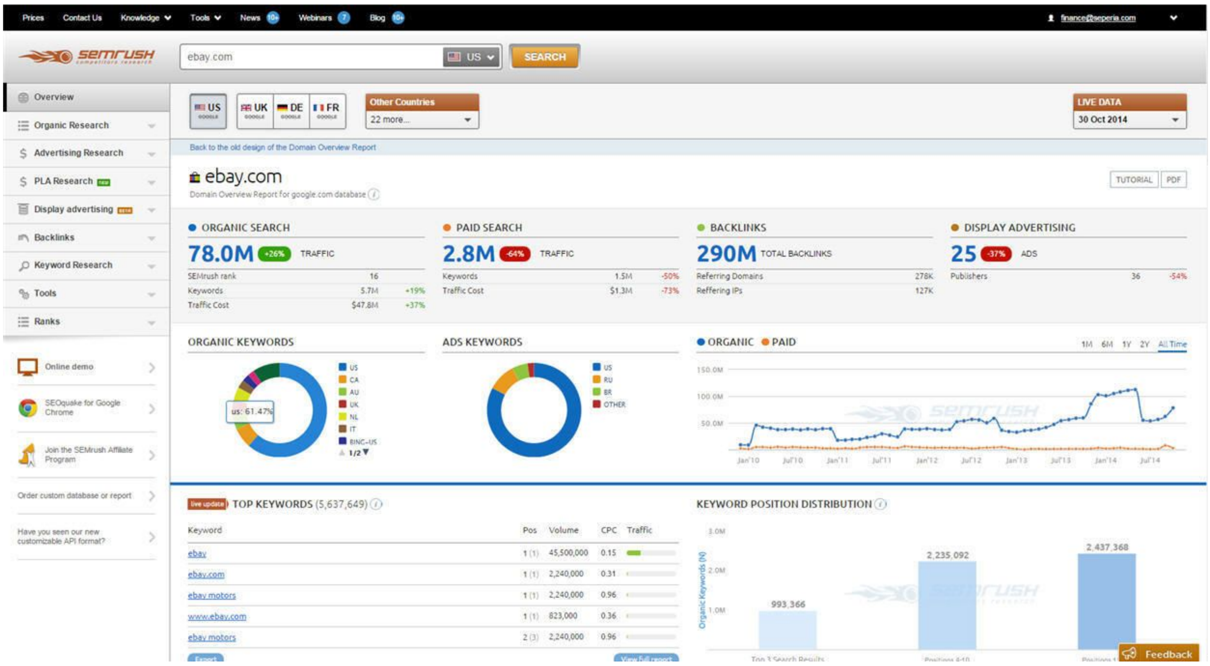
Besides the keyword analysis, Google Search Console also can process data to deal with duplicate content or visits from robots. It also helps the company to optimize their website search performance on Google Search by analyzing how often company's site appears in Google search results, how search traffic changes over time and which queries are most likely to display your site (Readz, 2019).

Competitor Analysis Tools

All three tools mentioned above are dealing with the company's own website data. It's also important for a company to get to know their competitor. Getting data of competitors to analyze their marketing strategy can help the company to improve their own performance and increase their own website traffic. A useful tool that satisfied this need is SEMrush.

SEMrush

SEMrush is a comprehensive tool that has all the functions mentioned above. It can analyze website traffic, do keywords analysis of your competitors and keyword ranking, do the site audit, have competitive analysis and lots more. This tool has a huge database that contains over 46 million domains and 120 million keywords (Teker, 2016). The screenshot below is a SEMrush overview dashboard for eBay.

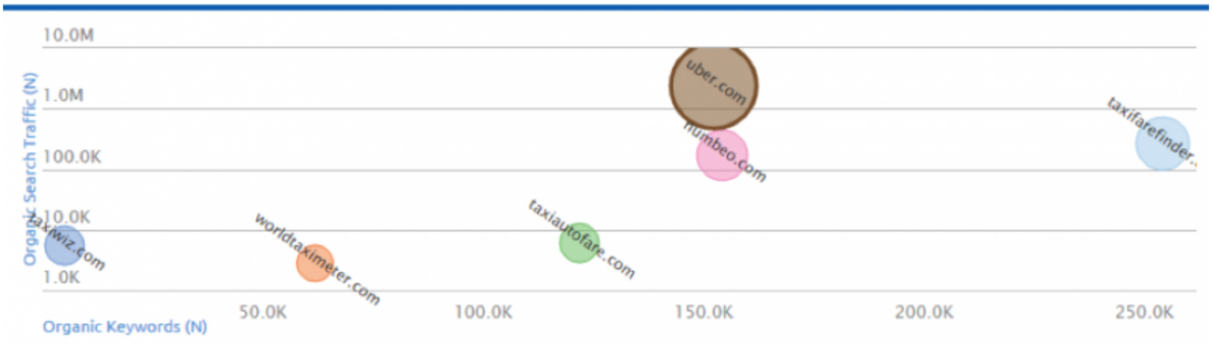


SEMrush is an effective tool to identify new keyword opportunities. Once a company clicks on a keyword like "boost oxygen" on SEMrush, more related keywords will be displayed like "canned oxygen". This gives the company a new idea for generating its new keywords.

Besides, SEMrush has useful keyword ranking tools that help the company to better know its position in fierce competition. With ranking tools, SEMrush not only allows the company to analyze its own competitors but also allows the company to analyze all the potential competitors in the same industry, which would be the competitor's competitors. It would find out all the websites that are ranked will for similar keywords (Teker, 2016).

SEMrush Rank	Domain	SE Keywords	SE Traffic	Costs	Ads Keywords	Ads Traffic	Ads Traffic Price (USD)
8	twitter.com	933.2k	41.3m	8.3m	303	2.9k	655
9	ndtv.com	1.4m	34.9m	4.7m	14	363	48
10	yahoo.com	646.4k	32.7m	9.9m	7	2	0
11	amazon.in	2.0m	29.3m	3.9m	391.6k	6.5m	947.0k
12	flipkart.com	762.2k	25.6m	1.8m	48.7k	2.7m	207.1k
13	indiatimes.com	1.7m	25.1m	5.0m	22.5k	625.4k	73.2k

Source: Ahmed, 2017



Source: Teker, 2016

By comparing your own website data with your competitors on SEMrush, the company could find a better way to advertising their websites even before their competitors do. It provides a pretty user interface and allows the company to customize the dashboards and reports.

European Union

We focus on tools that can help us to analyze the European market. We will determine the potential of individual countries using them. This step will be very important for future translations and marketing investments and answering the question of whether we want to enter the market in individual countries.

First, the main European economic players need to be clarified. These are the states in the following table. For simplicity, however, we will only work with German-speaking countries.

Country	GDP 2018	Language

	(M USD)	
Germany	3,998,000	German
United Kingdom	2,822,000	English
France	2,774,158	French
Italy	2,071,000	Italian
Spain	1,425,000	Spanish
Poland	586,000	Polish
Sweden	535,000	Swedish
Austria	456,000	German
Denmark	353,000	Danish
….		
Czech Republic	215,000	Czech

Source: countryeconomy.com, 2019

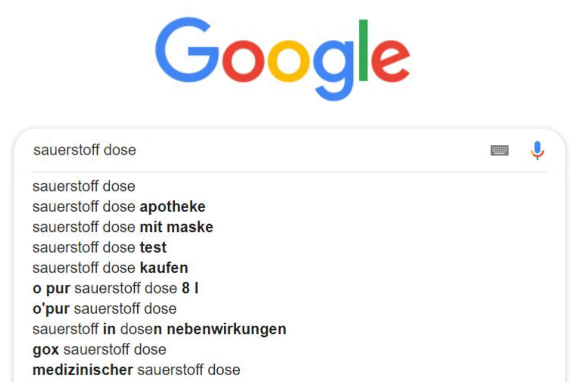
Market Research

Market research and forecasting of its potential can be done using keyword analysis tools. There are many tools that are recommended. Basic keywords can often be invented from the head, so brainstorming or its accelerated form of speed storming is often used from the beginning of keyword analysis.
(Enge, 2016)

Perfect knowledge of the language is required for brainstorming keyword ideas. It is not possible to process everything in all European languages for the purposes of this document. That's why we chose German. This is very advantageous because two countries in the European Union - Germany and Austria - speak this language. It is, therefore, possible to compare their results.

Google Suggestion

The first tool does not allow large data mining. But it is very effective as an alternative to brainstorming. When we use Google's whisperer, we get the first swallows of potential keywords people enter. The following images capture keywords from Google's German and Austrian. The first image is Google.de and the second is Google.at. You can see immediately that the words are different, even if the language is the same.

<table>
<tr>
<td>
</td>
<td>
</td>
</tr>
<tr>
<td>Source: Google.de (Germany)</td>
<td>Source: Google.at (Austria)</td>
</tr>
</table>

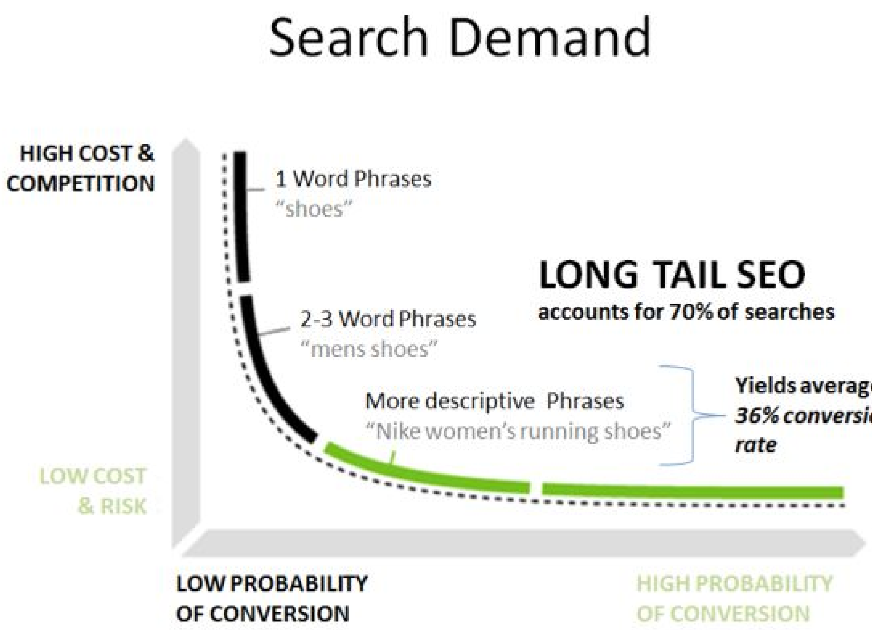
GoX competitor appeared in Google in the keyword "gox sauerstoff dose". On the other hand, O'PUR was more popular in Austria. He appeared in two words "o pur sauerstoff dse 8 l" and "o´pur sauerstoff dose". GoX competitor appeared in the Austrian version. This glimpse of Google's whisperer has already provided us with much market information. There are two players in the German-Austrian market. One of them is GoX - more popular in Germany. O´PUR was it in Austria.

We can consider very positive that in both cases the keyword “sauerstoff dose kaufen” appeared in the statement. This term could be translated into English as "canned oxygen". This is a very desirable term. It clearly shows that there is a market in Germany and Austria that might be interesting to pursue.

This tool is very good for very shallow analysis but not for deep planning. There are huge problems with exporting this data from Google Suggestion. We need to use other software that let us export data to Excel.

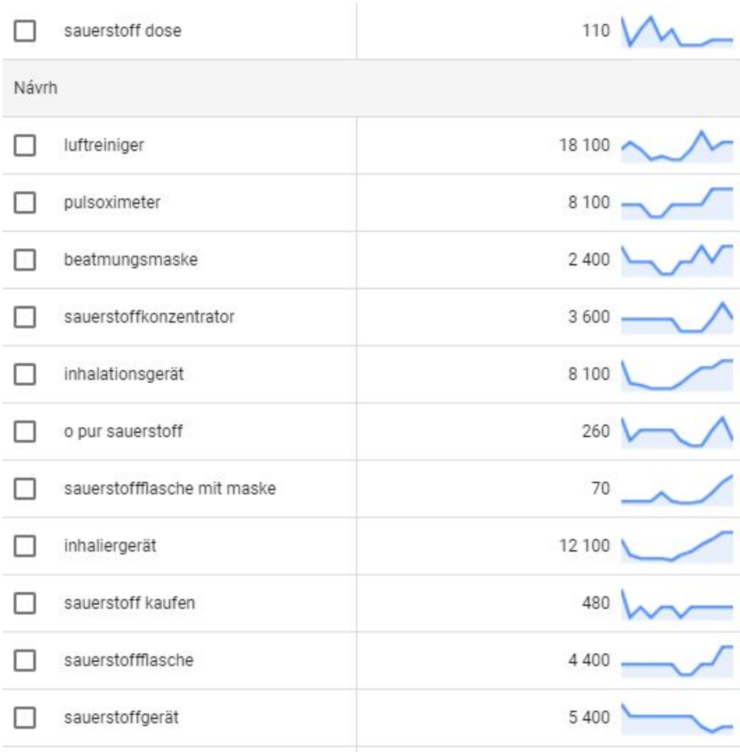
Google Ads (Google AdWords)

There is no more important tool for getting new keywords than Google Ads. This tool not only allows you to find words but also gives you an idea of their desire. It is more complicated with accurate data. Google associate similar terms together. So, the number is always bigger than it really is. At the same time, it does not show all the keywords. Nowadays most of the keywords that customers search for belong to the long tail. These are little-sought-after keywords, of which there are many, and therefore a large part of the search. However, we won't find them in Google Ads, so we often don't know about them until the website is displayed.



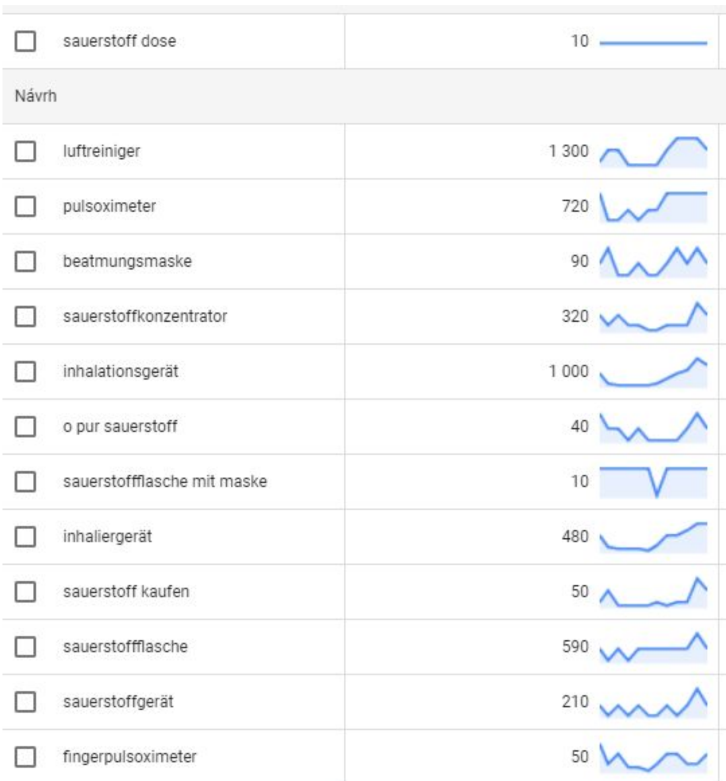
Source: Patel, 2018

Google Ads has a very interesting feature that makes it a much better tool than others. Breakdown by language, country and even by city or region. These are paid search tools where this particular targeting is particularly important. However, for the purposes of this document, it is also possible to use the data obtained for optimization for organic traffic.



sauerstoff dose	110
Návrh	
luftreiniger	18 100
pulsoximeter	8 100
beatmungsmaske	2 400
sauerstoffkonzentrator	3 600
inhalationsgerät	8 100
o pur sauerstoff	260
sauerstoffflasche mit maske	70
inhaliergerät	12 100
sauerstoff kaufen	480
sauerstoffflasche	4 400
sauerstoffgerät	5 400

Source: Google Ads, 2019, Germany



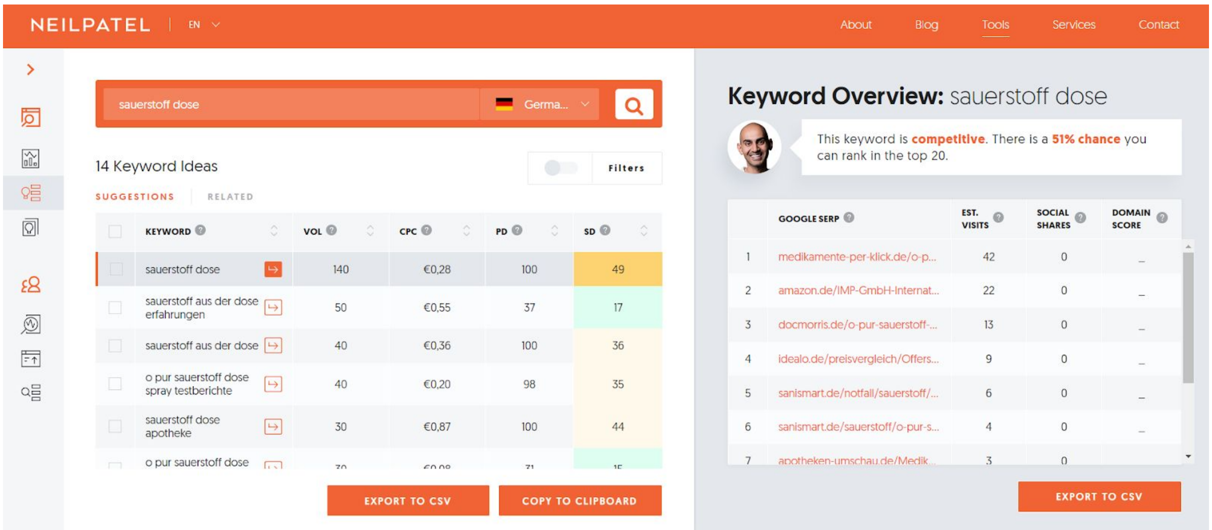
sauerstoff dose	10
Návrh	
luftreiniger	1 300
pulsoximeter	720
beatmungsmaske	90
sauerstoffkonzentrator	320
inhalationsgerät	1 000
o pur sauerstoff	40
sauerstoffflasche mit maske	10
inhaliergerät	480
sauerstoff kaufen	50
sauerstoffflasche	590
sauerstoffgerät	210
fingerpulsoximeter	50

Source: Google Ads, 2019, Austria

Within seconds you can get hundreds of new keyword suggestions that are very closely related to our original keywords. However, the goal is not to do a full keyword analysis but to compare the strength of demand in Germany and Austria. As can be seen, for example, the keyword "Sauerstoff kaufen", which can be assumed to have a high conversion rate, is only searched for 50 per month in Austria and 480 in Germany. If we compare both figures, it must be clear to us that Germany is a better choice.

This only basic information so far can be expanded to include others such as average cost-per-click (CPC) or necessary bid for the top half of the page. This data will help us to understand the competitiveness of individual terms. All this data can be downloaded and analyzed using Microsoft Excel.

Ubersuggest



Other tools than those from Google are also useful for keyword analysis. For example, Ubersuggest can analyze keywords more accurately. Shows accurate CPC and search. Keyword suggestions aren't as broad as Google Ads, which can be an advantage and a disadvantage. Can work with all the languages in which Google works. It also shows other results for Austria and Germany.

Keyword Research Conclusion

Keyword analysis should always be based on different sources. This is the only way to get a better idea of what customers are looking for. When using only Google tools, there is no more detailed information from Amazon or YouTube. Using only external tools, we don't get some data as well targeted as using Google tools.

The result should be a table of about 1,000-10,000 words that will reflect all keywords related to the product or business. In our case with Boost Oxygen and products. Monthly search and average CPCs should be recorded for all keywords. Some tools, such as the high-quality Ahrefs tool or partially Ubersuggest, can record keyword difficulty.

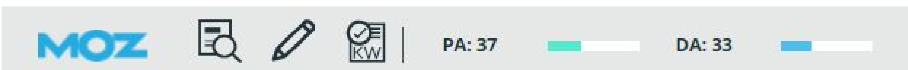
After getting data for individual keywords, it's a good idea to assign a landing page from each site to each word. It must also be optimized for this word. Often, the importance of given words is also assigned for future easier site optimization.

But how to recognize the market potential from this data? Some consultants recommend taking 10% of the total search for all keywords. This is usually the maximum search rate that can be obtained if our site receives the same authority or greater than the best competitors. If we find potential traffic, it is already easy to calculate the expected turnover using the conversion rate in other countries and the average order value after obtaining this position.

Competitor Analysis

The conclusion of the keyword analysis will allow us to estimate market potential. However, this is usually a very rough estimate. The number is always inaccurate and says nothing about the difficulty and cost that will be required to gain market share. Much more detailed information can be obtained from the competition analysis.

MOZ - Domain and Page Authority



Source: boostoxygen.com, 2019

A small web browser extension that makes it very clear to the site's authority. Google does not publish PageRank. MozRank is referred to as the best alternative. Can evaluate site authority from over 200 different factors. So, if we find a competitor we want to cope with. We should have an overview of how high MOZRank has authority.

MajesticSEO

One of the key success factors is backlinks. The more a website has and the better and more natural it is, the higher its authority and the better it displays. It is, therefore, necessary to know the strategy used by competitors to get links. Many competitors do not have a clearly defined strategy and their links are packed naturally. Even so, it is advisable to know what their links are most effective and if they could be obtained.

MajesticSEO can find and show these links. They very often reveal mentions in the media. They are highly valued. For example, for Boost Oxygen, Majestic found a high-quality link that the company naturally received through sponsorship of the event. This link came from BusinessInsider.com. This page has great authority, so the link has greatly helped to the higher web authority.

Most websites have hundreds to thousands of sites linking to them. Mostly, however, these are poor quality catalogs and random links. The ability to identify quality ones and devise a plan for getting them is a big advantage for search engine success.

Conclusion

We have described the selected tools. Now it is up to them to compare and select the ones that might be most useful to the company's CEO and then create a dashboard. The CEO is a very busy person. The team of its experts takes care of marketing. Nevertheless, it needs to have data that will be presented in such a way that after the first seconds it can tell if its company is doing well or bad compared to its competitors and whether the numbers are increasing.

For these needs, we have chosen Google Data Studio. It allows easy export of data from some tools and creates a clear dashboard. The CEO needs to see the company's current data, but he cannot see in detail all the KPIs that the experts propose. So, the dashboard will work with basic metrics. If there is a problem, the CEO can always ask his online marketing experts for more analysis. They then use a wider range of expert tools, some of which we have also introduced.

Tool	Useful in the US	Useful in Europe	Data Export to Google Data Studio	Knowledge level
Keywords Everywhere	Yes	No	No	Beginner
Google Analytics	Yes	Yes	Yes	Intermediate/ Expert
Google Search Console	Yes	Yes	Yes	Intermediate
SEMrush	Yes	Yes	Yes	Intermediate
Google Suggestion	Yes	Yes	No	Beginner
Google Ads	Yes	Yes	Yes	Intermediate/ Expert
Ubersuggest	Yes	Yes	No	Beginner
MOZ	Yes	Yes	No	Beginner
MajesticSEO	Yes	Yes	No	Expert

Google Analytics, Google Search Console, and SEMrush are best suited to our needs. They all make it easy to connect to Google Data Studio and only the intermediate level of knowledge is needed for the data you need. This is ideal for a CEO who has some knowledge of the issue but does not have time to deal with these issues in depth.

The first part of the report shows the performance of the first page pages, the pages are overall and then the individual important regions (US, EU). Everything is compared with last year to indicate long-term development. Below this are the most important keywords and their development compared to last year. An interactive map of the world allows you to see in which regions Boost Oxygen is most successful. Under the interactive map, you can see the performance of the most important competitors. Everything is available online. A report with updated data can be automatically sent to email. Complex data can be exported and further edited in Excel or another program.

Website Performance

last month compared to previous year

All countries together	USA	EU
Visitors	Visitors	Visitors
11 599	9 349	831
↑ 41.6%	↑ 50.6%	↑ 40.8%

	Query	Url Clicks -	% Δ	Impressio...	% Δ
1.	boost oxygen	2 064	33.3% ↑	42 897	27.8% ↑
2.	where can i buy boos...	173	8,550.0% ↑	2 617	2,257.7% ↑
3.	oxygen in a can	155	181.8% ↑	6 890	74.5% ↑
4.	oxygen boost	148	68.2% ↑	5 138	6.9% ↑
5.	oxygen can	114	137.5% ↑	6 434	16.6% ↑
6.	boost oxygen near me	111	1.8% ↑	2 202	17.4% ↑
7.	oxygen canister	94	20.5% ↑	7 425	16.1% ↑

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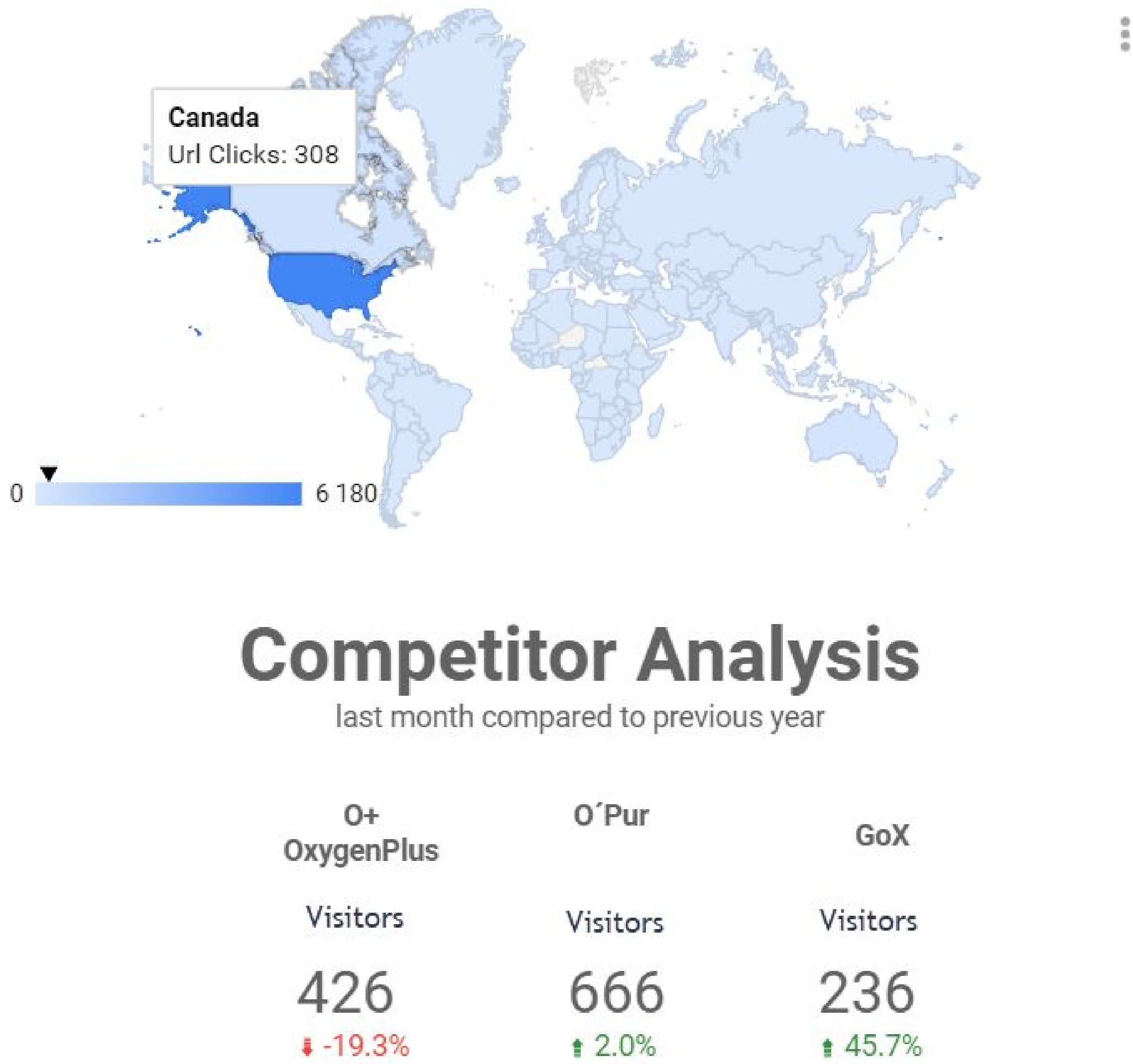

Source: Google Data Studio, 2019 (example data)

We discovered many data mining tools and described their features. We found tools for market research and competitor analysis. Some of these tools can analyze the current situation. We choose the best tools. We used these tools to create a dynamic dashboard for the company´s CEO.

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Comparison of the cloud usage in organizations in the Czech Republic and the USA

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2019

CONTENT

INTRODUCTION

Cloud computing is currently a growing platform worldwide. It is therefore necessary to know the current situation and possibly also the technological development of this sector. Processes based on cloud based applications is inevitable because cloud computing is innovative and successfully provides the satisfactory services to consumer over the world (Bertolino & Nautiyal 2017).

This project is based on the analysis of the use of cloud storage in the USA and the Czech Republic, which is complemented by research in these markets.

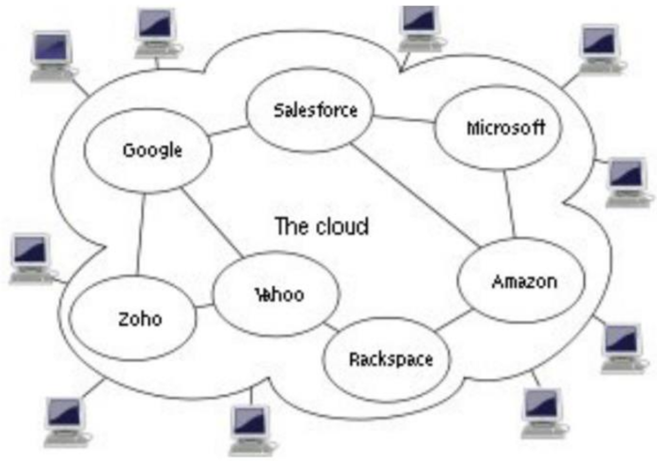
The papers have three parts, according to which the main goal is fulfilled: literature research, market analysis and qualitative research. Literary research deals with the issue of cloud computing, its importance and classification according to individual criteria. It is the basis for the context of market analysis. The Czech Republic and the USA are two distinct geographic, demographic, social and cultural markets. The aim of the analysis is to find out what is the difference in the use of cloud and usage in business and what are the current trends. The analysis is followed by own research, which has the form of a questionnaire survey. The questionnaire survey was developed in collaboration with academics and IT experts. This qualitative research consists in identifying the attitudes of IT experts to the cloud. Analysis and questionnaire are the basis for a discussion that describes the development of cloud computing in companies.

1 CLOUD COMPUTING

Cloud computing is a platform that connects all service to the virtual world. All data that the user is working with is stored and processed on remote servers, so the capacity of this storage is almost unlimited. Cloud computing includes computing power, storage, applications, and other technology resources that are important to users. The necessary condition for using this repository is the Internet (Amazon Web Services, 2019).

Figure 1 shows the basic cloud computing scheme. There are various devices around the cloud that can be accessed into the cloud environment. Today, they can manage the cloud through smartphones, tablets, laptops, desktops and servers. Technology is important because enables companies to monitor, measure, customize, and bill for asset use at much more than ever before (Bughin et al., 2010).

Fig. 1: Logical Diagram of Cloud Computing



Source: Bhardwaj et al., 2010

Cloud application is wide - within a few milliseconds, a user can monitor production on the other side of the planet, people can plan joint meetings, plans, or projects as part of collaboration. Potential for cloud computing is in business but Qian et al. (2009) say that this platform is one of the vaguest technique terminologies in history.

1.1 History

The first idea of cloud computing goes back to the 1970s. At the University of California, Santa Barbara, an article entitled "Network Specifications for Remote Job Entry and Remote Job Output Retrieval at UCSB" was published, where the idea of a new concept of sharing via Remote Job Entry (RJE) became popular (White, 1971). Remote Job Entry was introduced in 1968 by IBM (IBM, 1968).

Cloud computing platform was popularized by Amazon Web Services (AWS) in 2006 called Elastic Compute Cloud (Amazon EC2). This web services have provided resizable compute capacity in cloud and has been designed to make easier environment for developers. The main advantage has been in computing in the cloud and there was the first mention of the pay-per-use[1] in the cloud solutions (Amazon Web Services, 2006).

1.2 Cloud Computing Deployment Models

Cloud Computing Deployment model is an approach that connects big servers along with the technologies of virtualization that are divided to single servers and several virtual machines or a model of the activities that make a Cloud available for use. There exist four deployment models of clouds according to NIST[2] (Bertolino & Nautiyal 2017):

- private clouds,
- community clouds,
- public clouds,
- hybrid clouds.

Private clouds rely on data center owned by organization. The main aim of this cloud is not trade a service to the customers but using the service for own needs (Creeger, 2009). Community clouds are based on cloud infrastructure[3] used by a specific community of consumers from organization with shared concerns. It can be owned and managed by the community or a third party. Public Clouds is provided for public and owned and managed by a business, academic, or government organization, or some combination form. Hybrid clouds are combination of previous forms that have unique entities, but standardized (Mell & Grance, 2011).

1.3 Cloud Computing Service Models

Cloud computing platform is complex and provides different levels of control flexibility a management. According to the previous text, cloud computing defines the use of cloud

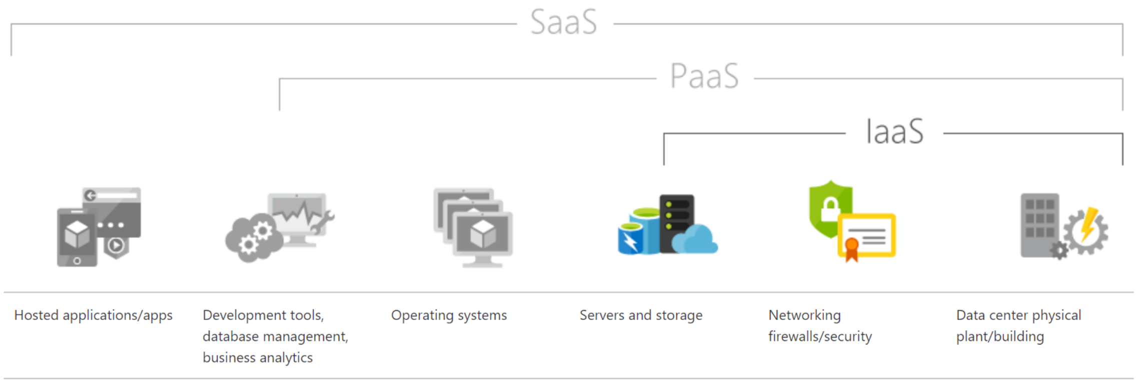
[1] Pay-per-use: Customer is charged each time he uses the service.
[2] NIST – National Institute of Standards and Technology
[3] Cloud infrastructure can be viewed as containing hardware and software necessary for using cloud.

computing as Infrastructure as a Service (IaaS), Platform as a Service (PaaS) and Software as a Service (SaaS). Each user can decide what set of services is right for his/her needs (Amazon Web Services, 2019).

1.3.1 Infrastructure as a Service (IaaS)

IaaS is an essential element for building a cloud platform. It consists of servers and storage, security systems and firewalls, data centers and physical buildings. It is the evolution of traditional hosting (Bhardwaj et al., 2010).

Fig. 2: IaaS Scheme



Source: Microsoft Azure, 2019a

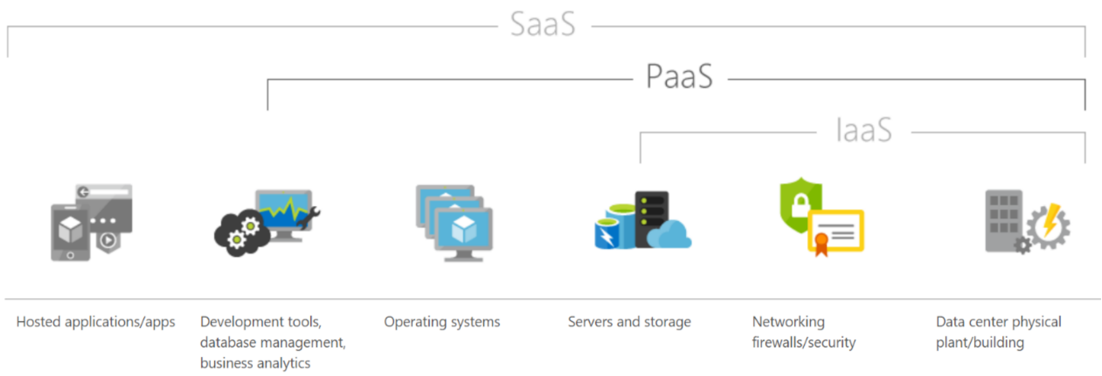
IaaS is a form of hosting. IaaS provider provides hardware and service needed to user´s usage. It is necessary to ensure data security and anytime anywhere access. For customer is important simple system, which is flexible, scalable, virtualized and automated. Costumer´s data and applications has to be enable to put on platform supporting by provider. Provider has to be responsible for provisioning of space & power, detailed scheme is in the Figure 2. The main advantages of IaaS (Lawton, 2008, Microsoft Azure, 2019):

- Eliminates capital expense and reduces ongoing cost
- Improves Business continuity and disaster recovery
- Innovate Rapidly
- Respond quicker to shifting business conditions
- Focus on the core business
- Increase stability, reliability, and supportability
- Better security
- Gets new apps to user faster

1.3.2 Platform as a Service (PaaS)

Platform as a Service (PaaS) is used for internal building applications in the companies. Figure 3 shows which services PaaS provides - development tools, database management, business analytics, operating system – that is development and deployment environment in the cloud. (Lawton, 2008, Microsoft Azure, 2019b).

Fig. 3: PaaS Scheme



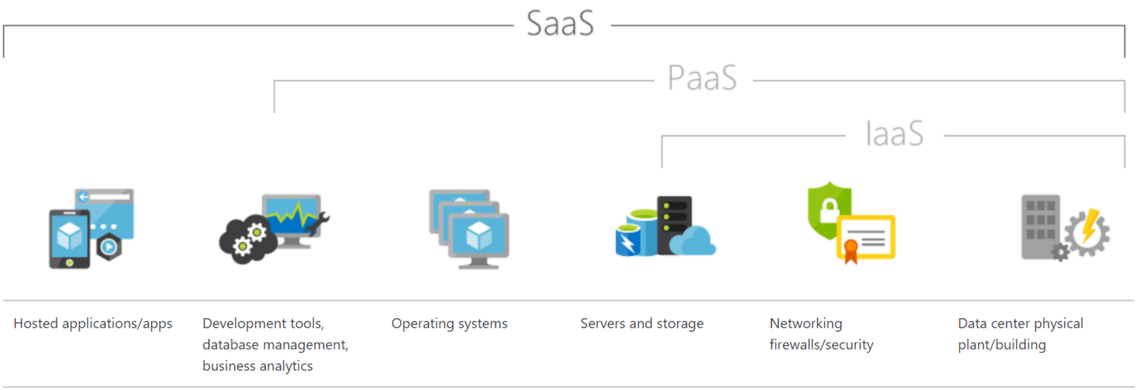
Source: Microsoft Azure, 2019b

PaaS is increasingly popular among industry companies and connects software from all devices and users can easily launch an app without knowing the details about how the supporting infrastructure is build and maintained (Mei et al.,2015).

1.3.3 Software as a Service (SaaS)

Software as a Service provides simple access method – users can gain the information through each devices with the Internet connectivity. Nowadays, more and more software companies and organizations offer SaaS as a software delivering and business model. This platform is based on software applications running on particular cloud infrastructure - see Figure 4 (Cusumano, 2010, Kao et al., 2014).

Fig. 4: SaaS Scheme



Source: Microsoft Azure, 2019c

Saas is presented to consumers through devices in browsers and saves troubles with software maintenance. Cloud software is shared by multiple tenants, automatically updated, and no additional license needs to be purchased (Tsai et al., 2010).

2 CLOUD COMPUTING TODAY

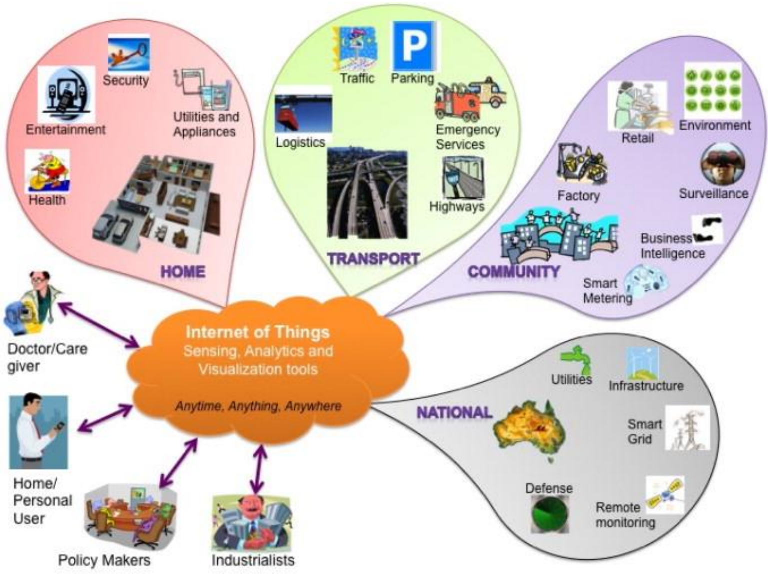
Nowadays, the terms Internet of Things, Big Data, mobile computing and security are related to this issue. By considering the factors in the public cloud like IaaS, PaaS, and SaaS, and comparing the projected development from 2018 to 2028 with the traditional methods, “open source IT research organization Wikibon is forecasting that the cloud’s share of enterprise computing will grow from around 10% today to 45% by 2026” (Kemp, 2018).

2.1 Internet of Things and Big Data

The term Internet of Things was first published by Kevin Aston in 1999 in the context of supply chain management and later the definition has been extended to wide range of applications like healthcare, utilities, transport, public sector, etc. (Ashton, 2009, Sundmaeker et al., 2010).

Figure 5 shows Internet of Things scheme where the users and application areas based on data. There are sectors (home, transport, community, national) that affect the Internet of Things. Through analytical and visualization tools, end-users (such as doctors, personal users, policy makers, industrialist) receive valuable data that is essential to subsequent management (Gubbi et al., 2013).

Fig. 5: Internet of Things Scheme – The Users and Application areas



Source: Gubbi et al., 2013

Modifying Internet Things is a Social Internet of Things (SIoT) that is defined as an IoT with social relationships with other objects, autonomously with respect to humans. The SIoT paradigm represents the ecosystem of interaction between people and smart objects within a social relationship structure (Atzori et al., 2012, Ma et al., 2019).

IoT is a very demanding platform for processing huge amounts of data (Big Data). In recent years, with development of IoT and big data, requirement of data storage is increasing and it is necessary to optimize storage for real-time big data in IoT (Gaocheng et al. 2018, Tu et al., 2019).

2.2 Mobile Computing

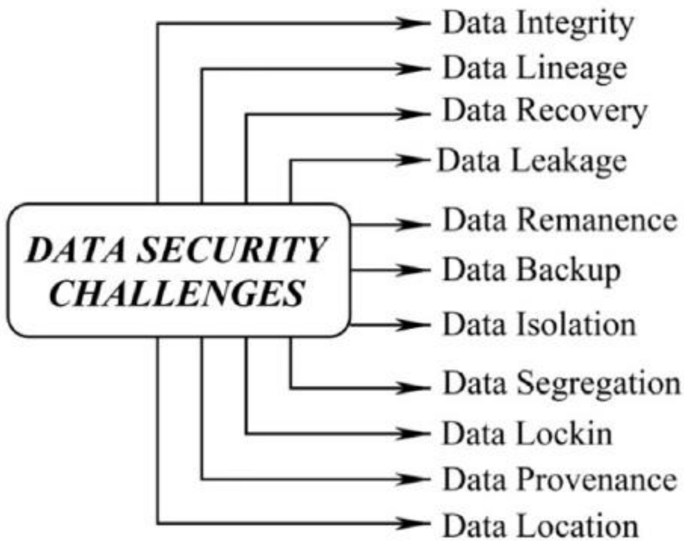
Smart phones and other smart devices have a great impact on modern life and through them they can connect to cloud services. Clouds have the advantage of not taking up the phone's internal storage, and within other capacities (processor speed, battery size, data transfer rate), service outsourcing appears to be a logical step (Dinh, Lee et al., 2013, Sova Martinovsky, 2017).

The mobile computing is difference with cloud computing. Unlike cloud computing which is related with different business, mobile computing is more like a consumer-facing service. It provides the functions like providing software applications, accessing the internet by using browsers, and processing data. The regular mobile computing devices "include thin, lightweight laptops, netbooks, smartphones, media players, gaming consoles, eBook readers, and ambient computing devices" (Purdue University Global). However, the rapid development of smartphones encourages business people to use their own devices to conduct daily work. This phenomenon is called Bring Your Own Devices (BYOD). The BYOD grows quickly. According to an article from Paméla Baillette, Yves Barlette,and Aurélie Vandelannoitte, "This market was worth nearly $113 billion in 2016 and could represent $318 billion by 2022" (2018). This increase of BYOD market encourages the IT department in company to adopt more mobile computing services (Purdue University Global).

2.3 Security

The major problem of cloud service usages in the world is about security. The cloud actually helps businesses and individuals live and work better, but brings the risk of data leak and destroy, the risk of operating system security and the risk of internet trust. In 2018, there are about 50 big data breaches happened in the world. For example, Facebook database system was attacked by hackers for twice and had huge loss in 2018 (Information Is Beautiful). Some traditional data protection methods like host-based antivirus software, firewalls and intrusion detection systems cannot provide the enough protection for the cloud (Subramanian & Jeyaraj, 2018). It seems like the security protection of cloud usages are incomplete now. The following graph shows the different types of data security challenges.

Fig. 6: Data security challenges



Source: Subramanian & Jeyaraj, 2018

3 CLOUD USAGE IN BUSINESS IN THE CZECH REPUBLIC AND THE USA

In this part, we mainly used the survey as our research tool to gather the information for our project. For now, we have gotten 55 responses from U.S. and Czech Republic. In this survey, we mainly focus on six aspects. The first one is about organization location. Where your firm is, US or Czech Republic? The second one is about organization size. How many IT employees in this organization? We have four categories for this aspect. They are 1 to 9, 10 to 49, 50-249, and more than 255. The third one is about specialization. What is your specific role in the company? Are you a developer, analyst, web designer, marketing specialist, or project manager? The third one is about the cloud provider. Which cloud provider your organization used? The top three choice from our responses are AWS, Azure, and Google. The next aspect is about the experience of using cloud. For this part, we use the system usability scale survey (SUS) to gather the information. The SUS contains 10 questions. How often you use this Cloud? Among these responses, more than half of people used the cloud services in a high frequency way. About 60% people thought the cloud services were too complex. About 63% people thought the cloud services were easy to use. More than half of people thought they didn't need the technical help from experts. More than half of people thought the cloud functions were well integrated. More than half of people thought the cloud services were easily for people to learn. The last aspects are about the future trend. Overall, the responses that we got showed that people believed that the cloud services would dominate the large amount of market in the future. Next part is our detail comparison between US and Czech Republic.

3.1 Cloud usability in the USA

Among the responses from US technical experts, 50% of responders are Analyst. The remaining responders are project managers, IT interns, and web designers. There are three major cloud providers in US. They are Google Cloud, Amazon AWS and Microsoft Azure. The factors of choosing the cloud providers are technology, training, cost and security. For example, Marquette University choose to use Microsoft Azure as the cloud provider for their data center is because of the consideration of cost. Since Marquette University used lots of Microsoft products, using the Microsoft Azure can help the university to save money and save time. Based on the analysis of these responses, the company with the number of employees between 10 and 49 are more likely to use the Amazon AWS as their cloud provider. The company with the number of employees above 250 are more likely to use Microsoft Azure and Google. Moreover, almost all the responders thought that the cloud was easy to use but hard to learn. Additionally, technical experts believed that the cloud usages would be more popular in the business world in the future. The cloud provider will keep focusing on the security and sustainability in the future.

3.2 Cloud usability in the Czech Republic

Up to 44 % of Czech companies (above 150 employees) has cloud service (EU average = 35 %). In Europe dominate private clouds (53 %), that is more than hybrid clouds (27 %) and public clouds (19 %) (ITBIZ, 2016).

4 RESEARCH

Research of cloud usage comparison in the Czech Republic and the USA was based on the survey which was offered to the IT experts and business cloud users in the both countries. Survey method was the SUS (System Usability Scale) . Respondents choose score for each questions which are converted to a new number, added together and then multiplied by 2.6 to convert the original scores (0-40 to 0-100). The result of the research is value in range 0-100. This method is easy for comparing with average but contains basic questions, and some questions could be irrelevant (Usability.gov, 2019).

“Based on research, a SUS score above a 68 would be considered above average and anything below 68 is below average, however the best way to interpret your results involves “normalizing” the scores to produce a percentile ranking.” (Usability.gov, 2019).

4.1 Survey results

The survey contains two parts: demographic part and empirical part. Demographic part informs about location, specialization, size of the company. Location is based only on two countries, which are Czech Republic and the USA because the comparison of the both countries is the main topic of the research. Figure 7 shows the number of respondents of the survey.

Fig. 7: Respondents - Location

Country	Respondents
Czech Republic	35
USA	20
Total	**55**

Source: Own research, 2019

Methodology of gaining data was different and depended on the different countries. In Czech Republic, data was gained on the event which was held on March 2019 – there were 28 respondents. Other respondents were gained individually – most of them are developers of the cloud. In the USA data was gained with cooperation with the Marquette University students and local experts. Totally, we gained 20 answers in USA.

Specialized positions were consulted with IT experts at the Czech local organization. Original answers were: Developer, Analyst, Web designer, DevOps, Marketing specialist and Project manager. There also was option "Other". Figure 8 shows all respondents' answers.

Fig. 8: Respondents - Specializations

Specialization	Czech Republic	USA	Total	Specialization	Czech Republic	USA	Total
Accounting	0	1	**1**	Marketing specialist	1	4	**5**
Analyst	1	7	**8**	Project manager	2	2	**4**
Business development	1	0	**1**	Quality assurance	2	0	**2**
Developer	21	3	**24**	Sales director	1	0	**1**
DevOps	4	0	**4**	Vision director	1	0	**1**
IT student	0	2	**2**	Web designer	1	1	**2**

Source: Own research, 2019

According to the respondents that we got form IT event, 21 of Czech respondents are developers and 14 are the others. The highest number of the US part is 7 – Analysts. For analytical issues these specializations can be divided to two groups – creators (Analyst, Developer, DevOps, IT student intern, Web designer) and user (the others). The Figure 9 shows a company size where respondents works.

Fig. 9: Respondents – Company Sizes

Company size	Czech Republic	USA
0-9	3	4
10-49	11	7
50-249	11	1
250+	10	8
Total	**35**	**20**

Source: Own research, 2019

The criteria of company size are based on the criteria that were defined by European Union. In 2015, the European Union defined the business size to four categories which were Micro, Small, Medium-sized and Large company. This scale as known as SME (small and medium enterprises). This information can be helpful in the analytic part.

Next question was oriented to the opinions from respondents about which was the best cloud provider that they used. Answers were selected from the specialized IT website which was named TechRadar. The website had an empirical research about which the best cloud was computing service in 2019 – see Fig. 10. Optional answer, “other”, was added to the survey.

Fig. 10: The Best Cloud Computing Services 2019

BEST CLOUD COMPUTING SERVICES

1. Rackspace Cloud
2. IBM Cloud
3. Amazon Web Services
4. Microsoft Azure
5. Google Cloud

Source: TechRadar ranking, 2019

Figure 11 shows the respondent preferred cloud service. The table below showed that the most preferred cloud service provider in Czech Republic was AWS. The most preferred cloud service provider in USA was Google Cloud.

Fig. 11: Respondents – Preferred Cloud Service

Prefered Clouds	Czech Republic	USA	Total
Amazon Web Services	16	6	**22**
Digital ocean	1	0	**1**
Google Cloud	10	12	**22**
Microsoft Azure	7	2	**9**
Own	1	0	**1**

Source: TechRadar ranking, 2019

The SUS survey contained 10 questions, and respondents filled out the score and showed his/her opinions. Original SUS survey had 10 questions, and the counting method for these data is not difficult. The scores of questions 1, 3, 5, 7 and 9 should be reduced by number 1. The scores of questions 2, 4, 6, 8 and 10 should be used to reduce the number 5 (converted). See the Figure 12.

Fig. 12: Respondents – the SUS answers

1	2	3	4	5	Statement	1	2	3	4	5
0	1	11	10	13	I think that I would like to use the cloud frequently.	0	1	4	10	5
1	9	16	6	3	I found the cloud unnecessarily complex.	1	8	7	3	1
1	5	8	17	4	I thought the cloud was easy to use.	0	2	6	9	3
6	8	11	8	2	I think that I would need the support of a technical person to be able to use the cloud.	0	4	6	8	2
0	3	10	19	3	I found the various functions in the cloud were well integrated.	0	0	8	8	4
5	11	11	7	0	I thought there was too much inconsistency in the cloud.	3	4	9	3	1
1	7	11	13	3	I would imagine that most people would learn to use the cloud very quickly.	0	4	8	5	3
1	22	9	2	1	I found the cloud very difficult to use.	2	7	5	4	2
1	3	15	14	2	I felt very confident using the cloud.	1	1	5	9	4
0	9	11	11	4	I needed to learn a lot of things before I could get going with the cloud.	2	2	10	3	3

Source: TechRadar ranking, 2019

The answers at the Figure 12 is oriented to the center (number 3). Answers number 1, 3, 5, 7 and 9 are oriented to the right, and the others are on the other side according to the methodology of the SUS computing.

Fig. 13: Respondents – the SUS result

Czech Republic	**Total**	USA
59	**58,955**	58,875

Source: TechRadar ranking, 2019

Figure 13 represents the final result of the SUS method. If the results of the survey is above 68%, it will demonstrate that the cloud services are useful for business people. However, based on our analysis, the result of the survey is bellow of the average level (68). But it is not true. It doesn't mean that the cloud service is terrible because the cloud service has huge potential. In the research, 82 % respondents believed that the cloud services would be better in the future.

4.2 Limitations

Overall, the research helped us to compare the cloud usage between USA and Czech Republic. However, there are several limitations for our research. At first, the number of respondents that we got were small. The number of respondents from USA was lower than the number that we got from Czech Republic, and this might make us hard to compare the data. Also, the calculation method and the results that we got might not be really accurate. The third limitation is that we cannot make sure that the respondents that we got is real. We were unable to identify if they provide us the fake answer. The last limitation is that we cannot make sure the responders are neutral. They may have some biases. These biases may influence the result of the research.

CONCLUSION

Cloud is a popular topic in the world. On one hand, it helps the IT experts and IT staff in the company to work better. It helps the IT team in the company to work easier and more flexible. On the other hand, the cloud services like cloud computing and cloud storage can help company to reduce the cost and time. The company can reduce the number of IT staff in the company which can save lots of money. In this paper, we mainly focus on three parts. They are literature research, market analysis and qualitative research. The literature research and market analysis explain the definition of cloud, the history of cloud and the current trend of cloud usage. In the qualitative research part, we compare the cloud usages between USA and Czech Republic. We use survey as research tool to gather the information from technical experts in USA and Czech Republic. We use specific method to calculate the data and analysis the results that we generate from the calculation. The results demonstrate that the most popular cloud provider in USA is Google cloud. The most popular cloud provider in Czech Republic is Amazon AWS. Additionally, the results show that even though the final SUS survey result is under the average level (68), the cloud service is still a good choice for business people to consider. The reason is that 82% people believe that the cloud service is potential and will have better performance in the future. The development of cloud service will be better and better. They believe that the cloud service is bound to be the unstopped trend in the technology development and revolution.

FIGURES

ATTACHMENT - QUESTIONNAIRE

Cloud Solutions

Give us a few minutes for survey which is about cloud and cloud services. Data gained from this anonym survey will be compered between Czech and American respondents.

Thank you.

Lukas Skrivan - Faculty of Economics, University of West Bohemia, Pilsen
Meiqi Zhao - Marquette University

*Povinné pole

Where are you from? *

- ○ Czech Republic
- ○ USA

If the USA, write the state where you live.

Vaše odpověď

What is your specialization? *

- ○ Developer
- ○ Analyst
- ○ Web designer
- ○ DevOps
- ○ Marketing specialist
- ○ Project manager
- ○ Jiné: ____

How big is the company where you work? *

◯ 1-9 employees

◯ 10-49 employees

◯ 50-249 employees

◯ 250+ employees

Which cloud service provider do you prefer? *

◯ Rackspace Cloud

◯ IBM Cloud

◯ Amazon Web Services

◯ Microsoft Azure

◯ Google Cloud

◯ Jiné: ____________________

I think that I would like to use the cloud frequently. *

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

I found the cloud unnecessarily complex. *

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

I thought the cloud was easy to use. *

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

I think that I would need the support of a technical person to be able to use the cloud. *

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

I found the various functions in the cloud were well integrated. *

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

I thought there was too much inconsistency in the cloud. *

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

I would imagine that most people would learn to use the cloud very quickly. *

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

I found the cloud very difficult to use. *

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

I felt very confident using the cloud. *

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

I needed to learn a lot of things before I could get going with the cloud. *

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

What do you think about future of cloud solutions? (5 years) *

Vaše odpověď

Source: Own research in Google Forms, 2019

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Comparison of CSR in Europe and USA for two chosen mobile providers

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Table of Contents

Introduction

Corporate social responsibility (CSR) is a business concept known around the world. Although its roots can be traced to the 1950s, its global permeation and advancement is related to the spread of globalization beginning in the 1990s (Carroll, 2015). CSR is currently implementing more and more companies in its strategies. They realize that not only the minimum costs and maximum returns are behind successful business. Their attention is also recently focused on the impact of their business activities not only on economic aspects but also on environmental and social issues. Responsible business does not only affect on external existing or potential customers, but also on employees. Thanks to an active socially responsible approach and high-quality communication towards to public, the company also grows in the eyes of potential job seekers and has the opportunity to choose the highest number of candidates from the highest.

CSR and its principles are an integral part of the corporate strategy of one the Czech and US telecommunication operators, Vodafone and Verizon. The aim of this work is to map the current state of social responsibility as one of Vodafone's and Verizon's strategies, to present the activities in this field and the way of communication of this strategy to the public. Another goal is to find differences between both companies in theirs CSR strategies and try to recommend some steps they could learn from each other.

The work is divided into two parts. The theoretical part is based on an analysis of professional literature on corporate social responsibility and last but not least, it draws on extensive information on CSR from websites. This parts describes the general definition of CSR and its basic pillars, the theory of stakeholders and its benefits. The analytic part already deals specifically with social responsibility in Vodafone and Verizon. In the end of this work can be found a comparison of activities in both companies and some suggestions. This part is based on annual CSR reports from the companies and their websites.

1 Theoretical Framework

The CSR concept has become one of the integral parts of the strategy of most companies. As the concept of CSR evolves, its content changes. Today, it is far from focusing on the ethical area, but it includes a whole range of activities and initiatives. All these activities, initiatives and stakeholders are described in this theoretical chapter. First, the responsibility of companies is discussed, followed by a presentation of the history of CSR. It is aimed, besides the above, on defining the concept and the main pillars on which the whole concept stands. It mentions the greatest benefits of CSR implementation and describes the process of implementation.

1.1 What is CSR?

The concept of corporate social responsibility is now an integral part of the activities of many companies. This concept is not entirely new, but in the subconscious of people it arrives only in the second half of the twentieth century. In the 1960s, the CSR gained its popularity as there were wide social movements, mostly in the US. What became important at that time were civil rights, women rights and consumer rights, as well as there was an environmental movement (Carroll & Shabana, 2010). Many claims that CSR officially took root in the 1960's but underlying socially responsible ideas can be traced back to the mid-1800's, during the Industrial Revolution (Crane & Matten, 2009). With the explosion of factory production, it was clear these establishments started their operations in a way that most would consider to be socially harmful: horrible working conditions, child labour usage, lack of minimum wages. So, as the social environment was changing, there was also the pressure on businesses to behave in accordance with this societal mindset, and thus the concept of CSR was shaping and expanding. Even in this time, communities were realizing that large companies owed more responsibility to all of their stakeholders, not just their shareholders (Visser, 2010). Scientific development began in the United States in the 1950s by the scientist Howard Bowen, who propagated the use of information about the social impact of corporate activity as an internal management system. In his book "Social Responsibilities of the Businessman," Bowen defined the social responsibility of an entrepreneur as meeting the expectations and values of society (Ankele et al, 2004).

The responsibility towards the company is thereby transferred to the managing owners. Later, the impact of the entire company took centre stage. These effects were intended to bring about societal benefits that put the interests of companies and their owners in the background. Although Bowens book speaks more about entrepreneur responsibility than business, its definition of social responsibility is valid until today (Carroll, 1998). CSR problematics became widely discussed and analysed in 1980s. In that period also occurred related concepts, such as business ethics or stakeholder theory. This trend continued in the 1990s and 2000s, when the notion of the corporate citizenship was added. In this concept the firm is considered to be a “citizen”, or a member of the society, so it has its responsibilities towards the local communities and the environment in which it operates (Garriga & Mel´e, 2004).

This concept is coming into Europe in the 1990s and is seen as an instrument for achieving sustainable growth. In 1995, European Commission President Jacques Delors supported the establishment of a European CSR Expert Center, known as CSR Europe (CSR Europe, 2019). According to the European Commission, CSR can be seen as a source of competitive advantage or, in other words, innovation, which can ensure the long-term existence of a business. In 2001, the so-called Green Paper entitled "Promoting a European Framework for Corporate Social Responsibility" was published by the European Commission, which included the first EU CSR definition. The Green Paper set itself the goal of launching a discussion on CSR. Another objective of the Green Paper was to find a way to successfully promote the concept at European and global level and to ensure a uniform measurement and evaluation of the CSR concept (IISD, 2013). Massive development of the CSR concept can be seen in the last decade of the last century, mainly through the creation of the first platforms and initiatives that deal with CSR and thus increase the awareness among lay and professional public.

For this concept, there are a number of definitions in the literature, and there is currently no single global definition. However, one of the most important is the European Commission's definition:

“a concept whereby companies integrate social and environmental concerns in their business operations and in their interaction with their stakeholders on a voluntary basis” (European Commission, 2011).

The EC also states that, **“to fully meet their corporate social responsibility, enterprises should have in place a process to integrate social, environmental, ethical and human rights concerns into their business operations and core strategy in close collaboration with their stakeholders”** (European Commission, 2011).

Companies can become socially responsible by integrating social, environmental, ethical, consumer, and human rights concerns into their business strategy and operations (European Commission, 2019).

As has already been said, there are several definitions. All of them, however, contain certain common elements that give a common basis to all definitions.

The determinant feature of CSR is the principle of volunteering, and perhaps that is why we can find a lot of definitions, none of which are of fundamental importance. This point is, it should not be an initiative, but a voluntary affair. The truth is, however, that at present companies have no choice but to compete in strong competition on the market. Another common point is so called stakeholders. The company never acts in isolation, but its behaviour is always tied to specific groups or entities. The stakeholders' issues are discussed in more detail in next chapter. The last important common point is the integration of different dimensions into the business. Most often it is an economic, social and environmental dimension. Companies try to connect all these spheres with their own activities.

Definitions generally reflect social, environmental and economic aspects. They highlight the volunteering and management strategy in which these areas are integrated. They emphasize responsibility towards the wider neighbourhood - stakeholders, in other words, there must be a real demand for ethical behaviour from the stakeholders. Then it is possible to consider CSR investments as any other investment. Summarizing the main elements of all definitions, we can say that being socially responsible means not only fulfilling legal expectations, but also going beyond compliance and investing "more" into human capital, the environment and the relations with stakeholders. The only goal of the company is not just a profit, but society and the environment are at the forefront.

Businesses today address the question of whether or not to communicate their CSR strategies. Some businesses consider CSR activities and strategies to be the privilege of big companies. Other businesses go with their ethics so far that they consider it unethical to publish their CSR activities. However, communication of these corporate activities is essential for improving the name of the company, which is one of the reasons for socially responsible behaviour. It is also important information for stakeholders. Possible communication channels are: newsletters, news, advertisements, websites, brochures, packaging and labels, print and media, brochures, information packages or simple interpersonal communication.

1.2 Stakeholder and CSR

Definitions and a key factor in Corporate Social Responsibility are defined as "stakeholders", or stakeholders, or groups of individuals, institutions and organizations that have a direct or indirect influence on the operation of the business or are influenced by the existence of the business itself. The stakeholder's model is based on the view that a business organization has a wider responsibility than its owners. Opponents to the theory of stakeholders include Friedman's "stockholders" approach, where managers as employee owners (stockholders) are required to answer only to their superiors and to direct the company in their interests in order to maximize profits. While applying the concept of CSR, we overcome the theory of stockholders and accept the fact that the company also takes into account other stakeholders - with whom it is interested to build the most favourable relations, to develop mutual trust and understanding. Stakeholders are a broad concept, and it is important for a business to properly identify their stakeholders. In order to know to whom not only to direct their activities but also to inform them about them. In an enterprise that wants to implement a successful CSR policy, this identification process must be unconditionally underway (Zadražilová, 2010).

Stakeholders are most often divided into two groups - primary and secondary stakeholders.

Primary stakeholders

These are, above all, groups that are defined within a business and differ in structure, depending not only on size but also on ownership structure, local market conditions, geographic position and many other factors. The mutual interaction and position of these stakeholders will always be different. Most often they are divided into:

- Owners, shareholders and investors
- Employees
- Customers (current and potential)
- Business partners - especially contractors and creditors

Secondary stakeholders

This stakeholder group can influence the company from an external point of view. We include groups that are outside the active field of action and decision-making within a defined economic entity:

- Competitors
- The public
- Media
- Lobbyists and various pressure groups
- Civic and trade associations
- Government and self-governing bodies

The stakeholder group broadly includes customers, employees, business partners, shareholders, suppliers, government and self-government representatives, interest groups, media, trade unions and international organizations (Trnková, 2004).

1.3 Triple Bottom Line

CSR is a modern business concept that is divided into three basic pillars (so-called triple-bottom-line):

- economic (profit),
- social (people),
- environmental (planets).

Figure 1 - Triple Bottom Line

Source: https://medium.com/@Anaiska/contribute-to-a-better-world-be-a-successful-company-sustainability-in-a-shared-economy-startup-50cc72f2e37b

It requires a change in the perception of its own social role from a „profit only" level to a broader view in the context of the often-mentioned „3P" chart – people, planet, profit. It means functioning with regard to the so-called triple-bottom-line, where the company focuses not only on economic growth but also on the environmental and social aspects of its activity. It also applies voluntarily beyond the scope of its legislative duties the principles in the above-mentioned basic areas (Trnková, 2004). The forefront of the company's interest is to create the most favourable climate in such an environment, which can greatly facilitate its commercial success. The assessment of the company's activities and its environment directly affects the commercial success of the company. The term CSR covers the company's activities from environmental protection and employment rights through the fight against discrimination, transparency to social investment policy. The CSR of each business should be all three areas, but each includes many activities from which a business can choose those that fit its focus and stakeholder requirements.

The TBL concept was introduced in 1994 by John Elkington and later used in his 1997 book "Cannibals with Forks: The Triple Bottom Line of 21st Century Business." The main problem with TBL, according to Elkington, is the difficulty of measuring social and environmental bottom lines. This requires each of the three areas to be evaluated according to their own merits (Investopedia, 2019).

Profit - the economic pillar covers above all transparent business, positive relationships with business partners, the fight against unfair commercial practices, supports the development of employment. The economic pillar, which is defined not only by optimal profit, but also by the so-called 3E - economic, effective, ethical. In the economic sphere, a socially responsible company is expected to engage transparently and to develop good relationships with investors, customers, suppliers and other business partners. There is a close relationship between the company and its employees. The company in which employees work affects the quality of their private life, is the source of their income, is the place where they spend most of the day. On the other hand, the company is influenced by the quality of its employees from management to production. The CSR concept is geared to finding maximum satisfaction for both parties (Kuldová, 2010).

People - a social pillar means a relationship to people in general. The social sphere can be divided into two areas - the working environment and the local community, where both the workplace and the community affect the standard of living, health, safety, education and cultural development of citizens. Other activities in this area can be: employment policy, health and safety of workers, education, employment of minority and vulnerable groups, gender equality and child labour rejection (Kuldová, 2010).

Planet - an environmental pillar where an enterprise deliberately works to minimize its impact on both living and inanimate nature, including the ecosystem, soil, air and water, not to burden the environment and protect natural resources. The environmental sphere includes the protection of natural resources, investment in green technologies, energy saving and environmental policy. This way of doing business brings financial savings. E.g. friendly use of energy, prevention of pollution, minimization of waste, recycling. All these activities can reduce costs and other benefits for the company. (Pavlík & Bělčík, 2010, s. 26)

1.4 Motives and Benefits

By adopting the CSR concept, a socially responsible company receives a number of benefits that are predominantly of a non-financial nature. However, these benefits also stimulate earnings growth in numerical terms, as the responsible company may become more attractive to customers or investors, as increased sales and better investment positions will ultimately lead to profits also of a financial nature. Because of a CSR policy, a company may gain trust and legitimacy from its customers, employees and investors (Smith, 2003).

Reasons and benefits of adopting socially responsible behaviour:

1. Increase transparency and strengthen the credibility of the company
A socially responsible business perceives the company as a member of a company consisting of stakeholders. Having an open dialogue with all stakeholders improves mutual relationships, confidence and market position. Customers may be willing to pay more for a product or service that is, for example, produced organically or under fair trade practices. CSR reporting and communication is essential to spread this awareness to the customer (Weber, 2008).

2. Building reputation and emerging strong market positions
The market is becoming more and more saturated, and individual products are becoming less and more distinct from each other. An additional role is played by additional services, company reputation and brand confidence.

Business in line with CSR principles offers such a competitive advantage, thus contributing to the increase of brand value, market share and customer loyalty. Being perceived as a responsible company helps businesses position themselves as attractive employers in times of ever greater shortages of skilled labour; it boosts customer loyalty or helps with tapping new groups of customers. Customers may be attracted to a product or service if they know the company has taken social or environmental concerns into their activities. These intangible assets are as important to the firm as assets in the form of, for example assets, supplies and money (Workspace, 2019).

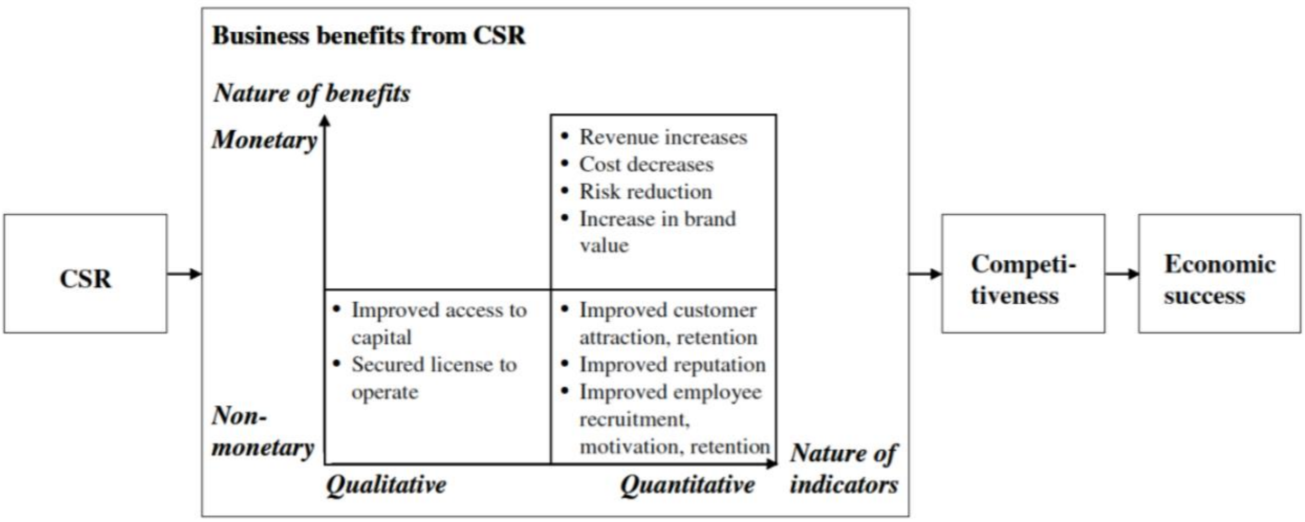
3. Greater attraction for investors
In assessing investment opportunities, investors and investment funds focus not only on financial aspects, but they are choosing companies according to a combination of financial, social, environmental and ethical, as the responsible company is a guarantee for their security and long-term sustainability. Especially investors with a long-term strategy often prefer to invest in companies with more sustainable business practices than the competition.

Institutional investors such as life insurers and pension funds view sustainability strategies as crucial factors in their investment strategies.

4. Cost reduction
Businesses are increasingly turning to corporate social responsibility to drive down costs. It increases pressure on resource efficiency, saving energy and materials. It reduce not just a company's ecological footprint but also its costs. In terms of efficiency, the introduction of a CSR or sustainability policy often initiates the analysis of material and energy resources used, and ways to reduce them for both cost reduction and environmental benefit. For example, reuse of material in production, energy saving and the decision to switch from a fossil based to a renewable energy source (Bocken, et al., 2014).

5. Better human resource management
Applying CSR to an interested group of employees involves fair remuneration, reconciliation of work and private life, combating discrimination, etc. This positively affects the loyalty of employees, labour productivity, reducing fluctuation and the risk of strikes. Satisfied employees positively present their company to the public, making the company attractive to potential employees. Employees that are better compensated, both financially and socially, are likely more committed and productive in the long-term than those that are exploited. CSR strategies often include strong human resource management, and therefore directly benefit employee quality of working life (Federal Ministry of Labour and Social Affairs, 2019).

Figure 2- CSR impact model



Source: Weber, 2008, p. 250

2 Vodafone

2.1 Introducing

Vodafone got the license to operate the GSM network in October 1999 and the commercial operation was launched on March 1, 2000. Its original name was "Český Mobil a.s.", which operated the first dual and the most modern GSM network in the Czech Republic under the Oskar brand. It has become the third domestic mobile telecommunications operator, has made radical changes and has contributed to their access to every consumer by offering their services. A network comparable to competing networks has been built within a year (Vodafone ČR, 2019). Vodafone also says that this youngest operator's strategy has been direct contact with the customer since its inception, which has become and has remained the basic pillar of the company's success. Oskar Mobil joined the Vodafone Group in 2005 and in 2006 he was renamed Vodafone Czech Republic, a.s. Today, Vodafone serves more than 3.4 million customers in the Czech Republic (Vodafone, 2019a).

Vodafone has gained a number of awards in the field of advertising for its published magazine Čili Chili and, in particular, for its active socially responsible approach, it is collecting awards such as: in 2018 Effie - Silver for Benov and Sofianus to Abbey Road within project #jetovtobě. With this platform, Vodafone wants to encourage young people to do what they want. In October 2017, the company received 5 award prizes at the TOP award ceremony. Gold Certificate for Top Responsible for Big Business, Diversity Strategy and Responsible Reporting, Silver for Leader in the Environment and Socially Beneficial Project (Vodafone, 2019a).

Among other things, Vodafone holds a CSR certification - compliance of the CSR management system according to ČSN 01 0391 (Vodafone, 2019b).

Based on the awards obtained, it can be concluded that CSR activities are important in Vodafone. Vodafone has been working on them for a long time and systematically, and of a diverse nature. He is engaged in the field of environment, donation, health of its employees, in the social field and in the education of the public on socially beneficial issues. In the next part of this thesis are presented specific activities of the company in the individual areas of CSR.

2.2 Analysis of CSR activities

2.2.1 Environmental pillar

In the field of the environment, the use of environmentally friendly technologies and activities with a positive impact on nature, Vodafone is very committed. At the same time, this part of their socially responsible behaviour is the most communicating to the public and intermingling across its business activities.

The first green network

The largest part of the power consumed by Vodafone, more precisely 90%, is the consumption of the mobile network, which includes the operation of antennas, base stations (BTS) and other technologies. The annual consumption of this network is at least 60 GWh, which is noticeably affected by the environment. In order to eliminate these impacts, Vodafone decided to take energy savings and launched the Green Network in 2011. In practice, two thirds of the telecommunication network is powered by E.ON's renewable sources, the remaining one third of the consumption is offset by the planting of new trees in cooperation with the Nature Conservation Agency of the Czech Republic (Vodafone, 2019c).

The annual planting of trees amounts to approximately 20,000 units. Trees are planted mainly in protected landscape areas, these are the original species that have a natural environment here. The trees then absorb the emissions generated by the operation of the cellular network, specifically each tree is able to absorb 0.5 to 1 ton of $CO2$ during its life cycle (Vodafone, 2019c).

The first green network helps Vodafone to mitigate the impacts of its business, mobile network operation, not only on nature and rare resources, but also contributes to protecting the health of residents from endangered regions with industrial and power plants. With the use of renewable energy sources, Vodafone is not involved in pollution by sulphur, nitrogen or airborne dust (Vodafone, 2019d).

Recycling mobile phones

An old cell phone should not end up in ordinary waste. It contains components (precious metals and plastics) that are suitable for recycling and subsequent reuse. Vodafone can recycle up to 95% of all parts of the unnecessary phone. It is also made up of toxic substances (lead, copper and arsenic) that should not end up in landfills, are dangerous to health.

People can leave these retired mobile phones outside of special containers on electrical equipment or collection yards free of charge in any of over 120 Vodafone stores in Czech Republic. The money that Vodafone receives by recycling will invest in Vodafone Foundation projects that improve the air, water, land and life of fauna and flora on the planet. Since 2005, 80,000 phones have been recycled (Vodafone Foundation, 2019a).

Figure 3 - Returned mobiles

Source: https://www.vodafone.cz/_sys_/FileStorage/download/2/1199/sustainable-business-report-2017-18.pdf

Green traffic

Transport is also one of the parts affected by CSR activities in Vodafone. Almost all service cars are currently equipped with a fuel-efficient diesel engine and a number of service cars are shrinking. The employees of Prague's Vodafone headquarters also have 7 electric cars, 4 bicycles and 4 scooters, which can be borrowed free of charge for their work meetings in Prague and for private purposes.

Vodafone has been supporting the European Mobility Week or Action for Several Years to Experience the City of the Auto * Mat Initiative. Under this program, public, pedestrian and bicycle transport, or the rational use of automotive transport, are supported. In 2016, Vodafone won 3rd place in the Cyklo Employer of the Year competition. For bicycle employees, a bicycle lock is available at the headquarters of the company, where free bicycle employees can safely leave their bikes for work time or within the given capacity even in the winter. For cyclists is an enough showers after work available (Vodafone, 2019c).

2.2.2 *Social pillar*

Vodafone is committed to many projects and volunteer programs that support society and people who need it. In the following, the main parts are described, and then random actions and programs are selected, due to the fact that Vodafone is developing many activities in this activity.

Vodafone Foundation

The Vodafone Foundation is rightly considered to be the cornerstone of CSR in this company. It was created in 2006 and has so far (2019) invested over 195 million crowns into socially beneficial activities. It supports children, youth and disadvantaged social groups. Support is provided through both its own activities (grant programs) and other non-profit organizations. This foundation is one of the largest foundations in the Czech Republic. She has received many awards for her work so far. The Vodafone Foundation, through its programs, also contributes to the achievement of Sustainable Development Goals (SDGs), particularly in the area of quality of life for people with disabilities and access to education. (Vodafone Foundation, 2019b).

Foundation Mission: Vodafone Czech Republic, a.s. wants the foundation to change the world for the better and contribute to making the world a place where human solidarity is not a foreign concept and where socially responsible business activities are a standard (Vodafone Foundation, 2019b).

Main goals:

- the development of civil society through the capacity building and know-how of non-profit organizations,
- the use of communication technologies for socially beneficial purposes,
- developing capabilities, skills, own initiatives and social responsibility of young people,
- supporting the personal involvement of Vodafone Czech Republic employees in local communities (Vodafone Foundation, 2019b).

The Foundation's core programs are as follows:

- **"Rok jinak"**

The Vodafone Foundation's core activity is the "Rok jinak". This program offers to candidates, usually top professionals and professionals from the commercial sphere, to spend some time (3 months or one year) in a non-profit organization while receiving their usual salary paid by the Vodafone Foundation. The organization gets a full-time professional and full-time know-how. It is an opportunity to change the world for the better, help the needy and realize your dream. The "Rok jinak" was marked by CSR experts as the most interesting CSR initiative in the Czech Republic in 2015 and so far (2019), the program has been completed by 51 candidates (Vodafone Foundation, 2019c).

Figure 4 - "Rok jinak"

Source: http://www.nadacevodafone.cz/programy/rok-jinak.html

- **Technology for Society**

This is a grant program for nonprofit organizations with technological focus. The program supports and seeks innovative social use of modern technologies. Each year, the Good Apps competition is announced. More than 4 million crowns are distributed annually (Vodafone Foundation, 2019d).

For example, in 2016 the Rescue app was launched. The goal of this mobile application system is to significantly reduce the arrival time of the Medical Emergency Service to the event location. This is achieved primarily by the precise localization of patients (Vodafone Foundation, 2019e).

Employee care

Vodafone is fully aware that its success lies in satisfied and motivated employees. It also provides its current employees with a very wide range of above-standard benefits and services at the present time, resulting in a constant influx of new entrants to work in this company and thus enough job seekers.

The corporate culture and personnel policy of this company begins with the possibility of informal dressing for work, respect for employees without discrimination (diversity of cultures, beliefs, race, employing disabled people, parents with small children), contact between employees regardless of age, job position or length of work in Vodafone.
Employees receive, in addition to meal vouchers, one extra holiday week, three "sick days" (days when an employee can do what he needs or stay at home without a disability), telephone also for private use or home -office. Each employee is entitled to a number of benefit points a year, that can turn into holidays, education, sporting activities or, for example, buying medicines in pharmacies.

Vodafone also promotes social responsibility among its employees. Employee involvement is possible in several programs:

- Every employee can participate in the **Non-Profit Day**. In one calendar year, everyone can participate twice (once as an individual and once as a team). Each participant is paid an average pay per day.
- Vodafone joins the **charity collection** once a year and doubles the amount to be collected by Vodafone Czech Republic, a.s. between themselves.
- The involvement of employees in **beneficial sporting activities** is financially supported by Vodafone (Vodafone Foundation, 2019f).

2.2.3 Economic pillar

Within the economic area, the company focuses on the quality and safety of its products and services, relationships with its customers or investors, and builds trust relationships with business partners. Suppliers are selected according to their environmental or social standards. All activities of the company are based on the so-called Ethical Purchasing Code, the observance of which is also required from suppliers. As a part of a fair business, the company also focuses on safer internet for children and adolescents and tries to prevent internet crime.

Transparency

Vodafone is leading an open dialogue not only with its customers, but also with suppliers and partners. Thanks to many suppliers and efforts to meet certain required conditions, Vodafone makes cooperation with partners by their adoption and compliance with the codes below:

- **Ethical Purchasing Code.** This Code describes the conditions and activities to be avoided by the contractor (e.g. child labour, discrimination, forced labour, etc.) (Vodafone, 2019e).

- **Labour Safety Code.** Undertakes entities in a contractual relationship with Vodafone to comply with regulations, regulations and permits in the area of OSH, is binding on partners, subcontractors or their employees and authorizes Vodafone to monitor compliance with them (Vodafone, 2019f).
- **Anti-Corruption Code.** It describes in detail the desirable behaviour of suppliers and partners to avoid possible corruption behaviour (Vodafone, 2019g).

Tax contribution

Tax is a vitally important way for governments to raise the revenue needed to help fund reliable public services and civil infrastructure. As a major investor, taxpayer, employer and purchaser of local goods and services, Vodafone makes significant contributions to the economies of all the countries in which it operates. In 2016-17, it contributed €507 million in cash to Czech government (see the attachment; Vodafone, 2019h).

Fair Advertising

Vodafone seeks to be an operator that can be trusted by customers and is therefore responsible for marketing. The company's offerings are clear and simple, no underline. As the only operator in the Czech Republic, it accounts for customer calls for seconds, even in the first minute. It is as good as new and existing customers. Also, customer data is strictly secure, only selected employees have access to it. In order to secure customer data, several projects have been implemented in Vodafone to help increase data security.

In addition to its business activities, Vodafone also develops social responsibility activities that include all three pillars. Although the company fulfils the three pillars of social responsibility already mentioned, it neglects one of the social indicators. Although the company spends money and implements a range of programs to help disadvantaged population groups, it does not seek to employ these groups of citizens at their own workplace. That's what the company should try to fix.

3 Verizon

3.1 Introducing

Verizon Communications is an American multinational telecommunications conglomerate and was founded on June 30, 2000 by Bell Atlantic Corp. and GTE Corp. (Verizon, 2019a). While Verizon is truly a 21st century company, the mergers that formed Verizon were many years in the making, involving companies with roots that can be traced to the beginnings of the telephone business in the late 19th century. GTE and Bell Atlantic had each evolved and grown through years of mergers, acquisitions and divestitures. Each had proven track records in successfully integrating business operations. Bell Atlantic, the surviving entity, changed its name to "Verizon", a portmanteau of veritas (Latin for "truth") and horizon in 2000. In 2015, Verizon expanded its business into content ownership by acquiring AOL and two years later it acquired Yahoo!. The company is based at 1095 Avenue of the Americas in New York. A bellwether for the industry, Verizon Communications was added to the Dow Jones Industrial Average in 2004. Verizon has a regional presence in wireline and national presence in wireless markets, with well more than 100 million Americans connecting to a Verizon network daily (Verizon, 2019a).

The Corporate Social Responsibility (CSR) of Verizon focuses on using emerging new technology to build a better and more responsible future, which is an appropriate and attainable goal for the leading American telecommunications company. In order to develop the new advanced technology to achieve its social responsibility goal, Verizon is seeking various ways to create incentives and innovations to its research and development department, and thus they can build a better, more responsible future. And meanwhile, Verizon does not only look for improvements for the social aspect, but they also try to make a big difference in economic and environmental aspects. The CSR of Verizon serves as a perfect example of manifesting and demonstrating how technology will change every aspect of human life.

3.2 Analysis of CSR activities

3.2.1 Environmental pillar

As a big corporation, Verizon recognized its responsibility for environmental aspect as well. And the company has developed many strategic goals in the future for the company to transfer to an environmentally friendly corporation in the end. For examples, the company claims that by 2020, 80 percent of their assessed suppliers will be compliant with Verizon's overall CSR standards. By 2025, the company will reduce water consumption by 15 percent against the 2016 baseline. And by 2025, they will reduce their carbon intensity by 50 percent against the 2016 baseline. And by 2030, they will plant 2 million trees in communities around the world, including 250,000 in areas impacted by the 2017 hurricane season. These are concrete goals with number and quantities, thus it takes time and efforts to achieve them. Moreover, it is vital for Verizon to realize its significance in preventing environment degradation, and they do try their best to keep an environmentally friendly world for our offspring to reside.

Figure 5 - Sustainable Development Goals

Also in alignment with SDG 13, we have made progress with these existing goals:

SUSTAINABLE DEVELOPMENT GOALS

By 2020, 80 percent of our assessed suppliers will be compliant with Verizon's overall CSR standards.
By 2025, we will reduce water consumption by 15 percent against our 2016 baseline.
By 2025, we will reduce our carbon intensity (a measure of the carbon our business emits divided by the terabytes of data carried by our networks) by 50 percent against our 2016 baseline.
By 2030, we will plant 2 million trees in communities around the world, including 250,000 in areas impacted by the 2017 hurricane season.

Source:https://www.verizon.com/about/sites/default/files/corporate-responsibility-report/2018/index.html

Energy – efficient solutions

In order to reducing greenhouse gas emissions, Verizon believe business and technology companies is playing a very important role on this. They have the responsibility to help people and society to build a low-carbon future. They made the solution by three ways.

Frist, smarter and faster building deliver data can help the managers to reduce the energy waste and increase their building performance. Second, they reduce the commute times and carbon emissions by promoting the traffic signals. It will save more time for people on the road and make the traffic more effective. Last, they developed more mobile app to help people have a more convenience lives, such as finding parking lots and fastest road planning.

As a result, their effective solution helped to reduce 8.2 million metric tons of CO_2 emissions, just like they removed 1.6 million cars from the road (Verizon, 2019b).

Waste

Verizon is committed to the sustainable development strategy, and they have a strict use policy for the recycling and the use of papers. For the use of people, "over the past four years, Verizon Wireless has reduced the amount of printed material for customer orders by 70 percent compared to 2014 levels. (Verizon, 2019b)" In 2018, they are keeping the strategy forward, and reduced almost 157 tons of paper, equal to 3,100 trees (Verizon, 2019b).

For recycling, their plan is recycling and reusing the boxes for cell phones, set-top boxes, and other electronic devices. Also, they engage with customers and community to approach the solution. As a result, we held 53 e-waste events in 2018, and collected 500,289 pounds of materials for recycling, equal to 725.3 metric tons of CO_2e emissions (Verizon, 2019b). For internal recycling and conservation programs, they reduced the use of plastic model phones by 45% since 2015, and they reused and recycled 100% of wireless devices from their customers. For battery, there are 89 million pounds of telecommunications equipment, batteries, paper are recycled in 2018.

3.2.2 Social pillar

For the social aspect, Verizon has been working very hard to develop 5G network. As people might know, the time for 5G is imminent, whoever is the first one to develop and apply this technology will change the whole internet society, which will bring a brand-new experience to its users. People may still remember how the internet changed from 3G to 4G, everything was completely different. As the corporate CEO Han Vestberg states, "5G will not only provide a quantum leap in connectivity – it will also unleash exciting new opportunities to address the most pressing environmental and social challenges we face today". It can be speculated that the 5G will bring our internet experience into a new era, where many opportunities exist. It is surely that the 5G will change how people socialize with each other. Other than this, the company has been sponsoring its employees to continue their school educations. For more participation to this society, Verizon created "the V Team" for more support to the society.

Helping millions get back on their feet

In 2018, approximately 8 million US dollars was donated to help its employees to schools and nonprofits, and two hundred thousand employees were beneficial due to this donation. Addition to that, in 2018, Verizon donated 4.6 million US dollars to disaster recovery projects throughout the U.S. Both of these two activities have a great influence on its people and the whole society.

Figure 6 - Donation

Helping millions get back on their feet

Unfortunately, 2018 brought natural disasters to many of the areas we serve. Our Credo tells us to run to a crisis, not away, and Verizon and our employees stepped forward in a variety of ways to help those who were victims of hurricanes, wildfires, floods, volcanic eruptions and earthquakes. Our employees helped millions of people impacted by these disasters get back on their feet. In total, Verizon donated more than $4.6 million to disaster recovery and community projects throughout the U.S., including $1 million to the American Red Cross for Hurricane Michael relief.

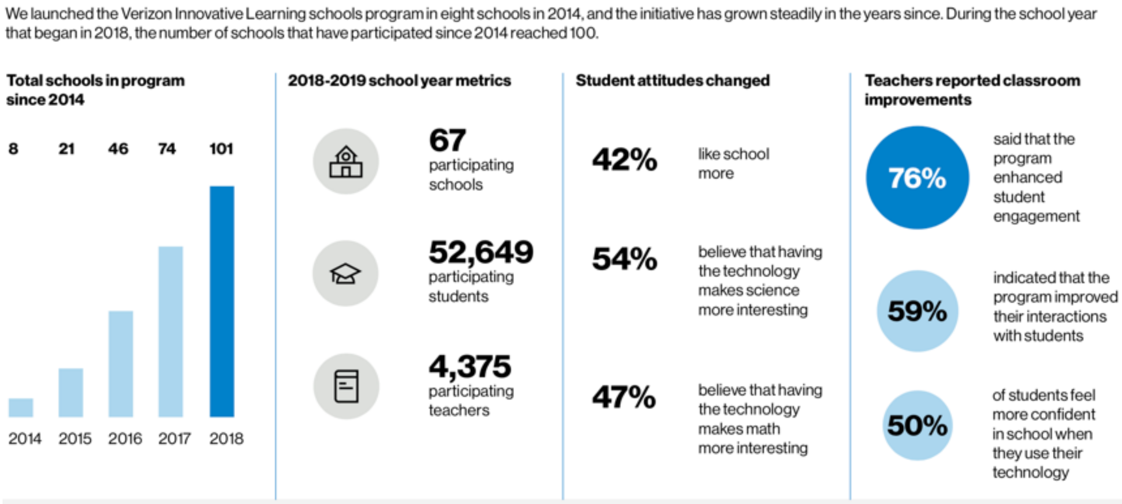
Verizon launched an Emergency Resource Center Hub, which provides updates on our response to everything from wildfires to earthquakes to hurricanes. This hub allows news media, local officials, employees and others to learn about our emergency response efforts. For current information on Verizon's emergency response efforts, please visit our Emergency Resource Center.

Source:https://www.verizon.com/about/sites/default/files/corporate-responsibility-report/2018/index.html

Innovative Learning

In addition, the company provides low-cost learning program called Verizon Innovative Learning, and their goal is to reach 3 million students to the tech-dependent job market. Right now, they have already impacted nearly 1.7 million students since 2012. This activity does not only save students' tuition, but also relieve the education tension in the United States, which further reduces the funds for education.

Figure 7 - Education Program



Source:https://www.verizon.com/about/sites/default/files/corporate-responsibility-report/2018/index.html

3.2.3 Economic pillar

Apparently, the most important aspect for this company to continue its contribution to the society is its growth and development. Verizon, as a multi-million corporation, not only focuses its own development and growth, but it also acknowledges its inevitable responsibility to contribute the economic development of the whole society. As it was mentioned in its CSR statement, "We are building processes to identify and purse market opportunities that address economic and social challenges while enabling significant revenue generation for Verizon". Through various means, the company begin to create economic benefits for its partner corporations and employees.

Code of conduct

Verizon has been compliance with the code of conduct since they started the business. They believe being honest is the core of who they are. Being fully transparent is the basic responsibility to the society - their consumer, stakeholders, and governors.

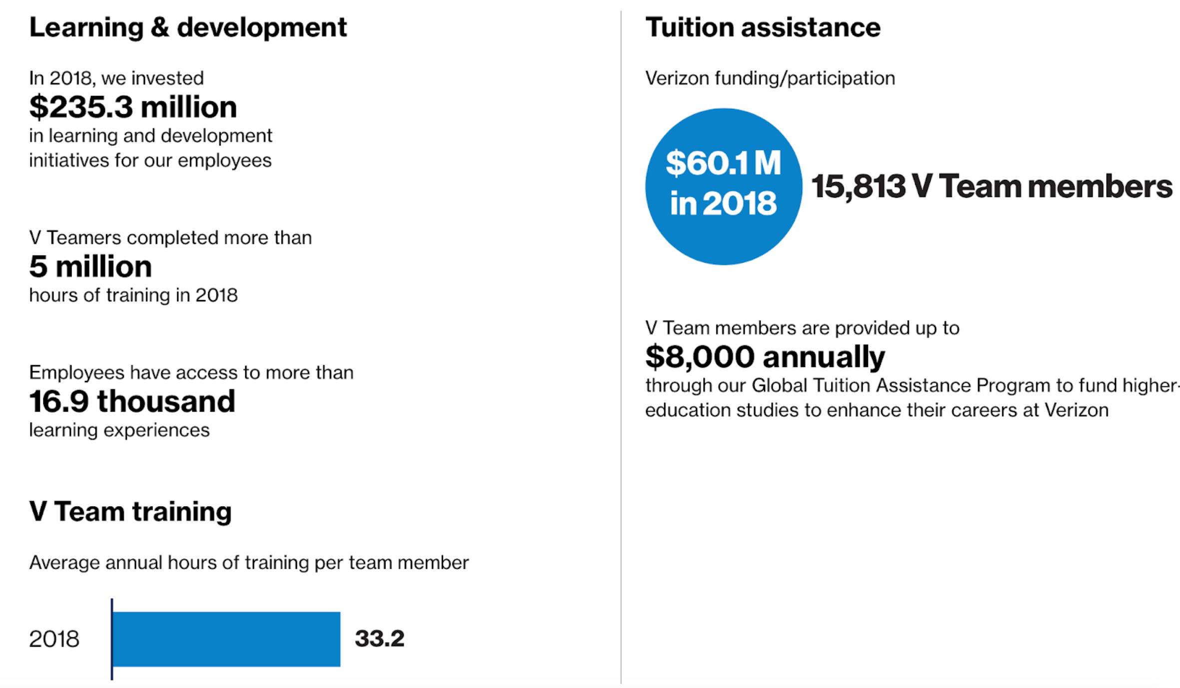
Safeguarding the integrity of our business

"We monitor conflicts of interest and require all employees to complete Verizon Code of Conduct training to safeguard the integrity of our business. (Verizon 2019b)" They keep a complete ethic and compliance plan and use it as the foundation of their code of conduct. The code of conduct defines the way of their work, and it creates a core value to guide their honesty, respect, and achievement. They encourage "V teamers" provide questions and reports to consider and achieve any more other information about ethic standard. V teamers actually provide a lot of resources to help them fulfil our commitment to integrity.

<u>Employee Growth and Development</u>

Investment on Employee growth and development is one of the most important mission Verizon taking in mind. Each year they spend hundreds of millions of dollars to train and support their employees. They help their employees to improve on their vertical and horizontal development (Verizon, 2019b). There is an organization named The Association for Talent Development's BEST Awards official recognized Verizon ranked 4th in 2018 (Verizon, 2019b).

Figure 8 - Learning and development



Source: https://www.verizon.com/about/sites/default/files/corporate-responsibility-report/2018/vTeam/growth.html

4 Comparison

Based on previous analyses of CSR activities of both mobile providers, a comparison of these portfolios in the context of Triple Bottom Line is made in this chapter. The activities are divided into three groups according to the categories of the Triple Bottom Line: environmental pillar, social pillar and economic pillar.

Chart 1 - Comparison within environmental pillar

Environmental pillar	
Vodafone	**Verizon**
The first green network	Smart technology
Energy from renewable sources	Traffic signals
Planting trees	Reduction of emissions
Reduction of emissions	Removing cars from road
Recycling mobile phones	
Green traffic	

Source: own compilation, 2019

As for the environmental pillar, we can find some similarities in both companies. Vodafone and Verizon are recycling old mobile devices and they are taking care about reduction of emissions. Verizon uses more smart technology to reduce traffic on the road and helps with traffic light optimization. In turn, Vodafone is more active in "real action" such as planting trees and using an energy from renewable sources.

Chart 2 - Comparison within social pillar

Social pillar	
Vodafone	**Verizon**
Vodafone Foundation	5G
Development of non-profit organizations	Donation
Technology for society	Low-cost learning program
Employee care	

Source: own compilation

In social pillar are both companies very active. They are supporting non-profit communities, Vodafone for example established the Vodafone Foundation and Verizon have a donation program and supports students, which do not have enough money for studying. In return Vodafone supports students too, but instead of paying them their studies, it helps them with realization of their ideas. Thank this was developed the Rescue app, that minimize the arrival time of emergency medical service.

Chart 3 – Economic pillar

Economic pillar	
Vodafone	**Verizon**
Transparency	Code of Conduct
Tax contribution	Employee growth and development
Fair advertising	

Source: own compilation

Both companies has been kept a good record on compliancing with the code of Conduct to show their honesty and respect to the society. In order to increase the level of corporate social responsibility on economic part, Vodafone has a great contribution on tax to benefit people's lives. Fair advertising is also a promising decision Vodafone made to being honest and fair to every possible customers. At this part, Verizon is very focused on their internal development. Employee growth and development program is designed for benefiting every employee and increasing their working performance at the same time. Even through companies has different ways, both of them are helping with the economy of the society.

5 Lessons learned

We realize two companies are both working hard on developing social responsibility and benefiting people's lives, and they are doing in different ways. After the comparison of two companies, we believe there are some actions and suggestion can be helpful to the companies. See attached table below.

Figure 9 - Suggestions

Vodafone	Verizon
More smart technologies	Motivated action
Educational investment	More app development

Source: own compilation

We would like to thank the two companies for their great contributions in corporate social responsibility and hope that they will achieve greater progress in the near future. They should still continue with their activities.

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Attachment

Czech Republic

	Revenue (€m)	Profit before tax (€m)	Direct revenue contribution: Tax (€m)			Direct revenue contribution: Non-tax (€m)	Indirect revenue contribution (€m)	Capital investment (€m)	Direct employment
			Total paid	Split between: Direct taxes	Corporate tax				
2016–17	507	32	17	13	4	14	70	92	1,694
2015–16	499	26	17	n/a	n/a	23	64	101	1,735
	We have one of the largest and most modern 4G networks in the Czech Republic where we operate mobile and fixed-line services with 3.6 million customers as of 31 March 2017. We offer 3G and 4G coverage to the Czech population and also provide communications services to Czech businesses. We entered the market in 2005 through the acquisition of Oskar Mobil. Our 2016–17 non-tax contribution was lower than the prior year due to the absence of any payments for spectrum licences.								
Number of legal entities	3								
Legal entities	• Vodafone Czech Republic A.S. • COOP Mobil S.R.O.*						• Oskar Mobil S.R.O.		

Source: https://www.vodafone.com/content/dam/sustainability/pdfs/vodafone_2017_tax_country_by_country.pdf

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A Comparative Analysis of Corporate Social Responsibilities between ČEZ Group (Czech Republic) and WEC Energy Group (USA)

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Czech Republic & USA 2019

CONTENT

INTRODUCTION

The subject of this project is a comparative analysis of Corporate Social Responsibility (CSR) between two global energy companies. The aim of the project is to compare corporate social responsibility of ČEZ Group and WEC Energy Group.

WEC Energy Group delivers electricity, natural gas and steam to more than 2.2 million customers in Wisconsin. ČEZ is the biggest energy producer and provider in the Czech Republic.

This project is to determine what CSR issues exist with WEC Energy Group and ČEZ Group, what differences and commonalities exist between them, and what CSR knowledge can be shared. This analysis will assess CSR from two cultural perspectives (USA and the Czech Republic).

Case study is divided into analysis and research. The analysis contains the definition of CSR, CSR pillars and advantages of CSR. Then there is description of company ČEZ and WEC Energy Group. The research includes individual CSR activities of both companies. Based on the all gained data there are defined CSR similarities and differences. In the final chapter there is conclusion for the both companies. The project is focus on economic, social and environmental CSR activities.

1 ANALYSIS

This chapter is devoted to definition of corporate social responsibility, triple bottom line and advantages of CSR. Also, there is described both company – ČEZ Group and WEC Energy Group.

1.1 Definition of CSR

The concept of corporate social responsibility first appeared in the 1970s. The rise in interest in this subject is due to the increasing public attention to the negative effects of a globally operating world economy. Attention is paid to the role of companies in harming the environment, shaping consumers' lifestyle, corporate responsibility for behavior and behavior towards suppliers and customers in the labor market (Zadražilová a kol., 2010).

Socially responsible companies place the highest priority on legislative requirements and then, on top of that, voluntarily engage in responsible behavior. The result is a positive impact on the company and at the same time a benefit and a competitive advantage for the company (businessinfo, 2008).

There is currently no uniform definition of CSR. This is because CSR is based on volunteering, it does not have strictly defined boundaries, and gives space for a broad understanding and interpretation of the term. Therefore, there are several definitions to define CSR (Pavlík, Bělčík, 2010). There are 3 CSR definitions below.

The Commission of the European Communities (2001) define CRS as voluntary integration of social and environmental aspects into everyday business operations and interaction with corporate stakeholders.

"Corporate social responsibility is the continuing commitment by business to behave ethically and contribute to economic development while improving the quality of life of the workforce and their families as well as of the local community and society at large." (World Business Council for Sustainable Development, 2000, page 3)

According to Trnková (2004) CSR is a concept by which companies openly admit to their co-responsibility for the state and running of the company. It requires shifting the view of one's own social role from "profit only" to a broader perspective in the context of 3 P (people, planet, profit). It means working with the triple bottom line, where the company focuses not only on economic growth but also on environmental and social aspects of its activities. The triple-bottom-line is described in next chapter.

1.1.1 Triple bottom line

Corporate social responsibility is built on three main pillars (triple bottom line):

- Economy (profit)
- Society (people)
- Environment (planet)

Fig 1: Three pillars

Source: vvpromotion, 2019

Economic performance

The main goal of each business is to achieve a profit and to increase the company's share price over the long term. This allows companies to finance several socially responsible activities. Economic socially responsible activities belong:

- company and its employees avoid corruption and behave ethically
- way of corporate governance (principles of good company management)
- organizations are credible and transparent
- long-term building and managing customer and supplier relationships
- behavior to owners and shareholders (attempt to compliance business activities with the values and expectations of shareholders) (Kunz, 2012)

Social performance

The social area is related to the company's care for its employees and the working conditions that the company creates. A satisfied and motivated employee is a key factor in their success. Research shows that a company’s socially responsible attitudes to their employees can bring them many benefits, such as gaining a reputation as a good employer, higher employee loyalty, lower turnover and absenteeism, or higher employee performance.

Companies can engage in many activities to enrich their employee relationships:

- creating working conditions for work life balance
- human capital development - skills upgrading, career advancement
- outplacement - provision of retraining of dismissed employees for further employment in the labor market
- employment policy - fair wages, employee benefits, cafeteria system
- respecting the principle of equal opportunities - diversity management
- fight against mobbing, sexual harassment and harassment
- work enrichment, work rotation
- protection of work, health and safety of employees
- friendly business climate
- respect for human rights
- employment of minority population groups
- prohibiting child labor (Kunz, 2012)

Environmental performance

Top management should focus on applying environmental responsibility both within the company and regarding the external environment. The company affects these areas through its functioning (for example: landscape appearance, noise, resource use, traffic load). The company should strive to eliminate adverse impacts associated with its activities on the environment as much as possible. In case of problems, the company should always openly communicate and inform the public (Kunz, 2012).

Environmental activities may include:

- ecological production, products and services
- ecological corporate policy – recycling, using organic products

- reducing environmental impacts
- protection of natural resources (Trnková, 2004)

1.1.2 Advantages of CSR

Many companies are already aware that they must behave seriously to customers and partners, take care about their employees, protect the environment, etc. This behavior will bring benefits to the business. More recently, there are other drivers of responsible business, such as pressure and expectations from customers, the local community, government agencies, banks, creditors, and insurance companies.

Responsible businesses practices provide companies with direct and indirect benefits and allows companies to gain a long-term competitive advantage over those whom do not. It positively affects the whole society and directs its influence on the environment (businessinfo, 2008).

As tangible assets in the form of real estate, inventory or financial assets are important to the company, intangible assets such as human capital, capital in natural resources, brand value, reputation or trust and partnership relationships are also very important. Socially responsible companies are characteristic its proactive policy (Trnková, 2004).

Advantages which CSR brings to a company:

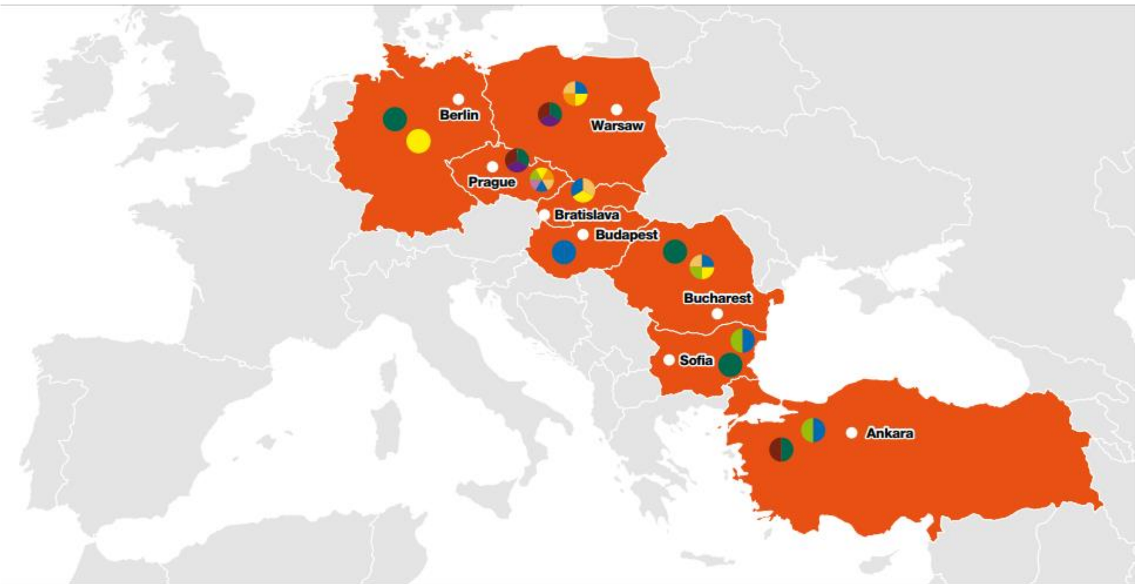
- Opportunity for innovation
- Greater attractiveness for investors
- Greater transparency
- Enhanced credibility
- Long-term sustainability of the company
- Increased employee loyalty and productivity
- Ability to attract and retain quality employees
- Building a reputation and resulting strong position on market
- Differentiation from competitors (competitive advantage)
- Creating a background for a smooth and successful commercial operation
- Reduce risk management costs
- Building political capital (improving the position for current and future negotiations)

- Dialogue and building trust relationships with and around the environment resulting mutual understanding
- Reduced risk of boycotts and strikes
- Direct financial savings associated with environmental practice (Trnková, 2004).

1.2 About ČEZ Group

ČEZ Group is an integrated energy group operating in Western, Central and South-eastern Europe with its headquarters in the Czech Republic. The core business is the production, distribution, trade and sale of electricity and heat, trade and sales natural gas and coal mining. It also provides customers with comprehensive energy services. ČEZ Group companies employ almost 30.000 employees (Annual report of ČEZ, 2017).

Fig 2: ČEZ Group



Source: Annual report of ČEZ, 2017

ČEZ is joint-stock company. It was founded in 1992. The most significant shareholder of the parent company, ČEZ, is the Czech Republic with a share of the registered capital (30 June 2018) almost 70%. ČEZ shares are traded on the Prague and Warsaw stock exchanges, where they are part of the PX stock market indexes and WIG-CEE (ČEZ, 2019).

The logo of ČEZ Group can be found in figure 3.

Fig 3: Logo of ČEZ Group

Source: ČEZ, 2019

1.2.1 Mission and Vision

ČEZ Group's mission is to provide safe, reliable and positive energy to customers and the entire company. The vision is to bring innovation to address energy needs and contribute to a better quality of life (Annual report of ČEZ, 2017).

1.2.2 Strategy

ČEZ Group's strategy is based on three priorities:

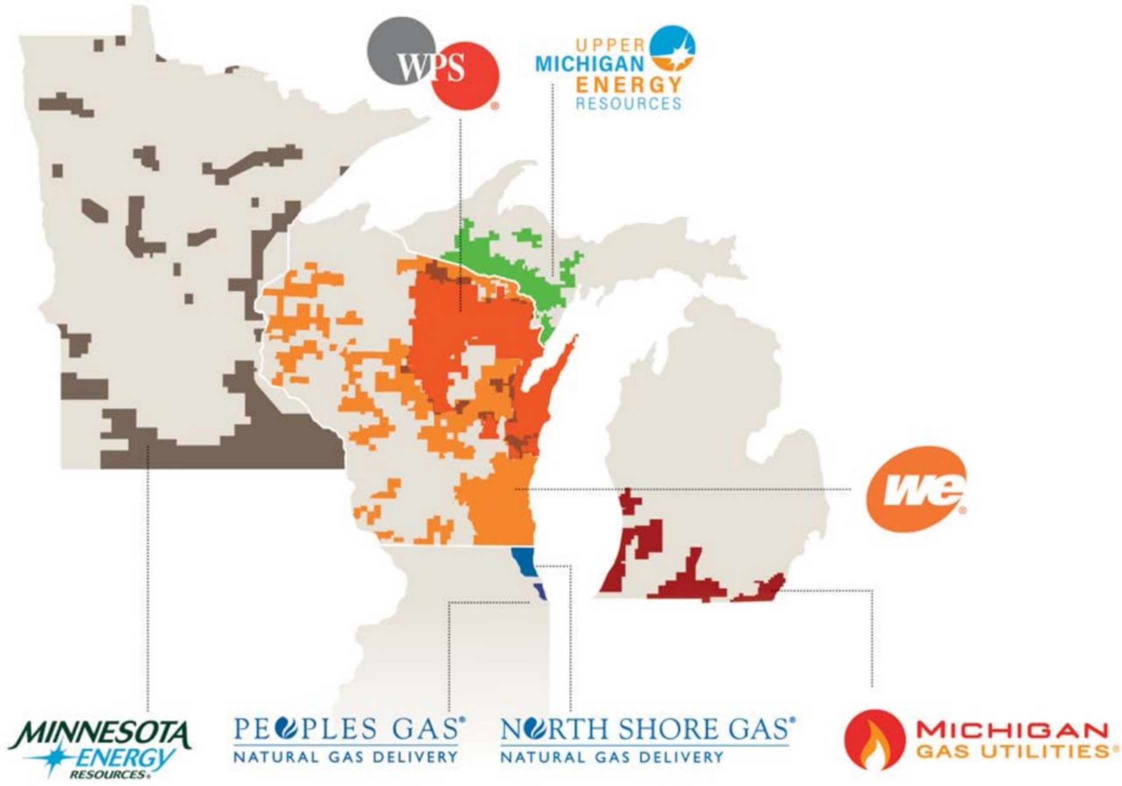
1. ČEZ is among the best in the traditional energy business and actively respond to the new challenges of the 21st century.
2. Offering a wide range of products and services focused on the energy needs of their customers.
3. Strengthen ČEZ Group's position in Europe by investing into energetic energy assets.

Energy is moving towards greater decentralization and renewable resources, which are areas in which ČEZ Group is actively seeking new opportunities and new markets. It focuses on modern technologies that will take the form of energy in which it wants to play a significant proactive role (Annual report of ČEZ, 2017).

1.3 About WEC Energy Group

WEC Energy Group is an energy group operating in four Midwestern states of the United States. Total customer accounts are 4.5 million (WEC Energy Group, 2017). WEC Energy Group is a Fortune 500 company and a component of the S&P 500. The company has approximately 50,000 stockholders of record, 8,000 employees, and more than $31 billion of assets (Annual report of WEC Energy Group, 2017).

Fig 4: WEC Energy Group



Source: Annual report of WEC Energy Group, 2017

1.3.1 Mission and Vision

WEC Energy Group has a strong culture of respect for employees, customers, and the environment. It is mission statement focuses on the following areas: safety, integrity, reliability, inclusion, diversity, customer focus, sense of urgency, financial discipline, and a personal responsibility for results to guide their business practices. WEC Energy Group also focuses on safety as a top priority. The company has implemented a "Target Zero" safety goal, which aims to keep employees (who often work in dangerous field environments) safe with zero accidents.

The values outlined in the mission statement are committed to keeping employees and the public safe by targeting "zero incidents, accidents, and injuries every day while promoting employee health and wellness; to conduct business with the highest level of integrity with appropriate governance and management systems to help plan and ethically manage their corporate initiatives; to work every day to maintain their status as one of the nation’s most reliable energy companies; to support a culture of inclusion, valuing individual employees and welcoming a range of viewpoints to build a stronger company; to value human diversity and treat each other with respect while maximizing individual contributions, organizational effectiveness, and company success; to provide clear communication to satisfy every customer; to act with a true sense of urgency; to effectively manage costs to meet the expectations of their customers and shareholders; and to hold themselves accountable for living these values and carrying out their responsibilities (Annual report of WEC Energy Group, 2017). It is critical for company success for their leadership to model and support these behaviors.

1.3.2 Strategy

WEC Energy Group strategy is taking action to:

1. Modernize its power generation fleet to maintain fuel diversity
2. Reduce customer costs and achieve long-term carbon dioxide reduction
3. Retire older coal-fueled units and investments in renewable and low-carbon generation. The company adopted a new long-term target of 80% reduction below 2005 levels by 2050 (Market Watch, 2018).

2 RESEARCH

In this chapter, we outline individual socially responsible activities of both ČEZ and WEC Energy Group. CSR activities are divided to economic, social and environmental performance.

2.1 CSR activities of ČEZ

ČEZ Group follows strict ethical standards, including responsible behavior towards employees, the company environment. As part of its business activities, ČEZ Group endorses the principles of sustainable development and supports it energy efficiency, promoting new technologies and creating an environment for the professional growth of employees. The corporate culture is focused on security, steady growth in internal efficiency and support for innovation in order to increase ČEZ Group's value (Annual report of ČEZ, 2017).

The company gains awards for its social responsibility every year. ČEZ has repeatedly won the TOP Responsible Company Award for Society business platform, designed for the largest corporate donor in the Czech Republic. For example, in 2018, the company won first place in the category of Annual Non-Corporate Report (ČEZ Foundation Annual Report), first place for the best annual report (ČEZ Group Annual Report), first place for Most desired Company or first place in the TOP Employer category in the Energy sector, gas and petrochemical industries (ČEZ, 2019)

2.1.1 Economic performance

Total revenue is \$ 2.4 billion. \$ 937 million returned to stockholders in 2017. Common stock traded at \$ 23.98 (calculated with exchange rate – 12th April 2019) (Annual report of ČEZ, 2017; ČEZ, 2019)

The legislation of the Czech Republic puts very high demands on companies. There are complex conditions underpinning the field of energy and nuclear power operations. ČEZ Group respects and abides by all applicable laws and subordinates them to its activities (ČEZ, 2014).

The company adheres to ethical principles. It follows ethical standards that include responsible behavior with employees, the company itself, and the environment.

The basic principle of the ČEZ Group's corruption prevention agenda is zero tolerance for any form of corrupt conduct, whether direct or through third parties. The issue is covered by the department of compliance, internal audit and the so-called anti-corruption line (Sustainable development report of ČEZ, 2017).

The main risk management body is the Risk Committee, which acts as an advisory committee to the CEO of ČEZ. The Committee approves the aggregate risk limit of the annual plan, proposes a way to develop an integrated risk management system, and continuously monitors the overall risk impact on ČEZ Group and others.

ČEZ Group selects its suppliers in accordance with the legislation through above-the-threshold public tenders, but also through below-the-threshold tenders. The supplier chooses mainly according to the quality of the supplied material and the provided services, but also according to the price. The criteria for selecting a supplier include in some cases also technical evaluation criteria or ISO quality certificates (ČEZ, 2014).

2.1.2 Social performance

Employees

The company does not tolerate any discriminatory manifestations. The Company's Conditions of Employment and Collective Agreements contain anti-discrimination procedures and instructions that employees must follow. Total number of employees is 29 837, 21 percent of them are women.

ČEZ understands education as an investment for the future. It offers specific development and internal mentoring to newly recruited employee's positions, employees with potential and successors. Also, ČEZ take care of departing employees.

ČEZ offers a lot of benefits to its employees. For example, special bonuses for employee jubilees and upon retirement, one week's holiday beyond the law, life anniversary reward, meal tickets, financial contribution to pension insurance or life insurance, -home office and flexible working hours for some professions, the possibility of placing children in kindergartens in selected locations and many others.

The company engages the unions in the control of OSH and PO – ensuring quality safety clothing and work aids that satisfy the constant pressure on OSH quality. For example, distribution technicians have durable, high-fireproof overalls with a certificate of high fire resistance (Sustainable development report of ČEZ, 2017).

The goal of internal communication is to provide employees with clear and understandable information they need for their work. ČEZ as internal communication uses intranet, ČEZ News, online intranet interviews, intranet ČEZ TV, electronic newsletters, roadshow = meeting of managers and employees and informal discussion meetings (ČEZ, 2012). Employees can be a part in several corporate volunteering programs and other beneficial activities during the year (Sustainable development report of ČEZ, 2017).

Philanthropy

ČEZ Group is one of the pioneers of corporate volunteering and responsibility to its surroundings in the Czech Republic. Nadace ČEZ (Foundation ČEZ) was founded on 25 July 2002 as one of the first corporate foundations in the Czech Republic. Every year they support several projects that respond to the company's current needs. The most important donor of the foundation is ČEZ, a. s. (Nadace ČEZ, 2019)

In 2017, Foundation ČEZ supported 1,015 publicly beneficial projects CZK 185.96 million in programs that responded to the current needs of society. Foundation primarily supports activities of children and youth, supports disadvantaged citizens and actively cooperates with regions (Annual report of ČEZ, 2017).

During the year 2017 ČEZ supported below area in total amount $ 2,66 million. (exchange rate – 12th April 2019, ČNB)

Tab. č. 1: Donation of ČEZ

Area	**Mil. $**
Infrastructure and regional support	1,63
Culture and environment	0,61
Education, science, care of young people	0,04
Sport	0,37
Disabled persons	0,01
Total amount	**2,66**

Source: own compilation according to Annual report of ČEZ, 2019

Stakeholders

The company improves its relationships with key stakeholders through open and transparent dialogue. ČEZ minimizes risks and considers the needs of the locations where it operates, thereby increasing the efficiency of new investments (Sustainable development report of ČEZ, 2017).

ČEZ Group is still trying to improve its services for its clients. Therefore, in 2013, it issued a Customer Code that summarizes the level of service provided to households and smaller businesses. Customer Code guarantees customers the utmost clarity, friendliness and further improvement in the next period. The Code clearly defines standards of customer communication (ČEZ, 2014).

2.1.3 Environmental performance

The company's goal is to be a safe, healthy and responsible company. Physical and human assets are managed in a long-term perspective and are environmentally friendly.

Strategic priority is to ensure sustainable operation. ČEZ Group incorporates a responsible approach to the environment into its strategy through its Environmental Management System (EMS). The aim of the system is to integrate environmental protection into the overall strategy of ČEZ Group and into regular activities. It is a tool by which the company actively monitors, manages and evaluates its activities in relation to the environment.

The company operates emission-free nuclear sources, which are the basis of the production portfolio. The aim is to minimize environmental and human health impacts, not only at present, but also in the future, so as not to create a burden for future generations (Sustainable development report of ČEZ, 2017).

Air, climate and water protection

ČEZ in the operation of coal power plants and heating plants systematically monitors their influence on air pollution through its own air pollution network. On its website, it offers the public the data measured around the power plants (ČEZ, 2019). Since 2007, ČEZ Group has reduced its CO2 emissions by 40%. Annual sulphur dioxide emissions from coal power plants declined by 189,039 metric tons in 35 years. ČEZ Group is committed to producing electricity with a neutral carbon footprint by 2050. In the area of water management, ČEZ Group focuses on economical water management, prevention and reduction of its pollution and compliance with measures for the protection of surface and groundwater (Sustainable development report of ČEZ, 2017).

Waste management

The company strictly adheres to all legal obligations in the area of waste management and seeks to reduce the amount of waste generated and control its hazardous properties, which could have a negative impact on the environment. They are trying to recycle as much material as possible in order to be reused. The waste is trying to make maximum use of it, waste is sorted into individual materials in all plant operations (Sustainable development report of ČEZ, 2017).

Fauna and Flora protection

The company also pays close attention to the protection of fauna and flora occurring in the areas and around the power plants. Continuously ČEZ carries out the reclamation of the affected areas in order to minimize and eliminate the effects of mining and dump activities on the environment. ČEZ Group also cooperates with several rescue stations that care for injured wildlife. As part of its sponsorship, the Foundation ČEZ also supports zoos and wildlife preserves (ČEZ, 2014; Sustainable development report of ČEZ, 2017).

2.1.3.1 Nadace ČEZ (Foundation ČEZ)

In 2017, Foundation ČEZ supported 1,015 publicly beneficial projects CZK 185.96 million in programs that responded to the current needs of society. These were regularly announced grant programs and others foundation activities:

- Orange Playgrounds - Support for the construction and restoration of children and sports fields.
- Support for Regions - supporting activities that contribute to improvement life of residents in municipalities throughout the Czech Republic, especially health, children and youth, social, science and education, protection of human health and human rights, culture and the environment.
- Orange Stairs – support for barrier-free modifications disabled pupils, students and educators into teaching.
- Trees – support for tree planting - especially new ones and renewed alleys and alleys.
- Orange Crosswalk – support for lighting pedestrian crossings

- Employee Grants – support for non-profit organizations in which company employees volunteer ČEZ Group in the Czech Republic
- Granting Wishes – a common charity project of employees' ČEZ Group and ČEZ Foundation. Financial aid was directed to families with seriously ill children
- Orange classroom - for participation in mathematical-physical Olympics and other competitions have been given aids by schools and equipment that have contributed to improving the quality and attractiveness of teaching technical subjects
- EPP Move to Help mobile app
- Orange bike – offered cultural and social visitors and sports events a minute charity ride on specials exercise bicycles for the benefit of local non-profit organizations (Annual report of ČEZ, 2017).

2.2 CSR activities of WEC Energy Group

2.2.1 Economic performance

The WEC Energy Group returned more than $656 million in dividends to stockholders in 2017. Total Revenue is $7.7 billion, and its common stock recently traded at $70.09. The company has grown in recent years as it has acquired several companies, which has greatly improved both the stock and financial performance of the company (Annual report of WEC Energy Group, 2017).

2.2.2 Social performance

The WEC Energy Group is committed to diversity and inclusion that is an integral part of its company culture. The diversity and inclusion strengthen its values to meet its business goals that ultimately drive success. By supporting and promoting business resource groups, they provide opportunities for networking, career and leadership development, and talent referral source. The WEC Energy Group encourages female leadership and gender equity in the workplace. Currently, 31 percent of company directors are female and/or ethnically diverse. WEC works with the Wisconsin Energy Workforce Consortum (WEWC), which helps energy companies foster relationships with universities in order to promote a more diverse and qualified workplace (WEC Annual CSR Report, 2017). Further, the company keeps upper management fresh with six new directors elected in the last five years. This helps the company keep new perspective in approaching business challenges.

The company and its foundations have donated $17 million to nonprofit organizations in 2017. WEC has relationships with nonprofits in education, arts, human services, community development, economic health, and environmental causes. The company also has a partnership with United Way, and many company employees take time to volunteer for organizations such as Habitat for Humanity. The company has direct involvement in Partners Advancing Values in Education (PAVE), Red Cross, Boy Scouts of America, among many more organizations.

In the energy industry, employees often are exposed to hazardous situations. The company acknowledges these risks, and therefore emphasizes safety: a new “Target Zero” goal has reduced workplace accidents by 52% over the last decade. This goal embodies both incidents in the field as well as for customers in situations such as gas leaks. “Slow” gas leaks have fallen drastically with the implementation of this program, with only five leaks in 2017 which are consistently monitored by the company. WEC Energy Group Workforce (Dec. 2017) of the 8135 employees, 25% are female. See in figure 5.

Fig 5: Workforce

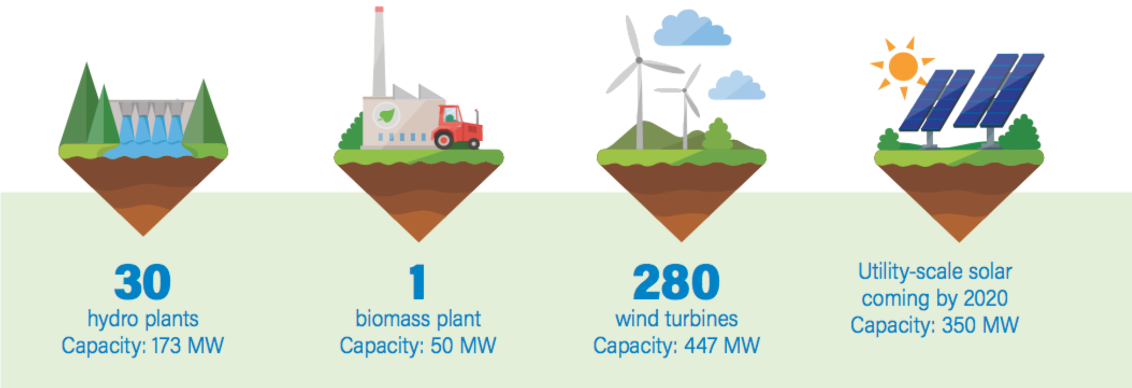
Source: Annual report of WEC Energy Group, 2017

2.2.3 Environmental performance

The WEC Energy Group encourages their employees to be environmental stewards. The company's environmental performance is an integral part of its planning and operating decisions and works to minimize the impact of operations by surpassing standards and supporting many programs, including air monitoring and quality control, smoke stack scrubbing, renewable energy sources (wind, solar, hydroelectric, biomass, and nuclear), and shutting down older and inefficient coal plants. The company also has programs which support flora and fauna in its jurisdictions and along it is gas pipelines.

WEC Energy Group invested $2.5 million in air quality improvement programs over the past 15 years. These programs support the reduction in sulfur oxide, nitrous oxide, mercury, and particulates. The company is actively retiring multiple older coal-fired plants while increasing energy from renewable sources. WEC is currently ahead of its of goal for reducing carbon emissions by 80% by 2050 - now this reduction will be achieved by 2030.

Fig 6: Investment programs



Source: Annual report of WEC Energy Group, 2017

The company is actively involved in helping flora and fauna. There are various programs which help conservation efforts for endangered and protected species, including restoring habitats for these species around the natural gas pipelines. The company's power plants are home to Peregrine Falcons, which the company helps to maintain. Recently, a company poll allowed employees to help name the new Peregrine chicks after Wisconsin sports legends (Annual report of WEC Energy Group, 2017).

2.3 CSR Similarities and Differences

Similarities in CSR between the two countries

Both companies emphasize the importance of their relationship with their employees. Both WEC and CEZ have relations with trade unions, support collective bargaining, and support employee development. They support diversity within the workplace and strive to make their companies a positive and inclusive workplace. Both companies list “safety” as a top priority, and their efforts have decreased workplace accidents, which is incredibly valuable in potentially dangerous fieldwork.

Both companies acknowledge their role in protecting the environment and their potential as leaders in the industry for renewable energy resources. The companies both monitor emissions, water and air qualities, while setting ambitious goals for reducing the carbon footprint. Both WEC and CEZ also actively participate in improving biodiversity and protecting fragile ecosystems within the areas they serve.

Both companies actively use capital investments to improve bottom line and return on investments. They also both make over a billion dollars in revenue due to the high demand for fuel and energy. For both companies, over 50% of total revenue comes from traditional coal-powered power, but this percentage is shrinking as renewable resources become more prevalent.

Difference in CSR between the two countries

In terms of employee relationships, there are a few small differences between ČEZ and WEC. CEZ allows for flexible working hours, a 37.5-hour workweek, 25 days of vacation, and meal tickets for all employees. On the other hand, WEC adheres to a 40-hour work week with vacation time that increases with longer tenure at the company.

The main environmental difference between WEC and ČEZ is the ambitiousness of the carbon-neutral goals. WEC has plans to reduce emissions by 80 percent by 2050, but ČEZ will become carbon-neutral by 2050. These goals reflect the difference between regulations in the US versus in Europe; European governments are much more responsive to the need for change in order to protect our warming planet, whereas the United States is slower to recognize and respond to this threat.

In terms of economic performance, CEZ operates in eight countries with different exchange rates and regulations. WEC has the benefit of operating in one country but must negotiate with regulation committees from four different states.

CONCLUSION

WEC Energy group and CEZ are very similar, which shows how stable the utilities industry is, even across nations. In every country, the demand for energy and fuel includes virtually every individual. Therefore, the operations and reach of both companies is relatively similar. With being such large public utilities, both companies recognize their responsibility as stewards of both the community and the environment, as they both take active roles as CSR leaders in their areas. Both companies set examples of how the energy sector must operate. Customers have little choice which utility they receive service from, they cannot switch to a more socially responsible company. Therefore, it is incredibly important that these companies do everything they can to be responsible, reduce their carbon footprint, and benefit the community as a whole.

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