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**SOCIAL RESPONSIBILITY OF COMPANIES AND
PROJECTS BENEFICIAL FOR PUBLIC WITH A
POTENTIAL TO DECREASE INEQUALITIES IN
SOCIETY AND TO INCREASE DIGITAL LITERACY**

(new challenges, topics and changes in the CSR concept
in the era of upcoming Industry 4.0)



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Managerial summary

The coming of the first industrial revolution brings many challenges and risks for society, and their (non)management may potentially significantly influence the quality of life for next generations. The key challenges include particularly (1) *successful digitalization and automatization of companies*, (2) *preventing polarization of society* (as a result of automatization of the low-income jobs, increasing qualification requirements and potential digital exclusion and illiteracy of some groups of population) and (3) *transformation of education system* and (4) *forms of work* towards the requirements of new structure of labour market and society.

The challenges have one important think in common. They are so complex their succesful management requires a participation of all important actors, from international organisations and state authorities via companies, to education institutions. Particularly the businesses may and may not have their share in the process of resolving the challenges. Some challenges represent a clear „business task“ for companies. Some are not directly connected to company profitability, however, there is still some connection. Solving challenges and problems of the companies, when it, in ideal case, makes sense considering its aim and an overall brand of the company – as described by the concept *Social responsibility of companies (hereinafter CSR)*.

As CSR develops in time and place and should always react to current needs of society, not event he upcoming Industry 4.0 shall not probably leave it unchanged. The study analyzes and offers recommendations of **how the companies may react to the above key challenges related to Industry 4.0 through the CSR concept.**

There will be an increased importance of (a) various forms of cooperation with educational institutions, (b) good company education involving all employees, (c) accepting some responsibility for a future of own employees who will have to leave due to automatization, (d) being open to flexible forms of work, (e) solving exclusion of some groups of people from digital world, society and labour market, (f) interest in mental health of employees and (g) keeping the „work-life balance“ issue and related innovation. Also (h) digitalization of company itself prevents many problems, ensures further prosperity and competitiveness of company and its employees, so it can be considered as responsible behaviour towards society.

The study is based on Czech as well as foreign scientific literature and strategic documents of Czech ministries. The theoretical conclusions of the study rely on its own investigation, with a participation of the top management representatives of 227 Czech companies.

Content

MANAGERIAL SUMMARY	2
INTRODUCTION	CHYBA! ZÁLOŽKA NENÍ DEFINOVÁNA.
CHAPTER 1: SOCIAL RESPONSIBILITY OF COMPANIES (CSR).....	6
WHAT CSR MEANS.....	6
SHARED VALUE	9
BENEFITS AND RISKS OF CSR	10
CSR IN THE CZECH REPUBLIC	12
SPECIAL POSITION OF SMALL AND LARGE COMPANIES.....	14
SUMMARY OF CHAPTER 1.....	15
CHAPTER 2: INDUSTRY 4.0 – OPPORTUNITIES AND RISKS	16
THE FOURTH INDUSTRIAL REVOLUTION AND INDUSTRY 4.0.....	16
EXPECTED CONSEQUENCES (CHALLENGES, OPPORTUNITIES AND RISKS).....	17
INDUSTRY 4.0 & THE CZECH REPUBLIC	20
SUMMARY OF CHAPTER 2	29
CHAPTER 3: CSR IN THE ERA OF UPCOMING INDUSTRY 4.0.....	32
OWN DIGITALIZATION AS A PRIORITY OF CSR STRATEGY	32
KEY TOPICS FOR INDUSTRY 4.0 AND HOW CSR CAN REACT	34
SUMMARY OF CHAPTER 3.....	45
CHAPTER 4: COMPANIES' OWN INVESTIGATION	46
COMPANIES IN THE CZECH REPUBLIC AND CSR (IN GENERAL).....	46
COMPANIES IN THE CZECH REPUBLIC AND INDUTRY 4.0.....	50
COMPANIES IN THE CZECH REPUBLIC AND CSR (IN KEY TOPICS FOR INDUSTRY 4.0)	54
SUMMARY OF CHAPTER	62
CONCLUSIONS AND RECOMMENDATIONS.....	CHYBA! ZÁLOŽKA NENÍ DEFINOVÁNA.
DISCUSSION.....	66
SOURCES	CHYBA! ZÁLOŽKA NENÍ DEFINOVÁNA.
IMAGES	CHYBA! ZÁLOŽKA NENÍ DEFINOVÁNA.
ATTACHMENTS.....	CHYBA! ZÁLOŽKA NENÍ DEFINOVÁNA.
DETERMINING KEY TERMS	CHYBA! ZÁLOŽKA NENÍ DEFINOVÁNA.
ADDITIONAL FINDINGS OF COMPANIES' INVESTIGATION.....	74
QUESTIONNAIRE (FULL WORDING)	79

Introduction

We live in the time of upcoming 4th industrial revolution (sometimes also Industry 4.0). That brings a range of challenges and it is so complex, it is necessary – in order to prevent and solve the risks – for the most important actors to cooperate, therefore a state and its authorities, companies and educational institutions. At the same time, it is still more and more common for the company strategies to have the concept of Social responsibility of companies (hereinafter CSR), which should flexibly react to what is current for the society. CSR changes at the time of upcoming 4th industrial revolution, and it should pay attention to the topics related to the risks of the time. **What are the topics? What are target groups for potential solution? And what „recept“ does CSR have for the topics?**

The CSR concept has been so far often perceived almost exclusively or primarily in connection with altruism and philanthropy, therefore with the solidarity help to those who have not been so lucky in life. Philanthropy and a share of companies when solving current social problems is an integral part of CSR (according to new approaches to CSR) but not the key one.

The concept of „shared value“, therefore the maximum connection of the needs of communities and society with companies striving to generate their profit has been discussed and implemented successfully for many years. Moreover, if we consider CSR in relation to coming Industry 4.0, it makes more sense to orientate through CSR not to patch the problems caused by digitalization and automatization but to prevent them. Though we can say very little about the future for definite, this approach to CSR makes sense if we realise that we are still right at the beginning of dramatic changes, and therefore we have a large space for steps to determine the level of social problems in the future (particularly polarization of society caused by automatization of the low-income jobs and increasing qualification requirements for future employment).

The study does not try to ludistically intercede to stop the progress for its indisputable risks, not it will pay the main attention to the altruistic „putting out fires“ caused by upcoming Industry 4.0. The aim of the study is more to put CSR to the dynamically changing world and put the greatest significance to the behaviour of companies which may ensure the long-term prosperity across the society and help to prevent the polarization of society. In such perception, CSR firstly means that „socially responsible“ behaviour of company means not to ignore the coming changes, invest into own digitalization and not to rely on seemingly fair stimuli.

The study is divided into 4 parts. At first, we introduce the CSR concept on more general level, and pay a special attention to the shared value concept. In the second chapter, we speak about the industry 4.0, its expected consequences for society and we define key topics and target groups CSR should pay attention to. In chapter 3, we analyze how CSR may react to them. In the fourth chapter, we summarize the key results of own investigation of companies.

The study is based on Czech and foreign professional literature, from the strategic documents of the Ministry of Industry and Trade and the Ministry of Regional Development, from relevant researches and investigations of digital literacy and education of employees (based on the ČSU data). Finally, the theoretical conclusions of the study are based on own investigation of companies with the participation of top management representatives of 227 Czech companies.

Chapter 1: Social responsibility of companies (CSR)

The CSR concept is still slightly ambiguous, in its perception (even definition), there still hasn't been absolute conformity. It is therefore suitable to expand on the ambiguity to make it clear which borders we move within. In this chapter, we first specify the term CSR, then we pay attention to its modern pragmatic conception (subchapter „shared value“), followed by a summary of main benefits and risks of CSR. The chapter is ended by a summary of CSR in the Czech Republic and a specific attention of the theoretical part is paid to CSR in the relation to small and medium businesses (which face many specifics in the CSR questions and also represent a significant part of Czech and European business environment).¹

I have to emphasize right at the beginning that CSR does not represent an unchangeable „advice pack“ of how to be a socially responsible company. CSR concept is dynamic, developing in connection to changing facts in society. Which direction the CSR may develop in the new world of upcoming 4th industrial revolution is discussed in chapter 3.

What CSR means

„Business and society with its problems – two incompatible rivals“. So it is often in traditional perception how the business sphere is viewed in relation to society. As Kramer and Porter state: „Nowadays, business is considered to be the main cause of social, environmental and economic problems“ (Porter, Kramer, 2011, own translation). Interests of companies and interests of society are traditionally defined as contradictory. (Bockette and Stamp, 2012, p. 7) But does it have to be?

This is what academics and many companies have been trying to answer for many years through the concept of social responsibility of companies (hereinafter CSR). Involving companies in the socially beneficial activities, environment protection or consistent care for their employees, suppliers and customers becomes a more significant way of company management. The reason for involving companies may be that companies often have no other choice due to pressure of the public and in the competition fight for the so-called aware consumers. (Kuldová, 2010, p. 50 and p. 68) But recently, there has been a brand new view of the concept and dealing of

¹ In this chapter, we come from „Local dimension of social responsibility of companies (on an example of Žďársko)“ of a member of a team of authors, Markéta Malá, produced in 2016 within the Secondary-school professional activity (see sources).

companies with social problems, which are viewed as business opportunities. This modern perception CSR (often also called „shared value“) is dealt with in a separate chapter.

One of the dominant personalities on academic field CSR, Archie Carroll, defines CSR as follows: „Social responsibility of companies includes economic, legal, ethical and other expectations, which the company has towards business at a particular moment.“ (Carroll 1979, p. 500, own translation)

The CSR concept means integration of social and environmental conceptions into company strategy. In relation to the strategy – to make it easier – we sometimes speak about the so-called „three Ps “: People – Planet – Profit, also called „Three responsibilities“. If a company deals with all the aspects, it will bring it, according to the concept, long-term sustainability.

Individual steps and projects of companies vary a lot, change in time and it is therefore not easy to determine when a company is socially responsible. „Elements that make social responsibility reflect current expectations of society in given moment, therefore it still develops. As the interests of society change, also the ideas about an approach of organisations change in order to reflect the interests. At first, social responsibility focused on charitable activities, e.g. contributing to charitable purposes. Things like advancements in the area of employment relations and fair operational processes occurred a century ago or earlier. In time, thanks to an increased interest, other topics occurred, like human rights, environment, consumer protection and a fight against deceptive and corruptive behaviour.“ (ČSN ISO, 2010, p. 16)

Just thanks to its ambiguity and a wide thematic range, CSR is often not understood. As we investigated in the companies, we came across opinions that CSR is „another nonsense“, as what is sometimes marked as CSR activity really is a natural thing the company would do whether it is called CSR, altruism or increasing competitiveness.

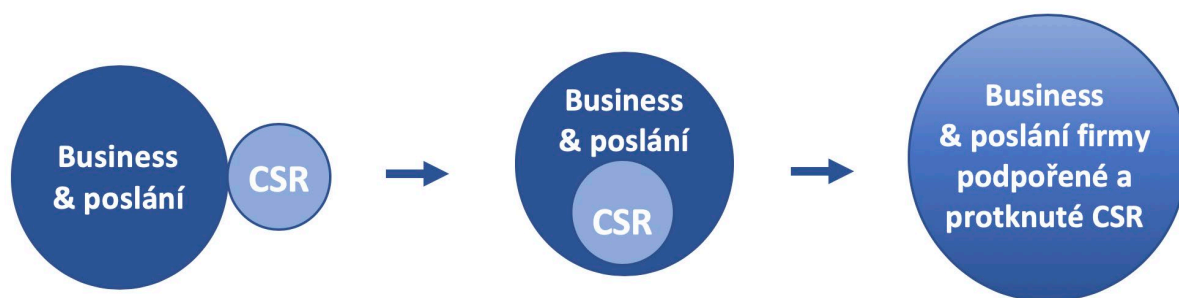
The truth is that it's very difficult to define the concept. **It involves the whole range of activities which shouldn't stand „next to“ a company in any way and its every-day functioning, but they should be a natural part of the company and its approach to employees, customers, community and planet.** That all should lead to the long-term sustainability of society, environment and also to long-term competitiveness of companies (HR, satisfied customers, functional community, sustainable natural resources for production, attractiveness for investors, savings in production – as ecology often means economic).

This all should theoretically be a more or less natural part of company operation, each company would come to through some sort of natural evolution. **However, we assume that the CSR concept exists to bring the revolution faster, to attempt to give clearer contours to all those (often ignored but natural from the longterm perspective for companies nad society) activities, to give flashing name to companies that already think in this perspective and at the same time quite specific motivation to do some desirable activities for other companies to achieve the same mark, too. It is a simple communication tool outside and inside the company.**

CSR should grow through the whole strategy and mission of company, it shouldn't be anything standing outside a company. However, such approach requires some creativity in solutions, human resources for good consideration and implementation and an interest from company management to participate in the CSR strategy and its penetration to company philosophy and every-day operation.

The research so far shows² that CSR often functions in a way that a company does a few unconceptional activities and „they are done“. Motivation to at least do something is either altruism or simply public pressure („do good“ is a must in some fields). Such approach definitely does not fulfil the CSR potential, doesn't make sense, it rather cuts company profit and long-term, it hardly solves serious social problems and their prevention.

Picture no. 1: CSR as a part of company mission



(Own illustration) Business&mission/CSR → Business&mission/CSR → Business&mission supported by CSR

CSR may at first seem as something that prevents companies from making profit, something expensive, something suitable just for large and succesful companies. This can be far from truth. If we approach CSR strategically it becomes competitive advantage but not a privilege. „It is a concept when a company voluntarily takes over the responsibility for the good and sustainable development of modern society, and at the same time expects to keep

² E.g. Trnková, 2004 or Srpová, Kunz, 2009

competitiveness and profitability, while those are not two opposing goals.“ (Čaník and col. in Kunz, 2012, p. 16) This is also expressed by John Heaslip from Business in the Community, who, in April 2010, said in Prague Senate that „CSR is not here for companies to have something to spend their profits on but to maintain them“. (CSR Fórum, 2011)

Shared value

An eternal question within CSR is whether the company should focus just on selected areas of CSR, which are relevant for or whether it should approach CSR holistically – so to pay the same attention to all three CSR pillars. The supporters of the first option also include the creators of the shared value theory – Kramer and Porter.³

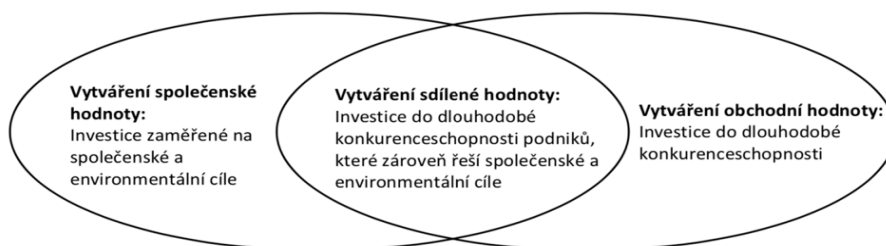
In their opinion, the core of non-functionality (previously) of the traditional approach to CSR lies in companies looking at CSR as something functionally separate from the company itself, which means companies miss opportunities when they create positions on labour market. Then CSR really becomes something that cuts from the imaginary cake of company profit. (Kašparová, Kunz, 2013, p. 74)

„The most advanced companies started to view their participation in social topics completely differently. Rather than constantly seeing business and society as an opposition, they recognized their great potential to help and support social progress. They've also understood that businesses – if they want to prosper – depend on healthy and well functioning society. The businesses therefore try to create „shared value“, that is including social topics into their main business strategies to create use for society and at the same time to strengthen their long-term competitiveness.“ (Bockette and Stamp, 2012, p. 20)

Creating shared value requires different way of thinking. Joining in solving social topics is understood as a long-term investment, important for business success, just like in the research and development. This view of CSR and approach to thinking is described in the following scheme. (Bockette and Stamp, 2012, p. 8 and p. 20)

³ For more information about shared value, see Porter, M. E., Kramer, M. R., “Creating Shared Value,” Harvard Business Review, January-February 2011

Picture no. 2: Shared value scheme



(Source: Bockette and Stamp, 2012, p. 8)

Creating social value

Creating shared value

Creating business value

Benefits and risks of CSR

As already said, companies obviously are not motivated to socially responsible behaviour (only) by an altruistic view of life. Implementing the CSR principles brings great benefits to a company. First of all, CSR brings the company a certain probability to keep and maximize its lifetime for a long time.

Implementing the concept of social responsibility into company strategy may, besides other things, positively influence:

- Its competitive position
- Its reputation, trustworthiness, potential recognition of brand by a consumer
- Its ability to attract and keep employees or members, business partners, customers, clients or users
- Maintaining manners, engagement and productivity of employees
- Its attractivity for investors⁴
- Its relationships with organisations, government administration, media, suppliers, partners, customers and associations it works with
- More informed decision making based on better understanding of society expectations
- Making innovations
- Savings connected with higher productivity and effectivity of using resources

(ČSN ISO, 2010, s. 7, 29; Trnková, 2004, p. 8)

⁴ „Criteria of social responsibility mean for investors a guarantee of savings and longterm sustainability of company. Ability of company to react to environmental and social questions are also an indicator of its maturity and good-quality management. Investments into socially responsible companies are considered less risky and able of profitability above average.“ (Trnková, 2004, p. 13)

This all leads us back to the core of the CSR definition, that CSR significantly contributes to long-term sustainability of company. But we have to take into account the fact that CSR is a long-distance run. „Companies often their efforts connected to building CSR in a longer time horizon, whether in a form of better image, long-term stability or loyalty to employees and customers.“ (Srpová, Kunz, 2009, p. 8)

Precise qualification of a relation of CSR and a profit of a company is, however, difficult to establish. Aspects such as loyalty of employees, public perception of brand etc. cannot be measured easily. If considering the confusion of the CSR definition itself, inadequate solid empirical research in the area would surprise no one. (Researching Corporate Social Responsibility: An Agenda for the 21st Century, 2006)

During its development, the CSR concept claimed many defenders but also critics. Probably the best known critic of CSR is a defender of liberal economy and a Nobel Prize laureate, Milton Friedman. He claimed that „The only social responsibility of company is increasing profit.“ Friedman assumed that joining in the socially beneficial activities takes a company away from achieving its main goal, grinds its main mission and increases its costs. (Kunz, 2012, p. 40)

Arguments of other critics of the concept include e.g. an opinion that CSR is just any illusion, which companies use for their HR, or that companies interested in CSR have higher expenses, which is why they lose their competitiveness.

„Coulter and Robins describe six main arguments against social responsibility, which are:

- Limiting maximalization of profit
- Higher expenses
- Not enough skills
- Grinding the purpose of business
- Insufficient clarity
- Too much power in the hands of businessmen.“

(Coulter, Robins, 2004 in Kunz, 2012, p. 42)

Most of the arguments are certainly relevant in some situations. We have to take into account a risk the company can have the CSR only as a nice label without having real activities or that the CSR may be only a burden for the company, especially if approached randomly.

„It is clear in Europe that an increasing number of companies see the CSR as a part of HR, as something they could "show off" by. A danger that the whole activity slips into a state when

more money is spent on shiny publications than on the matter itself really exists. Some overlapping of the HR activities and CSR is natural. Again, it needs to be reminded that CSR is a part of company strategy defined by the company top management, its implementation goes from top downwards and goes through the whole company. Therefore, it is not an ad hoc action with the biggest possible medial attractivity but a way of company management and enterprise in general.“ (Trnková, 2004, p. 10)

CSR in the Czech Republic

For the Czech Republic, responsible approach of businessman has been known since the beginning of 20th century. Tomáš Baťa is the man who contributed to that. This successful Czechoslovak businessman believed that business have to be based on moral principles and showed what it means to be a socially responsible in time when the term ‚social responsibility‘ de facto does not exist.

„Baťa’s opinion was that business has to serve a man, his development and improvement. On practical level, it was e.g. about consistent care for employees. Well-known is the concept of building respectable living for the workers of the Baťa plants or development of employees through a training system. Through a fair approach to wage formation and its division, equal opportunities for men and women, Baťa plants got loyal and good workers. In the centre of Baťa business and business philosophy, there was a responsible approach to community he worked in. It was supporting and building business academy, founding hospital for inhabitants and employees in Zlín. Concerning the responsible approach to environment, we name for example programmes for waste recycling.“⁵ (CSR portal, 2012)

We meet the CSR in the Czech Republic (again) more in 1990s after a fall of communism, which is many years later compared to western Europe. There are some facts arising from our totalitaitan past in relation to CSR. Dohnalová supposes that in the postcommunist countries, there is not enough trust in fair practise, that „solidarity“ is viewed more less just as a relationship of an individual to family and friends, not as a part of economic activity. That (economic activity) is connected with its own aims, rather than a positive contribution for society. According to Dohnalová, such thinking prevents better accepting of social responsibility in those countries. (2013, p. 70)

⁵ Specific activities of company Baťa are described e.g. in a book of Kašparová and Kunz on p. 27

Current approach of the Czech Republic to CSR can be described by the following facts:

- According to a research of Srpová and Kunz, 97,6 % company representatives agree that businesses should, besides generating profit, also get involved in the benefit of society they work in. (Srpová, Kunz, 2009, p. 4)
- 81 % employed people consider it important their employer is socially responsible and 2/3 respondents stated that CSR influences their shopping behaviour. (CSR Research, Ipsos Tambor, 2010 v Kunz, 2012, p. 38)
- The results of Trnkoveá research point out accent of Czech businesses on the CSR internal dimension. Emphasis is put especially on further education of employees. For businesses, key subjects are schools and they want to pay them more attention than the non-profit organisations or relationships with state institutions. The research confirmed that in the area of CSR, there are things to connect to. Many CSR activities already go on, though they do not have that label. (Trnková, 2004, p. 22)
- „Many businesses currently do a whole range of activities in the area of CSR, but they often don't have enough knowledge or experience with their mutual purposeful interconnection.“ (Srpová, Kunz, 2009, p. 6)
- Main obstacles preventing larger implementation of the CSR principles are not motivating tax conditions and worries of too big financial burden.⁶ (Kunz, Srpová, 2009, p. 4)
- CSR is a topic even Czech government tries to focus on. It is important that for example in 2014, the National Action Plan CSR was approved under the gestion of the Ministry of Industry and Trade.⁷ (Ministry of Industry and Trade of the Czech Rep., 2014)
- The most important platforms for CSR in the Czech Republic are Business Leaders Forum CZ and Byznys pro společnost, the aim of which is particularly to cultivate Czech business environment through spreading the concept of social responsibility of companies. (CSR portal, 2012)
- Since 2015, the Czech Republic has been the largest world network for the sustainability of businesses – Global Compact OSN. This initiative supports companies in implementing their basic principles (and therefore CSR principles) and creates space to share experience, possibilities to learn, collective action and partnership. Through a

⁶ Data come from a research with 248 respondents across all fields of business and all regions.

⁷ After preparing the document, cooperation among resorts was used, as well as opinions of businessmen, results so far and opinions of academic spheres. The document is also updated regularly.

dialogue (including political one), it allows its members to actively influence the CSR politics in the Czech Republic. (UN Global Compact)

Investigation of businesses that was carried out in spring 2019 as a part of the study confirms a whole range of the above mentioned facts. There are existing significant differences between various types of businesses in the approach to CSR, particularly concerning size and province. Main results of the investigation are summarized in chapter 4, its details in the attachment.

A special position of small and medium-size businesses

Small and medium-size businesses (hereinafter MSP) form – in EU and the Czech Republic - a vast majority of all businesses (their proportion in the number of all subjects doing business in CZ is around 99,9 %, longterm). A share of added value of small and medium-size businesses was 54,6 % in 2017, and a share of employees in small and medium-size businesses of the total number of employees in the business sphere in the Czech Republic was 58,0 % in 2017. (MPO, A report on development of small and medium-size business and its support, 2018)

„MSP are typical by their great dependency on local environment – they recruit most employees locally and also have majority of customers nearby. Therefore, an issue of reputation and a dialogue with stakeholders (whether employees, customers, suppliers or, in greater context, government) are in fact existential issues for them. Contributing to a better state of nearby environment is a direct interest of the businesses, or its stability very strongly influences their commercial success.“ (Trnková, 2004, p. 14)

A frequent problem of MSP in relation to CSR is their approach „day by day“, which misses a wider horizons and long-term time horizons. (Kunz, 2012, p. 43) The National action plan put together with a support of the Ministry of Industry and Trade also mentions a problem of small or inaccurate awareness of MSP, which leads to a situation when their CSR is often limited to charity. It has to be mentioned just for MSP that often intuitivnly, considering ethical values of management, CSR activities are applied but without any linking to the main activity, which limits win-win (profitable for both) CSR contribution. (National action plan CSR, 2014, p. 8)

Considering the fact that MSP make so important part of the business environment, they cannot be overlooked in the CSR questions and expect that CSR is an issue of only large companies. For them, i tis important to find a way to implement CSR that couldbe relevant for them. Including MSP into CSR strategy is a key, however, it requires a different approach than in case of corporations. MSP usual cannot spend too much on the CSR activities, and it cannot be

expected that they would have the human resources specifically for the topic (as it is in big companies, where the existence of management position within the top management specialized in CSR is normal). (Trnková, 2004, p. 5)

Trnková thinks that „the main task therefore isn't massive mobilization of small and medium-size businesses but in finding ways to strengthen their present CSR activities and particularly to strengthen the strategic approach to CSR as such (identification of WHAT, WHY and HOW makes sense for small and medium-size businesses. And what social, national, regional and also business contribution it can have).“ (Trnková, 2004, p. 14)

Summary of chapter 1

CSR means an integration of social and environmental concepts into business strategy, which is how businesses take over their part of responsibility for the world around (function of communities, state of environment, satisfaction of customers...). In ideal case, they do it thoughtfully, not ad hoc for the CSR not to cut from company profit but to become a mean to strengthen the company (via satisfied customers, trust of public and investors, saving costs, increasing safety of work, more functional community and healthier planet). As already mentioned above, “CSR is not here for the companies to have something to spend their profits on but to last for a long time.”

It also needs to be emphasized that CSR is not an unchangeable „advice pack“ provided for someone wise sometime. Meaningful fulfilment of CSR may constitute different activities for different companies. At the same time, CSR develops in time and place. Which direction the CSR may develop in the new world of upcoming 4th industrial revolution is what we try to discuss in chapter 3. In order to be able to analyze the topic more meaningfully, we consider it necessary to first focus on what the 4th industrial revolution really means (resp. Industry 4.0) and what changes it may bring into society.

Chapter 2: Industry 4.0 – opportunities and risks

In chapter 2, we describe what a concept of Industry 4.0 represents for society and for the Czech Republic. The aim is to offer the reader a context for a key topic of the study „CSR at the time of Industry 4.0“.

We also discuss in more detail the main risks connected with the coming of Industry 4.0, particularly the risks that are closely connected with activity of companies and their possibilities to prevent the risks or to solve their consequences. The areas defined in the conclusion of the chapter are starting points for chapter 3, where we analyze how the areas are related to CSR and what target groups and activities are related.

Fourth industrial revolution and Industry 4.0

Industry 4.0 refers primarily to using new, often mutually interconnected cybernetic-mechanical systems in industrial production, which leads to new and more effective production processes.

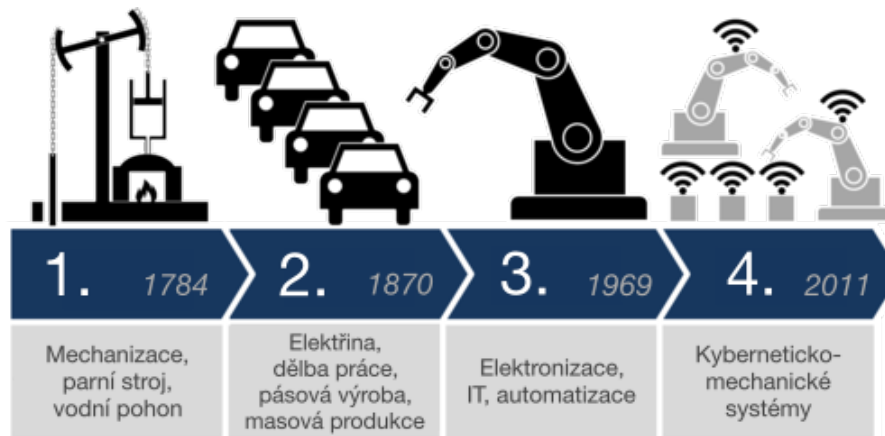
Industry 4.0 is inseparably connected with 4th industrial revolution. This gradually comes as a consequence of important Innovation in a line of technologies and their mass using. According to OECD specification, the changes coming are a result of:

- Digital technologies (3D print, internet of things, advanced robotics),
- New materials (based on bio- or nano-technologies),
- New processes („data-driven“ production, artificial intelligence – AI, syntetic biology).

(OECD, 2017)

Industry is in the centre of attention of the 4th industrial revolution (this is why the initiative to support the course of the 4th industrial revolution in SRN called Industrie 4.0, Industry 4.0 over here). Despite that, according to a range of studies, the first results of industrial practise and historical experience with previous industrial revolutions, it is clear that its consequences will have transformation impacts on the whole society. (e.g. the Initiative Industry 4.0 MPO, 2016)

Picture no. 3: Industrial revolution



(Taken from: Česká věda do světa, own modifications of the text)

Expected consequences (challenges, opportunities and risks)

„The fourth industrial revolution brings, with a promise of positive influence of transformative social, economic and environmental aspects of our world: from elimination of illnesses, environment protection, via providing energies, water, food and security to a reduction of social inequalities, meaningful development of individuals and communities.“ (Maynard, 2015, p. 1005-6)

For the businesses themselves, Industry 4.0 is connected with expected growth of productivity and production effectivity, connected with new logistic and technological solution and with decreasing energetic and resources-wise difficulty of production. E.g. the European Commission states that in the next 5 years, digitalization of products and services of industry in Europe will bring more than 110 billions EUR income a year. (European commission, Digitising European Industry, 2018)

„However, upcoming revolution brings a complex scale of risks – one basic, for example, lies in some asymmetry between speed at which new technologies occur, converge and enter the socio-economic and psychological processes on one side, and a speed at which regulators, governments and involved stakeholders are able to react to the changes, and event he cognitive aparate of an individual on the other side.“ (Initiative Industry 4.0 MPO, 2016, p. 13)

Risk of polarization of society

An often mentioned worry connected to Industry 4.0 is deepening of inequalities in distribution of richies. The worry rise especially from the fact that automatization will probably involve a

majority of low-income jobs. On the other hand, new jobs will occur, which will probably require higher qualification of employees (also connected with higher incomes).

The polarization of society may have great impacts, and it is desirable to prevent it, if possible.

One of the suitable reactions to the polarization and quick changes in the structure and the content of work is a development of a good quality and available system of lifelong learning.

Automatization causing a change in labour market and unemployment (only temporary in an ideal case) is not a topic of only economic level. Take into account also *psychological-philosophical dimension* of coming changes. How will a person replaced by a machine see himself, his value and his place in the world, when all those are aspects of life people throughout history connected, into a great extent, with their work and professions? (MPSV, 2015, p. 11)

However, it needs to be said that automatization is not only a factor forcing people away from labour market in many countries but also a needed replacement for workforce which is missing on the labour market due to negative demographic development.⁸

To be useful on labour market as well as in life in society, there is a key role of education of each man and particularly *digital literacy* (which we shall look into later on).

Teaching digital literacy may be simplified by a settled idea that current young generation and children learn it alone and de facto, it is almost impossible to avoid digitalization in our civilized world. „Children obviously grow up with technologies.“ The fact they „can walk, however, doesn't mean they know where they should go and why.“ Besides, no conclusions can be made about digital skills of children and youth based on time which they spend with technologies. As the researches show, children use technologies particularly to watch videos and to communicate on social networks, which is not too wide scale of activities leading to required skills connected with digital literacy. Therefore, teaching digital literacy should not be overlooked, though it may seem that today's children do not need it. (Pressová, 2019; Statistika & My, 2019)

⁸ This is, by the way, the often forgotten side of the coin concerning aging of Czech population. We usually speak about financing the pension system and less about the fact there will not be enough workforce.

New forms of work

Industry 4.0 brings a variety of changes in a form of how we are used to work. Firstly, new technologies will bring removal or limitation of hard physical and routine work as well as life-threatening and health-threatening work.

„[Changes] will also bring an opportunity of the qualitative enrichment of work, its performance in more interesting environment, greater autonomy and more opportunities for professional development as well as a space for innovative thinking. The changes fully convene to priorities of especially the young generation. As showed in the last World Value Study (WVS) and European Value Study (EVS), there is a clear shift of especially the young generation to post-material values but also an alternative lifestyle. Income is not on the first place anymore, emphasis is put on content of work, opportunities of education and growth, working environment quality, characteristic of a work team, company culture etc.“ (Initiative Industry 4.0 MPO, 2016, p. 139)

„One of the significant characteristics of Industry 4.0 is mass individualization of production, which is an ability to flexibly react to requirements of customers. **There will be narrower cooperation and communication between a manufacturer and service provider with a final consumer.** The ability, however, requires more flexible forms of education and organisation of working hours, and also requirements of knowledge and skills for workers change.“ (Kohout, Palíšková, 2017, p. 52)

„Work teams will have a more amorphous structure, there will be an increasing number of ad hoc teams aimed at fulfilling a specific task or resolving some problem. With using communication technologies, there will often be **teams based on virtual connections**, with communication and cooperation of not only professionals from one company or its regional branches but also ones from other companies or independent specialists. A very important part of qualification will be not only an ability to work in team and project thinking, but also an ability to manage language and culture barriers, which still exist.“ (Initiative Industry 4.0 MPO, 2016, p. 139)

Teams that will often function on an online basis can open job opportunities for people who would otherwise have a problem with regular commuting to work (e.g. due to distance, medical problems, care for family members etc.).

„Together with other flexible forms of work (flexible working hours, irregular working hours, part-time work etc.), it may [the virtual form of work] contribute to solving a problem of the so-called sandwich generation, which is at the peak of its active age but is burdened by a care

for children and at the same time ageing parents, who are less and less independent. Even now it commenced, due to using communication technologies, **for the sharp edges between the working hours and free time to wipe out**. The process will get even faster when people more and more replace a physical social contact by a virtual one. “ (Initiative Industry 4.0 MPO, 2016, p. 139)

On one hand, it all creates opportunities to solve the problems and to open work opportunities to people who would be otherwise unable to work. On the other hand, this form of work lays high demands on the team members (besides professionalism, it's communication skills and language skills). (Kohout, Palíšková, 2017, p. 52-63)

Besides that, the pressure on performance, sweeping the sharp edges between free time and work, moving working tasks to virtual world and decreasing working social interaction leads to growing mental strain on the workers.

Another serious problem is that on one hand, people expect the growth of the mentioned more flexible forms of work, however, the common practise currently is that temporary and part-time workers are „isolated“ from company education. If businesses do not make accessible company education and opportunity to share new information in the field to all its employees regardless their form of work, it will lead to their worse position on labour market and to another potential deepening of polarization of society. (Kohout, Palíšková, 2017, p. 52-63)

Industry 4.0 & the Czech Republic

„The Czech Republic belongs to countries with the longest industrial tradition and our ambition is its future remains connected with industry. The fourth industrial revolution brings various challenges, particularly a unique opportunity to ensure long-term competitiveness of the Czech Republic in global competitive environment. We live in extraordinary time and our ability to use the opportunity will have an impact on the quality of life of next generations.“ (Initiative Industry 4.0 MPO, 2016, preamble)

Industry 4.0 as a theme and priority

Industry 4.0 is a theme in the Czech Republic which has been paid a lot of attention to recently. It's probably due to a fact that we are economically very intensely interconnected with neighbouring Germany, a pioneer in implementing the concept and also the fact that the Czech Republic is a country with a very strong orientation to industry. It is apparent that it could have fatal consequences for the life of next generation, if coming changes were ignored.

We can name particularly the Initiative Industry 4.0 approved by the Czech government in August 2016, which was prepared by the Ministry of Industry and Trade and the aim of which is to maintain and strengthen the competitiveness of the Czech Republic at the time of coming of the so-called 4th industrial revolution. The document is then followed by many supportive programmes and strategic documents of ministries. (MPO, official web site, 2016)

„According to representatives of Czech-German business and industrial chamber (ČNOPK), the 4th industrial revolution will bring the complete interconnection of the whole production process including development and later service in the next ten years. **Productivity of work could increase by as much as 30 %. The 4th industrial revolution brings enormous chances but also risks for the companies.**“ (MPSV, 2015, p.7)

„The Czech Republic is a small open economy, which is also sometimes called „an industrial heart of Europe“. Industry ties a relatively high proportion of workers who can be at risk of losing jobs when companies move to the level of Industry 4.0. On the other hand, high representation of industry allows to maintain quite a good level of technical skills and abilities in society.“ (Kohout, Palíšková, 2017, p. 37)

Meaningfulness of focusing strengths on a preparation of coming of the Industry 4.0 lies in the unfavourable demographic development of Czech population. **Automatization brings a promise of a partial solution of the problem in replacement of missing workforce.**

Another level of perceiving the importance of the Industry 4.0 for the Czech Republic is a dimension of the topic across whole Europe. Aiming to maintain and improve its global competitiveness, the EU perceives the Industry 4.0 as a priority topic, which requires high investments and particularly cooperation of its member states and a support of the public sector and the private sector partnership. It's worth to mention an investment of 500 million EUR for 2018-2020 into the EU network of centres of digital innovation (centres of technological excellence), where businesses can get advice and test digital innovation. (European Commission, 2018)

Digital transformation in Czech companies

„Who won't conform, he will face the risk, which is what even many Czech companies understand. The ČNOPK research showed that digital interconnection of added value production processes is determining or very important for more than a half of local businesses. Large businesses realize the importance of the process much more than small or medium size ones.“ (MPSV, 2015, p.7)

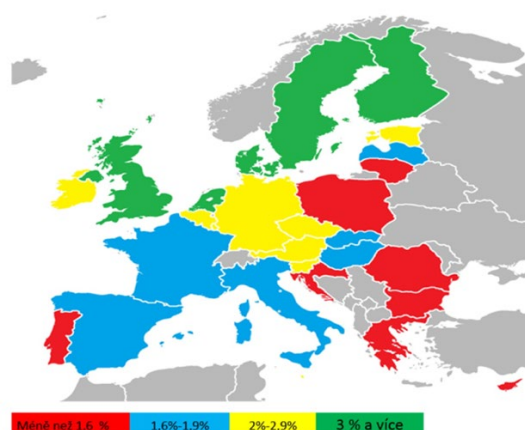
A problem of being behind in digitalization and automatization of MSP is also emphasized by European Commission as a topic across Europe. It is alarming for the Czech Rep. also because MSP employ more than a half of all employees in the business sector (58 % for 2017). (MPO, A report on development of small and medium-size business, 2018)

It is more than apparent that current comparative advantages of the Czech Republic on global market will not have the same value in the era of the 4th industrial revolution. In the opposite direction to digital transformation of Czech companies is a low level of wages, which is what MPO points out in its Initiative. Although the current relatively low wage level constitutes a competitive advantage of the Czech Rep. in international trade, long-term it brings a problem for the Czech Republic, as it slows down the process of digitalization. It is often reality (compared to e.g. Germany) in our country that the costs of purchasing and maintenance of a robot is higher than of a human.

„To employ another worker, who will work with current productivity, can't bring any effect, as when we adopt a new solution, new technology often allowing to work with much higher productivity. That would be a different way though. Diametrically different from that one, some representatives of Czech industry or business try to bring forward today and then request its support by the government – in a form of some stimulation etc. Without doubts, it is also a way which contradicts the efforts to remove the differences in wage levels between Czech economy and advanced EU countries.“ (Initiative Industry 4.0 MPO, 2016, p. 22)

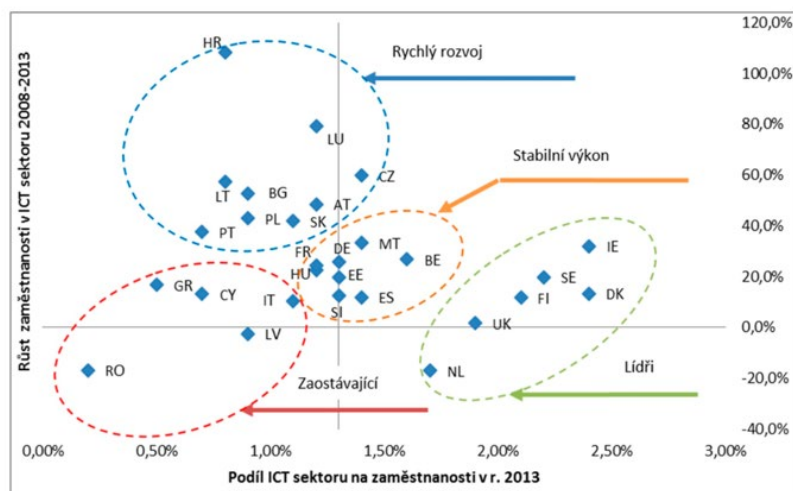
A positive piece of news is that our country has recently been among the countries with the fastest creation of vacancies and employment growth in technological sectors. **This reflects the ability to quickly absorb new technologies.** (Initiative Industry 4.0 MPO, 2016, p. 149)

Picture no. 4: Proportion of ICT professions on total employment in the EU countries



(Source: Eurostat, calculations: MPO, taken from Initiative Industry 4.0, picture 31)

Picture no. 5: Division of EU countries into groups according to size and dynamics in employment development in ICT sector



(Source: Eurostat, calculations: MPO, taken from Initiative Industry 4.0, picture 24)

Our investigation based on replies of leading representatives of 227 Czech businesses showed that companies in the Czech Republic usually realize the need of digitalization applies. But they are strongly concerned about not having enough qualified workers and strongly feel the support from the state to implement technologies (legislative, consulting and system) as insufficient.

More interesting finding of the investigation of businesses is, in their long-term plans, they (78,9 %) do not rely on the Czech Republic to continue to have low wages, nor they use state stimuli to create job vacancies for low-qualified workers (84,1 %).⁹

Risks of polarization in the Czech Republic

The rate of social exclusion and poverty is on a relatively low level in the Czech Republic.¹⁰ Income poverty applies to 6 % of people, lower share in Europe is only in Denmark (5,4 %) and Iceland (4,6 %). If we apply it to the young aged 18-25, we even get to the lowest threat of income poverty within OCED (4,9 %). (Kohout, Palíšková, 2017, p. 74)

We can therefore say that **starting position of the Czech Republic to maintain social peace is relatively good. In the world of dynamic technological and social changes, it doesn't have to mean a lot.**

⁹ Implementing and summary of key results of investigation is dealt with in chapter 4.

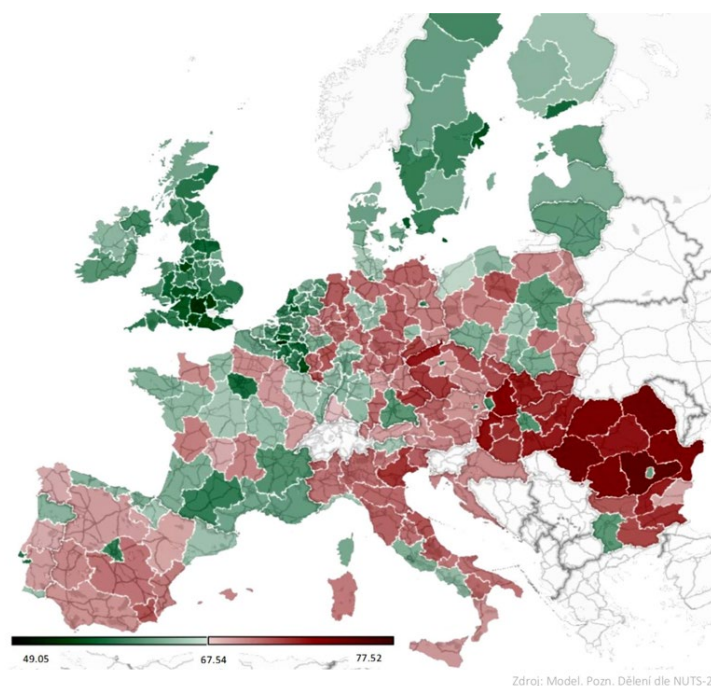
¹⁰ A threat of income poverty is, according to OECD, considered a situation when income of an individual moves under 50 % of median of incomes in a given country. Eurostat considers the line of income poverty to be 60 % of median of countries in a given country after social transfers. In 2016, a level of income poverty threat in the Czech Republic is, according to Eurostat, moves around 9,7 %, which is, after Iceland, the best result of the countries monitored.

The main problematic aspect to eliminate polarization of society in the time of coming changes is considered a relatively high proportion of employees in professions strongly endangered by automatization. In this issue, a strength as well as a weakness is also a great importance of MSP considering employment and creating national product.

On one hand, MSP represent flexibility, some stability, action ability and inovativeness. On the other hand, MSP naturally don't have so wide possibilities e.g. for elaborated company education, often don't have human and capital capacities for complex strategic solutions when implementing digital transformation etc. There is therefore **a higher risk of ignoring the changes coming, or ad hoc attempts instead of well considered steps**. This all may lead not only to company stagnation, but in a consequence also their employees. If we consider how important role MSP play in Czech economy concerning employment, the aspects seem to be potentially very dangerous for competitiveness of Czech economy and to maintain stable and widely educated public.

Problem of polarization of society connected with automatization o flow-income jobs and generally higher demands on employees, which is generally discussed above, it is very realistic for the Czech Republic.

Picture no. 6: EU regions according to index of professions endangered by digitalization

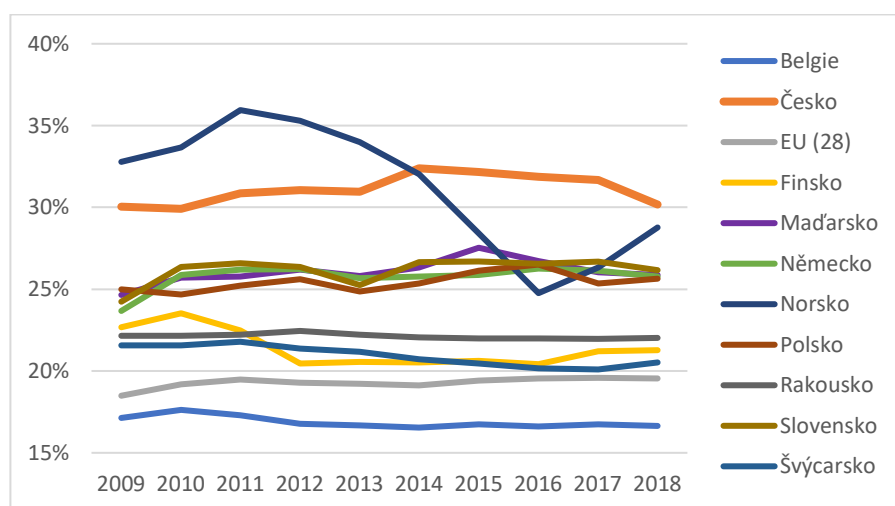


(Source: Model, taken from: Dopady digitalizace na trh práce v ČR a EU, Oddělení strategií a trendů, Úřad vlády ČR. 2015)

„A problem is that majority of the flow-qualified unemployed has education connected with a feeling of failure and stress, they lack motivation and interest. It is understandable that where one fails once, there he returns with difficulties. It is hard to work with the barriers for the Job Center (ÚP), 80 % of the low-qualified unemployed is registered here for more than six months and only 4 % of them do a course or requalification.“ (Brož, 2015, p. 2)

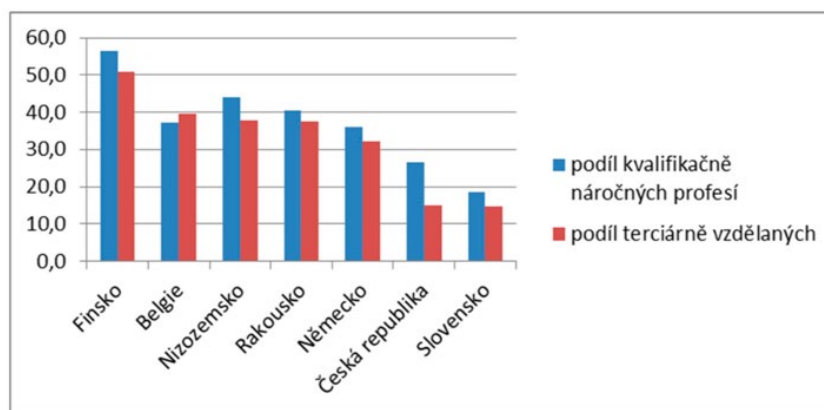
„Processing industry in the Czech Rep. ties, compared to small advanced economies, a high proportion of workforce (24 % of all employed in 2014), despite a decrease of its importance considering total employment. Employment in processing industry concentrates in technologically non-demanding branches (in 2014, 55 % of those employed in processing industry work in technologically non-demanding branches), to the branches with a high proportion of physical work, which will be the easiest to replace by relevant technologies.“ (Initiative Industry 4.0 MPO, 2016, p. 132)

Image no. 7: Development of gross added of industry on total GDP (% , 2009-2018)



(Source: Eurostat, own processing); from the top: Belgium, Czech Rep., EU, Finland, Hungary, Germany, Norway, Poland, Austria, Slovakia, Switzerland

Image no. 8: Proportion of professions not demanding high qualification and those with tertiary education on total employment in technologically highly and medium demanding industry (% , 2014)



(Source: Eurostat, taken from Initiative Industry 4.0, image 19); Blue – proportion of highly demanding professions, red – proportion of those with tertiary education. From left to right: Finland, Belgium, the Netherlands, Austria, Germany, the Czech Republic, Slovakia

Education and digital literacy

This part deals with risk aspects of education system in relation to coming Industry 4.0 and briefly summarizes a current state of digital literacy in the Czech Republic.

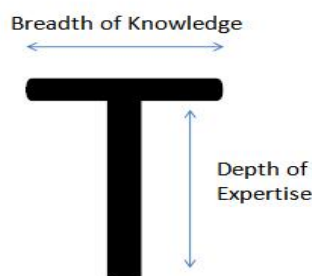
Interdiscipline, soft-skills & T-shaped education

Initiative MPO names one of the main obstacles in full use of the potential of Industry 4.0 to be insufficient understanding of interdiscipline in Czech environment. According to the Initiative, there is still **a traditional separation of secondary sphere (production) and tertial sphere (services) here, as well as a traditional view of differences and non-existing interconnection of crafts, technical fields and humanite fields.**

This contrasts with what will probably be required by labour market of the future. Besides digital literacy (described below in more detail), there is a growing importance of **soft-skills** (communication skills, conceptual thinking, leadership skills and cooperation, stress resistance, ability to react fast and make decisions, ability to share information, tolerance ability, self-control). At the same time and in relation to the mentioned approach to education and qualification, it is also the so-called. **„T-shaped education“.**

„Narrow specialization in one field will fade and people will require the so-called. T-shaped professionals or professional knowledge of T shape, that is deep as well as wide knowledge. *Depth of Expertise*, therefore deep knowledge in one field, and at the same time *Breadth of Knowledge*, therefore wide knowledge across many disciplines, ale but also communication skills, critical thinking etc. The knowledge to think interdisciplinarily is necessary for inovation. Concerning interconnection of technologies, production processes and the whole finished (also value-creating) chain, it will be necessary to orientate in the whole system.“ (study Impacts of digitalization)

Picture no. 9: T-shaped education



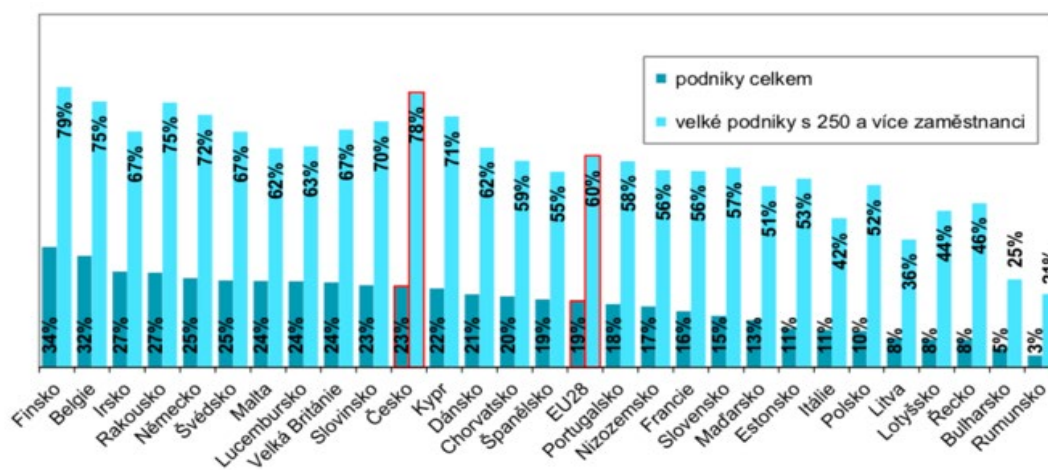
(Taken from: Darrennegraeff.com)

Further education development

„Compared to advanced European countries, further education is less developed in the Czech Republic, and its importance grows with higher intensity of changes in requirements of knowledge and skills necessary for individual professions. Though participation of Czech population aged 25-64 in further education gradually increases, the gap behind the most advanced countries, such as e.g. Finland, does not decrease. In 2014, only 9 % of population aged 25-64 participated in education in the Czech Rep., whereas in Finland, it was 1/4 population of this age.“ (Initiative Industry 4.0 MPO, 2016, p. 137)

„In 2017, one fourth of Czech companies provided its employees a possibility of training to get or broaden their computer skills. A higher possibility to do computer training had employees of medium size (44 %) and large (78 %) companies, considering branches, employees in branches related to IT (75 %) and also in telecommunication (61 %).“ (ČSU, Using information and communication technologies in households and among individuals, 2018)

Picture no. 10: Businesses in EU countries providing training for employees to get (broaden) PC skills in 2016 (%)* Dark blue – businesses in total, light blue – large businesses



* proportion of total number of businesses with 10 and more companies in given country

(Source: ČSÚ. Development of information society in CZ and EU countries 2018, p. 68)

From the left: Finland, Belgium, Ireland, Austria, Germany, Sweden, Malta, Luxembourg, Great Britain, Slovenia, the Czech Rep., Cyprus, Denmark, Croatia, Spain, EU28, Portugal, the Netherlands, France, Slovakia, Hungary, Estonia, Italy, Poland, Lithuania, Latvia, Greece, Bulgaria, Romania

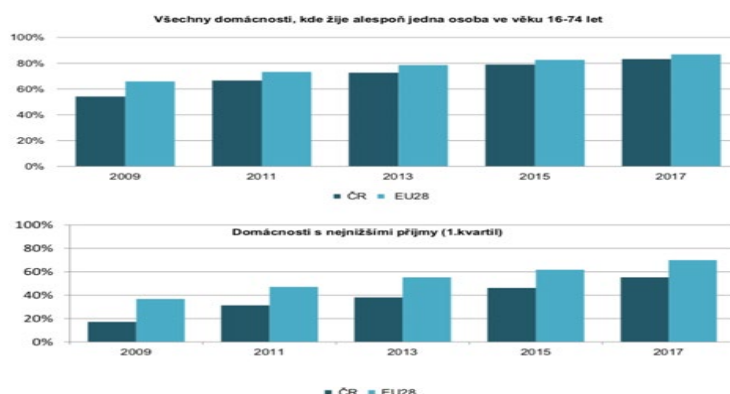
„A big challenge will also be further education of people with low initial education. As the practise shows, they participate in any form of education less than desirable in their life.“
(Kohout, Palíšková, 2017, p. 91)

Digital literacy and digital exclusion

Missing access to the Internet (due to which it is very likely to expect digital exclusion of individuals) is something about the same number of households face in the Czech Rep. as in the EU. If we consider only households with the lowest incomes (1st income quartile), the difference in access to Internet, compared to the average of the low-income households in the EU is higher.

Missing access to internet concerns primarily people with lower education and older people. According to their job position, missing access to internet concerns older pensioners (45 % do not have internet, 16 % have it at home but do not use it), invalide pensioners (23 % do not have internet, 13 % have it but do not use it) and unemployed (22 % don't have and 2 % don't use). On the contrary, the employed, women on maternity/parental leave and students are close to 100 % when it comes to using internet. (ČSÚ, Using information and communication technologies in households and among individuals, p. 25)

Image no. 11: Households with internet in CZ compared to the EU average, 2009 to 2017

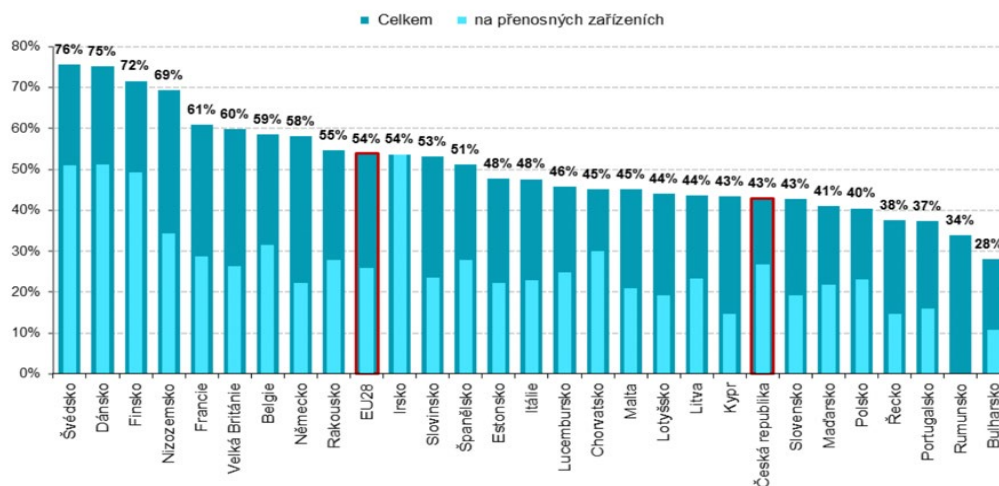


(Source: ČSÚ. Using information and communication technologies in households and among individuals p. 24)

In 2018, a computer was used for work purposes by exactly half of employees in the business sector in the Czech Republic. In the last 5 years, this proportion has constantly been above

45 %, and in 2018, it went over 50 % for the first time. Whereas 15 years ago, one third of Czech employees in businesses worked with a computer (37 %), today it is every other one. (ČSÚ, Using information and Communication technologies in the business sector, part 12.)

Image no. 12: Employees in businesses in the EU countries using computer with an access to internet in 2018



* *proportion in total number of employees of businesses with 10 and more employees in given country*

(Source: Eurostat, December 2018); dark blue – total, light blue – onportable devices

Summary of chapter 2

In chapter 2, we primarily summarized the risks connected with coming of the Industry 4.0, emphasizing the risks that are closely connected with company activity and a possibility to prevent the risks or solve their consequences. Areas defined here are starting points for chapter 3, in which we analyze how the areas may be solved within CSR and how the CSR concept changes under the influence of the new needs of society in the era of upcoming Industry 4.0.

At this moment, it is worth to answer the question of why the companies should solve the risks occurred when very often the solution should lie on the state (especially concerning education or co-responsibility for those released due to automatization). Though the question has been and will be answered in relation to the CSR concept (see chapter 1 and 3), it can also be partly answered in the context of Industry 4.0. As the Industry 4.0 involves complex issues impacts of which enter many levels of society, its potential can be hardly fulfilled and its negative impacts solved effectively without cooperation of all important actors.

„It can be said that initiative Industry 4.0 is particularly about responsible support of a change of the way of thinking of the whole society, rather than specific technologies. [...] In other words, we need systematic, structured and consiender synergy of various social forces – for example state institutions, private businesses, education and research institutions and centres,

but also civil society – in the process of responsible and consensual navigation of the fourth industrial revolution.“ (Initiative Industry 4.0 MPO, 2016, p. 14)

There were key topics of the Industry 4.0 (for CSR) and related target group, following the previous statements regarding Industry 4.0 determined as follows:

1. Slow digital transformation of small and medium size businesses

- Topics:
 - Falling behind of a business, risk of future disappearance and dismissal
 - Decreasing competitiveness of employees on labour market
- Target groups:
 - Management of the businesses
 - Employees of the businesses

2. New requirements of education system

- Topics:
 - Emphasis on digital literacy
 - Interdisciplinarity „T-shaped education“
 - Growing importance of soft-skills (social-emotional skills, communication, language equipment, ability to work in team,...)
 - Need of life-long learning
 - Solving current rigidity of education system and with sharp borders between fields (traditional view of apprenticeship vs. technical vs. humanite)
 - Digital exclusion and illiteracy of some groups of people
 - Many missing or insufficient company education not available to all
- Target groups:
 - Pupils, students and teachers
 - Employees of businesses
 - Other endangered groups of people (unemployed, retired and older employees, disabled retired, people from excluded locations)

3. Polarization of society due to automatization of the low-income jobs and growing qualification demands and wages on the other side

- Topics:

- Unemployment and potential inability to find new jobs due to low qualification
 - Fundamental importance of lifelong and widely available education
 - Frustration and mental burden, problematic perception of own value and unwillingness to increase qualification
 - Digital exclusion of the unemployed, old-age and disabled retired
 - Excessive income differentiation, deepening the gap in society
 - Target groups:
 - Employees of businesses
 - Employees dismissed due to automatization
 - Other endangered groups of people (unemployed, retired and older employees, disabled retired, people from excluded locations)
4. **Risks related to new forms of work** (more frequent shorter working hours, temporary contracts, work from home, virtual teams)
- Topics:
 - Solving growing psychological burden of employees
 - Integration of all employees into education system
 - Higher requirements of social-emotional skills of employees and on language equipment
 - Changing requirements of employees and their working content, growing pressure on performance and generally more difficult tasks
 - Smooth return of parent on maternity leave or people caring about a member of household on labour market (falling out of regime, not enough part-time jobs, too long working isolation,...)
 - Target groups:
 - Company employees
 - People on parental leave, people caring for a member of household

Chapter 3: CSR in the era of upcoming Industry 4.0

Chapter 3 is a connection of two previous chapters. We consider the key topics and target groups defined in previous chapter, and we analyze them from the viewpoint of CSR. In other words, we try to find approaches and specific activities in the CSR concept that react to the key topics and work with the target groups.

But before we pay attention to the partial topics, we consider it appropriate to open another (maybe surprising for some in the context) topic – digitalization of company as a cornerstone of other CSR activities.

Own digitalization as a priority of CSR strategy

As in a range of other human activities and attempts as well as in the CSR strategies, we can distinguish between activities that solve risks to a consequence and prevent them and those activities that attempt to contribute to solving problems that already occurred. We assume that hardly anyone would contradict that the first one is a key one from the long-term point of view.

Aiming to put out current fires is important and it is not possible to let the fire spread hoping heavy rain would come, which will resolve everything. Moreover, the activities are, from the viewpoint of CSR, easier for identification and using for the needs of HR. On the other hand, if we primarily focused on that and omitted „safety precautions“ to prevent any future fires, in future, we would have a lot to do with other fires, which would greatly take away our attention from other goals. Maybe it would rather be Sisyfos work with consequences for society and economy that are hard to imagine, as there is no life on any put-out or burnt land.

We are convinced that it is important for reliable CSR strategy to perceive own activities in a broader context first of all in order for a company (though in good faith) not to blindly spoil and proudly present a few trees when a forrest around it is on fire.

If we put this abstract idea in connection with upcoming 4th industrial revolution, we can state that **socially responsible behaviour of company firstly means not to ignore the coming changes, to invest into own digitalization, to educate employees and not to rely on the seemingly socially fair stimuli.** Lobbying for state stimuli to maintain the low-qualified workforce and using them greatly may lead to a short-term sweeping of inequalities, but from the long-term perspective only to the Czech Republic falling behind in an international comparison of productivity and standard of living.

Such approach leads to deepening the differences in the international context and puts the Czech Republic closer to fulfilment of the frequent saying that „Czech Rep. is only an assembly of advanced countries“. Moreover, undesirable polarization doesn't occur only relatively to Europe and world but also inside CZ, as the approach may not only lead to a company to fall behind but also to its loss of competitiveness of its employees on labour market.

The approach, which is pointed out as a great risk for Czech Rep. by Initiative Industry 4.0 from MPO, is really just shifting of the inevitable with painful interests increasing in time.

What sense would there be for such company, if it e.g. contributed to charity? It is definitely for a good thing, it is solidary and company brand grows. In time, due to its fading competitiveness, it would probably cease to exist, its employees would appear in an unpleasant situation and also the contributions to charity would become just a music of the past. Everyone loses in that scene.

A company may therefore not be really socially responsible, if it focuses just on minor solution of existing problems and at the same time omits the prevention of social problems it may generate as a result of its foresightedness.

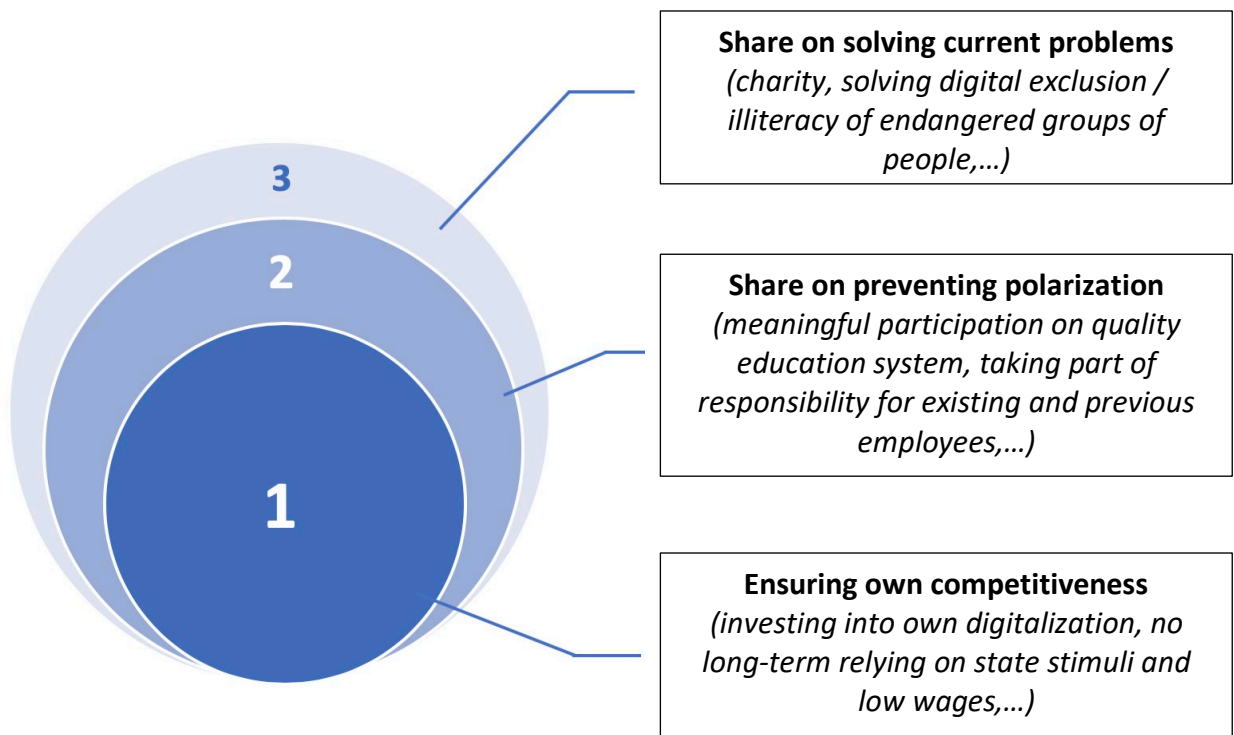
We realize that considering communication outside, it surely is difficult. Saying that „We are socially responsible because we digitalize,“ in the bookmark of CSR web, companies are hardly understood by public. Nevertheless, it may at least be an appeal for professionals to marketing and PR. But if something is hard to communicate within PR, it does not mean it's not correct and it is important to do it.

Already the biblical parable spoke about building a house on sand and on rock. You may have the best house but if it stands on sand, it will be destroyed. If the house stands on solid foundations, it makes sense to focus on building a house, too.

We believe that the approach discussed (to face the changes coming and to secure its own competitiveness) can be considered as stable foundations for next CSR activities and overall strategy of a company.

Following the thoughts, we suggest an optimum scheme of the CSR priorities to prevent polarization of society due to automatization and robotization:

Picture no. 13: Optimum scheme of the CSR priorities at the time of Industry 4.0



(Own illustration)

This frame of thinking is in accordance with CSR in the concept of A. Carroll. From the end of 1970s, he has spoken about fulfilling the economic level as absolutely the first responsibility of businesses towards society, followed by the legal, ethical and philanthropic responsibility. (Carroll 1979, p. 500) (Carroll 1991, p. 39-48)

Key topics for industry 4.0 and how CSR may react to them

In the first chapter, we defined 4 thematic areas: new requirements of education system, polarization of society due to automatization and growing qualification requirements, risks connected with new forms of work and slow digital transformation of small and medium-size businesses. How does CSR react to the areas?

(1) Slow digital transformation of small and medium-size businesses

Low wage level (causing economic disadvantage of automatization of many cases), relying on state stimuli, unconceptual ad hoc decision making instead of strategic planning of company strategy due to insufficient human and financial capacities, not being informed. Those are the reasons of slow digital transformation of small and medium-size companies.

Why and how this problem, seemingly not related to CSR, may be included in CSR company strategy, is described on previous 3 pages.

(2) New requirements of education system

Coming changes will require new skills and ways of education. Here we consider important to explicitly mention that **education is not only a mean for employment on labour market but also a mean of fulfilling personal and civil life.**

In order to be useful on labour market but also for some fulfilling life in society, **digital literacy** will be more and more important (as already discussed above, the fact that today's children grow up with technologies itself will not guarantee a required level of digital literacy; education in this area therefore cannot be taken easily even for children). Also, due to changing way of life, an importance of **soft-skills** will grow (social-emotional skills, communication, language equipment, ability to work in team,...). Finally, it needs to be mentioned we need to overcome the traditional view of education system, which builds imaginary barriers between branches and types of education (those with apprenticeship vs. scientists vs. technicians vs. humanite education) and think much more **interdisciplinarily**. The so-called „**T-shaped education**“ approach is promoted (depth of skills in one specific field and width in the spectre of other basic skills and knowledge). The last key prerequisite for the Czech Republic to stand as a knowledgeable society with economy based on high productivity and technological solutions of Industry 4.0, is the **system of lifelong learning**. People across society should learn to live with the fact that education doesn't end at the moment they get an apprenticeship certificate or university degree, but it is necessary in today's dynamic society to learn continuously.

„The released but also the existing workforce will have to have a chance to continuously refill missing knowledge and abilities required by new job vacancies and changes in their professions. The most important will be particularly ICT skills on different levels interconnected with various professional specializations. Besides that, it will also be about classic professional requalifications and development of general skills like creativity, business skills and ability to cooperate with other professions and customers. Further education system should therefore be prepared for various forms and tools adjusted to needs even in narrow groups of clients of different professions, with different levels of skills and of different age. It will require new methods and approaches including a great development of e-learning. We will also need to strengthen interconnection of businesses during requalifications and continuous training of own employees and their participation at providing of initial professional education in a form of closer cooperation with secondary schools and universities.“ (Initiative Industry 4.0 MPO, 2016, p. 149)

When fulfilling the requirements, companies introduce important actors. Their interconnection is desirable, from the viewpoint of CSR (while in many cases, interconnection of company in a solution does not have to mean only altruism but also very economic act) as well as a viewpoint of the Industry 4.0. as already discussed in chapter 1, Industry 4.0 is quite a complex matter and its impacts enter many levels of society. So his potential can hardly be fully fulfilled and its negative impacts solved effectively without cooperation of all important actors.

Within the CSR strategy, companies can focus on 2 levels:

- on **meaningful cooperation with education institutions**, from nurseries via after-school activities to universities (Cooperation with companies with choosls and other educational institutions is far from an unusual act, which is also confirmed by our investigation among companies.)
- on **elaborated education system of own employees.**

In all that, we should take into account the above described requirements of new education system.

A principal concerning topic **in company education is its wide availability**. Company education and priorities often exclude temporary employees or part-time ones. With a growing interest in more flexible forms of employment and their growing suitability for the coming era of the 4th industrial revolution, failing to be open to company education could be potentially problematic to maintain qualified workforce on labour market.

Besides the frequent model, it is also frequent to use the part-time work by people on parental leave, shortly after or during the care of ill member of household. In reality, it usually concerns women in the Czech Republic. It shows that women reach a higher level of formal education than men, and they also take part in lifelong education more often. With age (and maternity), however, a level of knowledge falls fast. **Making education accessible regardless a form of employment contract, in a consequence, helps to decrease the persisting gender differences on labour market.** (Kohout, Pališková, 2017, p. 91-94)

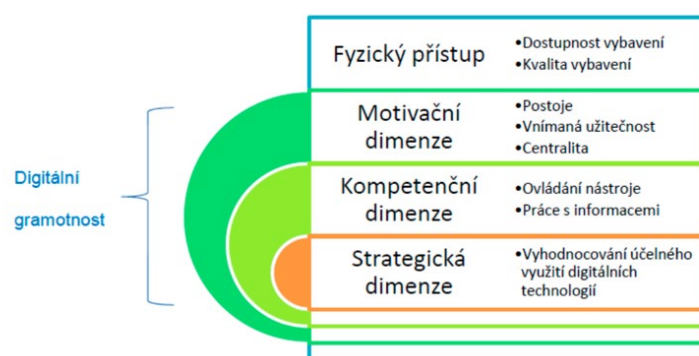
Investigation of companies within the study indicates that company education is more available to full-time permanent workers but there are no big differences (relatively to part-time employees or those with temporary contract).¹¹

¹¹ For more details, see chapter 4

Just as suitable CSR tool of a company in the area of company education may be **inclusion of the low-qualified employees in the education programmes**, though the programmes do not have to be (apparently) connected with their duties at work. This concerns especially basic education in the area of digital literacy, financial literacy etc. Such approach contributes to the **elimination of risks of digital exclusion and illiteracy of households with low incomes** (which is a problem in CZ compared to the EU average, as discussed in chapter 1).

Opening scissots between those who can manage ICT and who can't is also mentioned by the Strategy of CZ digital literacy. Using ICT is, according to the Strategy of CZ digital literacy, depends on human ability to perceive the benefit of ICT, ability to operate ICT and ability to use it practically. (Strategy of CZ digital literacy for 2015–2020, 2015 p. 3)

Picture no. 14: Scheme of digital literacy dimensions



(Source: Strategy of digital literacy of the Czech Republic for 2015-2020, p. 11)

Note: from the top:

Physical approach – available equipment and its quality; **Motivation dimension** – attitudes, perceived usefulness, centrality; **Competence dimension** – managing tool, working with information; **Strategic dimension** – assessment of purposefulness of digital technologies

Our investigation showed that companies strongly disagree that there would not be any sense in being educated in ICT skills for employees aged 55+. they still disagree (still strongly but not so much) with the fact that there would not be any sense in being educated in ICT skills for workers and other low-qualified employees (see chapter 4).

It is also important to say that companies often don't have to invest a lot into company education. Often it is rather an administrative matter of education of the HR departments and letting employees to attend education in their working hours. Education can then be funded from the state and European support programmes. As apparent from the investigation within the study, financial and methodical support of state in company education (e.g. OPZ) is used only little by the companies (see chapter 4).

„In the Czech Rep., there is a good situation considering involvement of companies in education of their employees. In 2010, for which the last data are available, 61 % on average of the employed participated in the professional courses provided by businesses in the Czech Republic, in industry, it was even 65 %, which are the highest proportions within the EU. However, the question is the specialization and quality of the courses, though it's possible to expect that employers provide further education pouze tehdy only, if they are convinced about their positive contribution for the work of trained employees. The second highest proportion was in Belgium, 52 % resp. 58 %, in other countries, the participation in courses of professional education moved between 33 % - 39 % on average for the whole economy and 34 % - 44 % in industry. A higher interest of employers in their employees' education was also a result of supporting further education from structural funds, which the Czech Republic, like other countries, could use at the time.“ (Initiative Industry 4.0 MPO, 2016, p. 137)

If we now consider what chapter 1 has described regarding the so-called „shared value“, then a bit strange role in CSR at the time of Industry 4.0 is played by businesses, the main activity of which is digitalization and the world of modern technologies. They can provide the key transfer of know-how in the area of ICT skills to target groups more effectively than other businesses. We can mention an example of two giants in the field – Microsoft and Google.

Microsoft takes digital education for a must, CSR is an integral part of the global company strategy, which has real impacts for the Czech Republic, too. These are e.g.:

- activities aiming to support and motivate women and children in the world of IT (together with a non-profit organisation Czechitas),
- to provide software and hardware to non-profit organisations free of charge (within intensive interconnection of company in the TechSoup programme),
- to provide software to students and teachers free of charge (within the business programme DreamSpark),
- starting companies can, in the first three years of their business, use some Microsoft services free of charge (which was used by about 200 Czech start-ups)
- and particularly the programme Partners in Education introducing conceptual implementing of modern technologies to education and a long-term education system for teachers, involving as much as 750 schools across the Czech Republic.

„Social responsibility is not perceived as an addition to business strategy but as its essential part. We aim for our technology to help people succeed, and we want to reach our business

goals in the cooperation with our customers, not at their expense.“ Biljana Weber, general director of Microsoft Czech Rep.. (Microsoft, official web site)

Similar to Microsoft and Google, also TechSoup greatly participates in the programme, within the framework of which, it provides services and hardware to non-profit organisations free of charge. It's worth to mention the Programme Digital Garage under the initiative We Help Czechia to Grow. It is a one-year programme, the aim of which is to increase a level of digital literacy of people in the Czech Republic. Globally, Google joins in a range of charitable activities related to removing differences in the approach to digital technologies and to their using. That is what it achieves by its business mission: „Our mission is to organize all information and to make them universally accessible and useful.“ (Google, official web site; Horáková, 2017)

For the key topics of „New requirements of education system“, the following target groups and CSR activities are relevant:

A. Pupils, students and teachers

- Indirect stakeholders if businesses
- Problem:
 - Rigid education system,
 - Strict borders between fields (traditional non-interdisciplinary view of apprenticeship programmes/technical/non-technical),
 - So far not common system T-education (one narrow specification + wide scale of general skills in ICT, languages, communication, socially-emotional skills,...),
 - Low emphasis on development of creative and social intelligence (which cannot be replaced by robots)
- Purpose of CSR activities:
 - Long-term problem solving (co-producing educated society),
 - recruitment,
 - PR
- Examples of CSR activities:
 - A share of company of education system¹²
 - Externally: professionals at schools, study visits, excursions

¹² Examples of specific activities from business practise are included in the graph no. 13, chapter 4.

- Internally: own educational programmes in the field the company works in (free-time or as addition of education)
- Financial contributions (to schools, educational clubs and organisations – for education which stimulates entrepreneurial spirit, sense of teamwork and responsibility, critical thinking, civil education, interdisciplinary view of solving problems, communication skills... etc. in children)

B. Employees of businesses:

- Direct stakeholders
- Problem:
 - Omitting education of part-time employees,
 - Missing basic ICT education of the low-income and older workers,
 - Problematic return of women after maternity leave to labour market (falling out of regimme, few part-time jobs, too long isolation from work)
- Point of CSR activities
 - Increasing competitiveness,
 - Increasing satisfaction of employees,
 - brand of a good employer,
 - low fluctuation of employees,
 - using potential of educated women
- Examples of CSR activities:
 - Openness to part-time work (if suitable for company regimme),
 - Professional company education available regardless a type of employment contract,
 - basic ICT education for all employees regardless their work position.

C. employees dismissed due to automatization:

(for details, see the key topic „Polarization due to automatization“)

D. Other groups of people at risk (unemployed, retired, and older employees, invalide pensioners, people from excluded locations):

(for more details, see the key topic „Polarization due to automatization“)

(3) Polarization of society due to automatization

Just like for all other industrial revolutions, also here we can expect principal changes in the structure of labour market. Many new employees will appear and many will disappear. **Industry 4.0 is connected with dismissing many low-qualified workers due to automatization and on the other hand with growing requirements and wages.** This may lead to big income differentiation and related problems in the polarization of society.

In order to temporary unemployment of people replaced by machines not to become permanent unemployment, we need to work with the people for them not to lose hope. A good starting position is a situation when, thanks to previous good employer, they learnt at least some ICT skills through company education and a motivation to keep working on themselves. We should also bear in mind that unemployment caused by being replaced by a machine may also be very difficult psychologically. Perception of one's own value may be, after dismissal due to being replaced by a machine, shaken, which can influence one's motivation to keep trying and look for how to be useful on labour market and increase qualification.

When solving problems of polarization of society, there is an absolutely key of lifelong and widely available education (see above). Besides taking a part of responsibility of education of the existing as well as leaving company employees, a company may, within the framework of CSR, focus on the digitally excluded and illiterate (unemployed, old and invalide pensioners).

For the key topic „Polarization of society due to automatization“, we can describe the following target groups and CSR activities:

A. Dismissed employees due to automatization:

- Direct stakeholders
- Problem:
 - unemployment,

- potential inability to find a new job due to low qualification and digital illiteracy/exclusion,
- frustration and mental burden, missing self-confidence to look for new work activities
- Purpose of CSR activities
 - „we do care“ signal (company shows it does not put its hands away from the until-recently direct stakeholder),
 - brand of a fair employer
- Examples of CSR activities:
 - Ensuring respectable leave,
 - Being give (older) company laptops when leaving (participation on solving the problem of digital exclusion),
 - Offering to participate in trainings to adopt basic digital skills, financial literacy and other necessary basic qualifications to be successful on labour market (e.g. at the time of termination notice)

B. Employees of businesses:

- Direct stakeholders
- Problem:
 - Changing requirements from employees and their content of work,
 - Growing pressure on performance and generally harder tasks (not physically, on the contrary, automatization promises significant improvement there),

(for more details, see the key topics „Risks connected with new forms of work“)

C. Other endangered groups of people (unemployed, retired and older employees, invalide pensioners, people from excluded locations):

- Indirect stakeholders of companies
- Problem:
 - At risk of digital exclusion (access to wifi, PC),
 - At risk of low digital literacy, low language/communication equipment and other essential basic skills
- Purpose of CSR activities:

- altruism (this motivation plays a significantly more important role than in case of other target groups where CSR is more likely to bring material advantage for the company),
- PR
- Examples of CSR activities:
 - Motivation and education campaign aimed at specific groups of people,
 - Cooperation of schools and activities in excluded locations

(4) Risks connected with new forms of work

As already solved in other parts of the study, Industry 4.0 heads towards more flexible forms of work, such as part-time work or work from distance (remote work).

Part-time work is also desirable from other points of view, as it is suitable for people on parental leave and shortly after or for people who care for a weak member of household (it is more often women in the Czech Republic), which may have a positive effect on their overall life situation and at the end also on solving gender problems of being successful on labour market. **In a greater respect, supporting part-time employment of people in suitable situations may be considered as a part of CSR strategy.** An important part may then be **access to company education regardless a type of contract** (see above).

Investigation among companies shows that companies now consider part-time work to be useful and suitable. They would use it more, if there were better tax conditions (see end of chapter 4).

„Thanks to new technologies, there is greater and greater erosion of the borders between life at work and after work. In many professions, it is possible to work almost anytime and anywhere, and on the contrary, for example households can be managed from distance, from work.“ (MPSV, 2015, p. 8)

This more amorphous look of work represents **a challenge to maintain „work-life balance“**. Besides that and especially for older workers, who it may be just this work style, shifting work tasks to virtual world and missing every-day working physical contact psychologically hard for. If we consider increasing qualification demands, requirements of social-emotional skills and language equipment and natural pressure on performance existing in competitive environment, then **growing psychological load of employees cannot be overlooked**.

This is also a big issue for CSR and its importance within CSR at the time of Industry 4.0 will probably continue to grow. Growing pressure on performance of employees and growing psychological load is also confirmed in the investigation among companies (end of chapter 4).

For the key topic „Risks connected with new forms of work“, it may make sense to focus on the following target groups and CSR activities:

A. Employees of businesses:

- Direct stakeholders
- Problem:
 - Changing requirements on employees and their content of work,
 - Growing pressure on performance and generally harder tasks (not physically, on the contrary, automatization promises improvement here),
 - Problematic return of women on labour market after ML (being out of regime, not enough part-time jobs, too long isolation from work,...)
- Purpose of CSR activities:
 - Increasing competitiveness,
 - Greater satisfaction of employees,
 - Brand of a good employer,
 - Low fluctuation of employees,
 - Using a potential of educated women
- Examples of CSR activities:
 - work-life balance,
 - care for mental health of employees¹³

B. Parents on parental leave, people who care for a member of household:

- Direct stakeholders
- Problem:
 - Problematic return to labour market (falling out of regime, not enough part-time work, too long isolation from work,...)
- Purpose of CSR activities:
 - brand of a good employer,
 - using potential of educated women,
 - increasing satisfaction of employees

¹³ Examples of specific activities from business practise can be seen in Graph no. 11 in chapter 4

- Examples of CSR activities:
 - Being open to part-time work,
 - Inclusive company education,
 - Company nurseries, contribution for nursery fees, establishing children's area at work¹⁴

Summary of chapter 3

First of all, this chapter dedicated its big part to argumentation about why digital transformation itself represented a cornerstone for next CSR activities. It was followed by analysis, from the viewpoint of CSR, of four key areas to ensure social conciliation at the time of coming 4th industrial revolution. Those are areas which, according to our analysis, will become important within the framework of good quality CSR strategy. Those areas are: new requirements on education system, polarization of society due to automatization and growing qualification requirements, risks connected with new forms of work and slow digital transformation of small and medium-size businesses.

¹⁴ These possibilities and examples of companies which implement such activities are described e.g. in the article of newspaper Hospodářské noviny: <https://archiv.ihned.cz/c1-66622420-jak-sladit-praci-a-rodinu>

Chapter 4: Own investigation of companies

Last part of the study represents a summary of company investigation results¹⁵. That was done in June 2019 in a form of online questionnaire investigation in **227 Czech companies**. Companies were selected randomly¹⁶, addressed by e-mail and asked to fill in an enclosed online questionnaire.

227 companies which filled in the questionnaire represents 15 % companies that opened the introduction email and at the same time 55 % companies which clicked on the questionnaire link. The questionnaire was completed and sent by 100 % companies that started to fill it in.

Considering apparent selection distortion of respondents (it can be assumed that the 15 % represent companies with a rather positive relationship to studied topics, not a representative sample of Czech enterprise environment), so it is necessary to take the results with respect. **But they can serve, like in many respects, as an interesting additional material, which may help to complete an idea of an approach of Czech companies to CSR and Industry 4.0.**

A majority of respondents were members of companies' top management (directors, CEO, managers, HR/PR/CSR managers). 70 % were independent Czech firms, 20 % were companies that are a part of supranational corporations, and 10 % of Czech companies owned by foreign or national financial group. As for a size, the most numerous companies had 11-50 employees (45 %), medium-size companies (51-250 employees) represented 37 % and companies above 250 employees 18 %. From the point of main activity of a company, there were various respondents, the most numerous group was processing industry (33 %) and building (12 %).

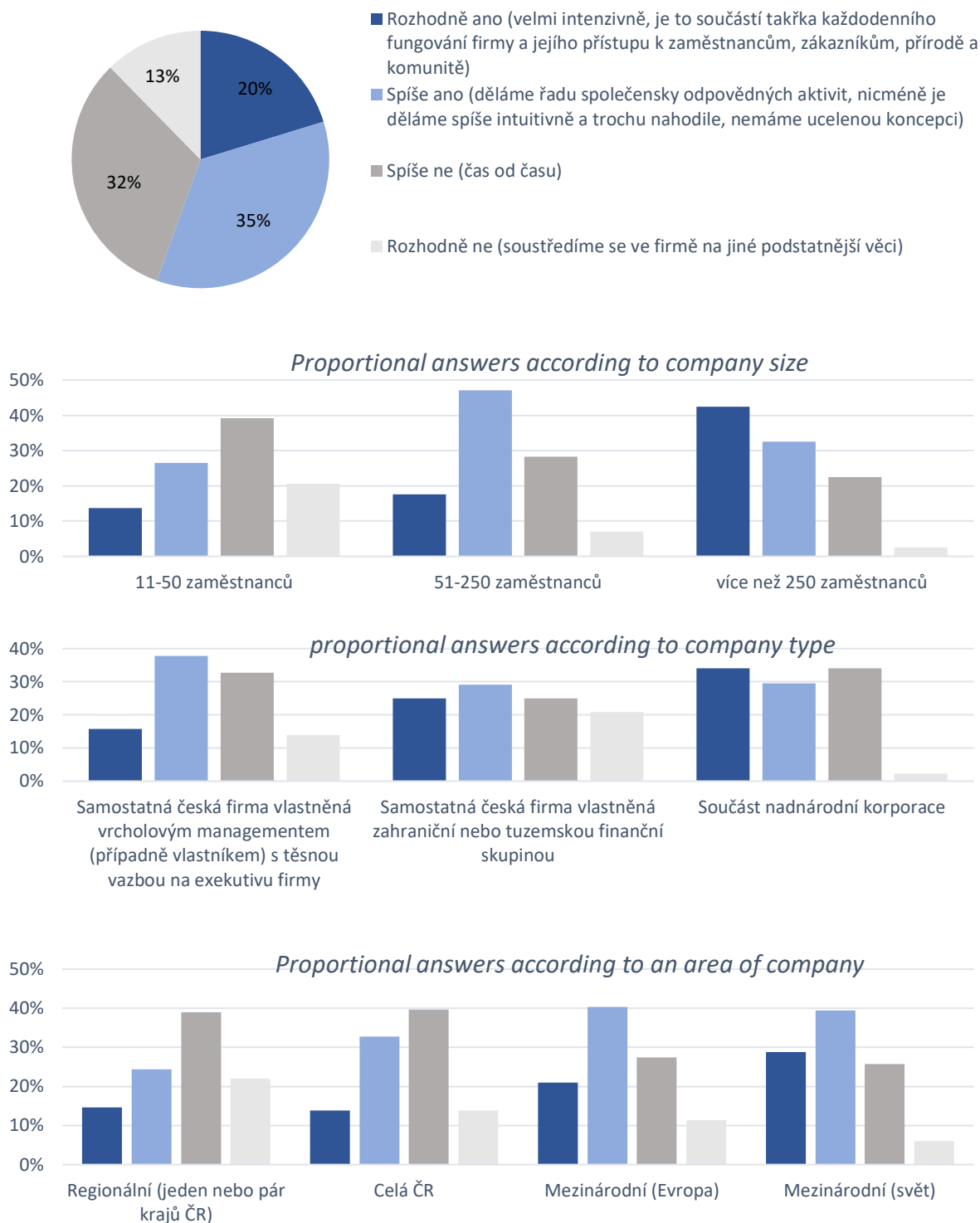
Companies in the Czech Republic and CSR (in general)

First of all, we analyze, on the basis of 4 questions of the questionnaire, what is the approach of companies to the CSR concept on more general level.

¹⁵ The following pages of the study represent only the key or interesting findings. More detailed summary of some questions can be found in the attachments.

¹⁶ Only the companies with over 10 employees were considered.

Graph no. 1: Answer to question „Is your company involved in any socially responsible activities?“ From top: Definitely yes – More of a yes – More of a no – Definitely no



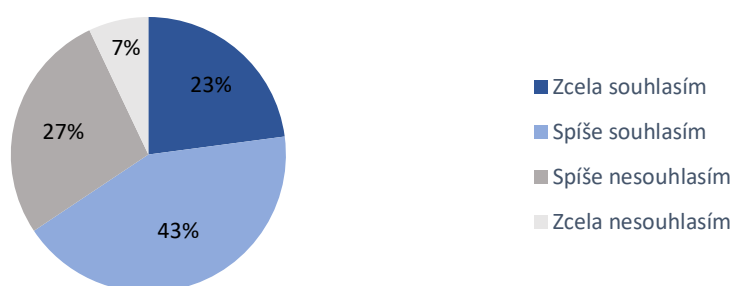
(Source: own investigation, question no. 9) First of the 3 graphs above classifies answers according to a number of company employees, the second is according to a type of company (company owned by top management – by foreign or local financial group – a part of supranational corporation) and the last one is according to an area (regional – all Czech Rep. – International: Europe – International: world)

In this question, there are great differences between different groups of respondents. The findings are in agreement with the research in the field (see chapter 1).

For companies, the priority areas within the CSR activities are care for employees and their families (this was a priority for 64 % companies and 32 % as a medium priority), followed by education of employees and an interest in impacts on environment (both areas were priority for 54 % companies and about 38 % stated medium priority),. The last one is philanthropy (high priority for 13 % companies and medium priority for 42 %).

(Source: own investigation, question no. 10)

Graph no. 2: The question „Do you agree with the statement „Is it correct when a firm does its socially responsible activities not only for conviction and a good think but also for profit to attract customers and strengthen its brand?“ was answered, as follows:



(Source: own investigation, question no. 11) From top: Absolutely agree – More agree – More disagree – Absolutely disagree

The question again showed a difference in perception of CSR by different types of companies. Companies with more than 250 employees, particularly those that are a part of a supranational corporation view CSR more pragmatically and do not see the concept just from altruistic point of view. (For details, see attachment, Graph no. 20)

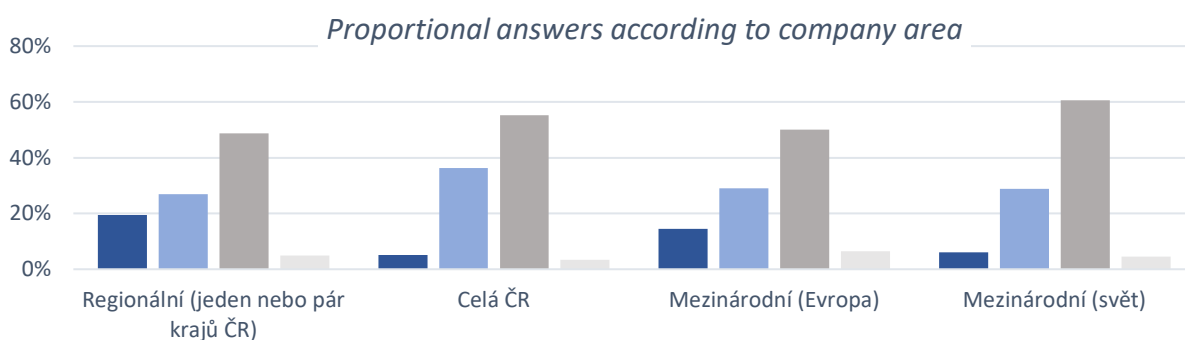
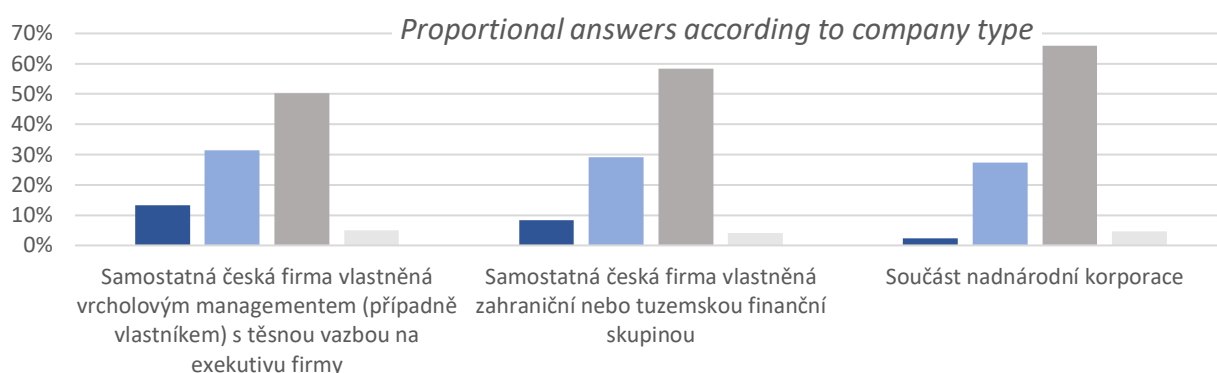
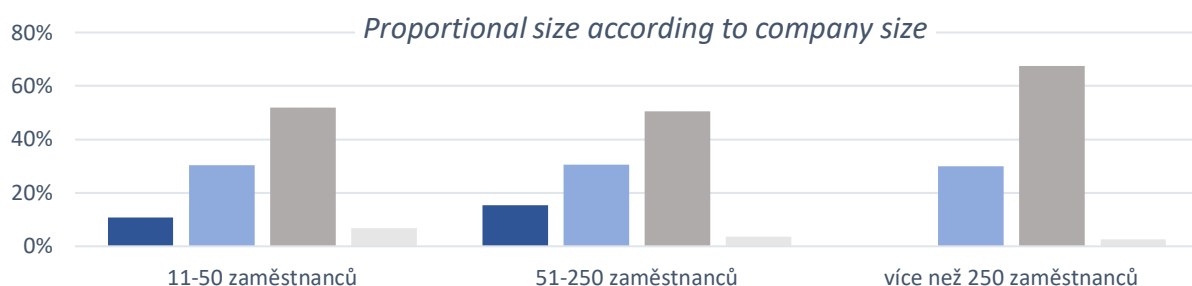
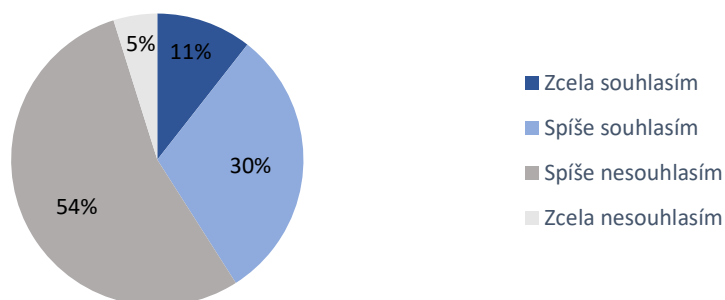
Graph no. 3: Question „Do you agree with statement „A firm bears no responsibility for future of its employees who are dismissed due to automatization. It is a natural part of attempts of a company to maintain and/or increase its competitiveness. Moreover, it is the state who can take care of those dismissed“? was answered as follows:

Note: graph 1 below: from top: absolutely agree – more agree – more disagree – disagree

Graph 2 below – according to a size of company and a number of employees

Graph 3 below – according to a type of company and ownership /see above explanations for details/

Graph 4 below – according to an area



(Source: own investigation, question no. 12) Regional / CZ / Europe / the world

There are again differences in answers among different groups of companies. The following findings go hand in hand with an intuitive view that large companies, as players with bigger possibilities, capacity and a number of employees, bear greater responsibility for society than small local companies.

Companies in the Czech Republic and Industry 4.0

This subchapter focuses on analysis of an approach of companies to coming changes, how much they realize the necessity of own digitalization and automatization, if, according to their opinion, the state support in that is adequate, if they rely on low level of wages in its long-term plans etc.

86 % of companies state that they are not afraid of speed of coming technological changes (40 % definitely no, 46 % more of a no), while there are no apparent systematic differences among different groups of respondents. There is also an interesting finding of an analysis of replies to question whether companies think that digitalization and automatization applies to them.

(Source: own investigation, question no. 1, see attachment for details)

Graph no. 4: Answer to question „Does the necessity digitalize and automatize apply to your company?“

Graph 1 below: From top: Definitely yes – More of a yes – More of a no – Definitely no

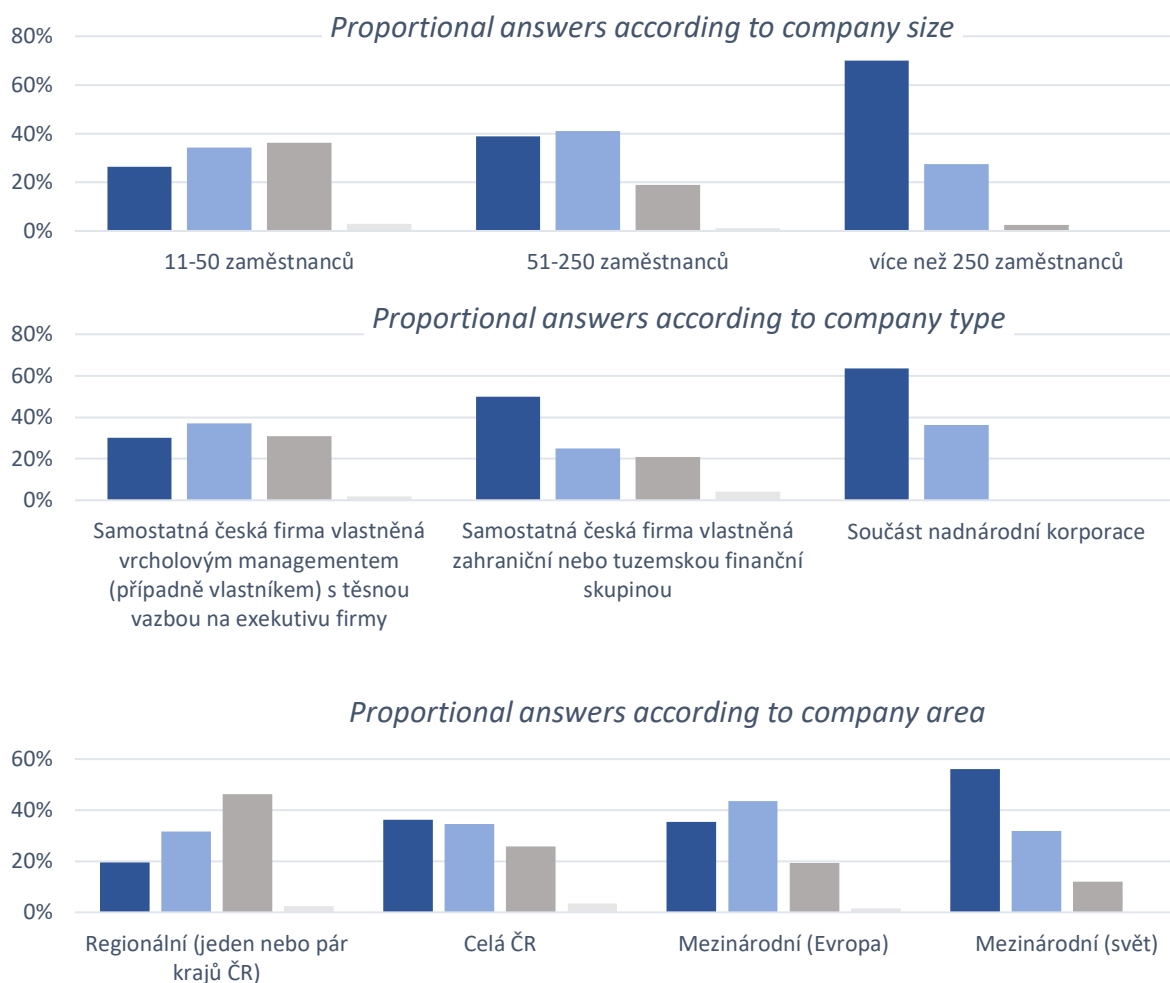
Graph 2 below: according to the size of company and a number of employees

Graph 3 below: according to the type of company

Graph 4 below: according to an area

For more detailed explanation, see the notes above





(Source: own investigation, question no. 2)

It cannot be assumed from the above answers that optimism of smaller and local companies is exaggerated. However, apparent differences among different types of companies are somewhat alarming, as they indicate that smaller and local companies believe more in maintaining the status quo, which is very unlikely to be realistic for a majority of fields.

The most commonly stated motivation to digitalize a company was maintaining the competitiveness (74 %) and saving costs (67 %). A less common motivation seems to be increasing profits (25 %) or increasing safety at work (18 %).

(Source: own investigation, question no. 3)

Graph no. 5: Answer to question „Do you agree with statement "State support (legislative, consultancy, system) to implement new technologies in a company like ours is adequate.“?

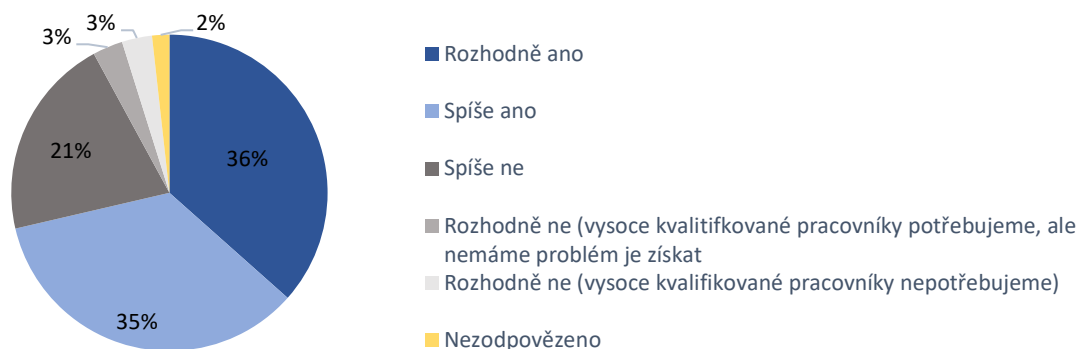


(Source: own investigation, question no. 4) From the top: absolutely agree – more agree – more disagree – absolutely disagree – we don't need this type of support in our company – not answered

Answers to the question did not differ significantly depending on the type and scope of company. However, differences can be spotted considering a size of company, specifically companies above 250 employees see much more often that support from the state is not needed in their case (answer „we don't need a support of this type in our company“ was selected by 40 % of large companies, it was 23 % of the medium size companies and 20 % of the small ones).

Interesting additional findings are the answers to question 16, which showed that companies use available methodical and financial support from the state or EU for education of employees, provided e.g. in a form of OP Employment, only very little. (More details in graph no. 18)

Graph no. 6: Answer to question „Does your company deal with not having enough highly qualified workers?“



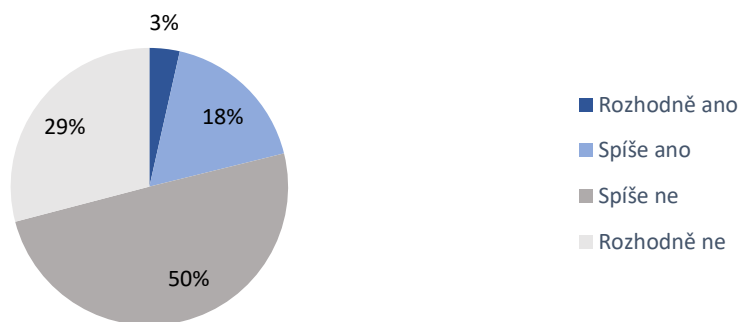
(Source: own investigation, question no. 5)

Note: Definitely yes, more yes, more no, definitely not – we

need highly qualified workers but have no problem to get them, definitely not – we don't need highly qualified workers, not answered

Previous findings probably aren't surprising for the readers. The answers, however, do not significantly differ among various types of companies. This also applies to the next question, which, however, uncovers a bit more positive view of reality.

Graph no. 7: Answer to question „Current comparative advantage of the Czech Republic is low level of wages. Do you rely on that in your long-term plans?“

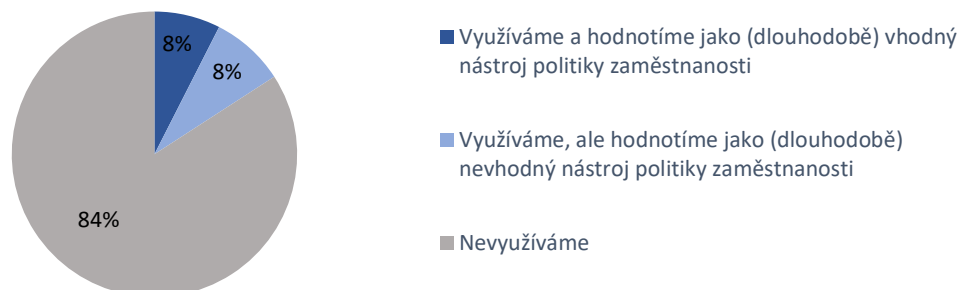


(Source: own investigation, question no. 6)

Note: from top: definitely yes, more yes, more not, definitely not

Answers to the question, again, do not differ systematically across various groups of companies.

Graph no. 8: The companies added to the statement „State stimuli to support employment of workers with lower qualification (e.g. state contribution to create the so-called „Socially purposeful work positions“)...“:



(Source: own investigation, question no. 7) Note: from top: we use and assess as a suitable tool of the employment politics long-term - we use but assess as an unsuitable tool of employment politics long-term – we don't use

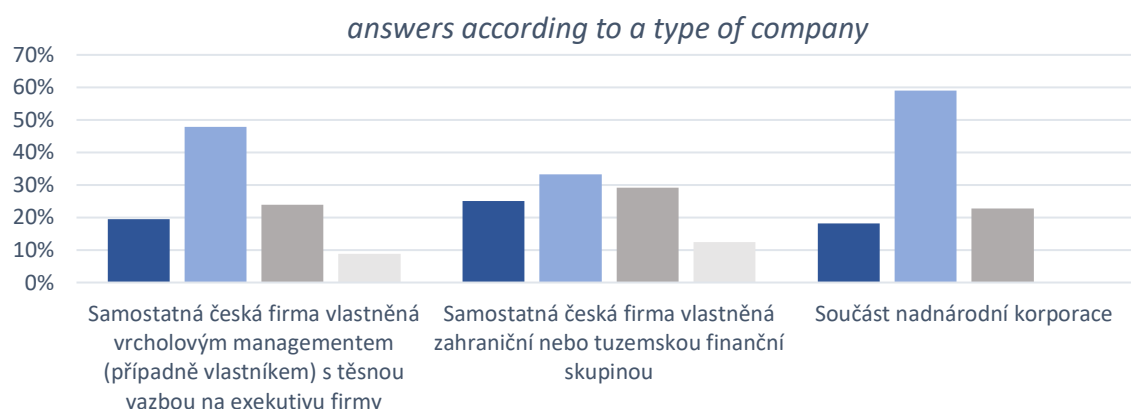
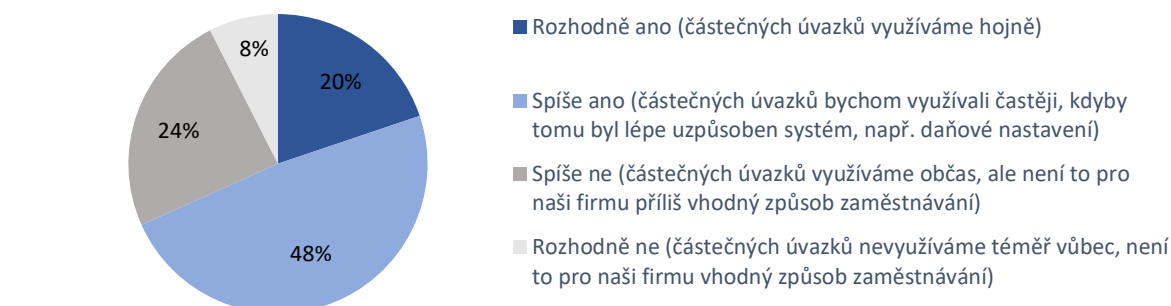
Answers to the questions would indicate that the worries about MPO in the Initiative Industry 4.0 are exaggerated (MPO mentioned relying on a low level of wages and keeping ineffective state stimuli as one of the greatest weaknesses of the Czech Republic when implementing Industry 4.0). Nevertheless, particularly in these questions, we cannot overlook the risk of misinterpretation of data caused by not quite honest answer of respondent („response bias“).

Companies in the Czech Rep. and CSR (in key topics for Industry 4.0)

In the last part of the chapter, we summarize the way companies contribute to specific CSR areas that will become (as described in chapter 3) important in the era of coming Industry 4.0.

Graph no. 9: The question „Part-time work may often be the best way to be succesful on labour market e.g. for people on parental leave or shortly after. Are you its supporters or providers?“ was answered as follows:

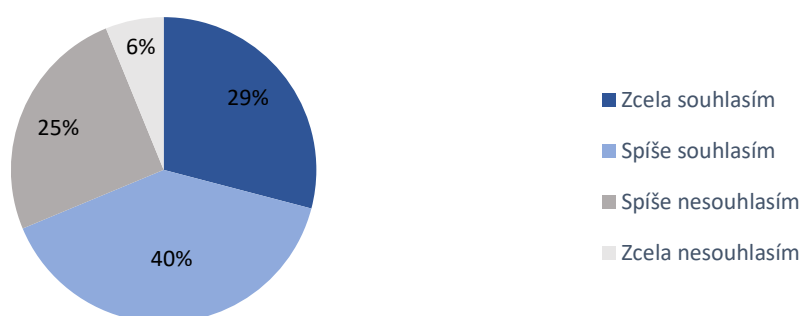
Pie chart: from top: definitely yes, we use part-time jobs a lot – more yes, we'd like to use part-time jobs more often, if there was a better system – mor not, we use part time jobs sometimes but it's not a good formo f employment for our company – definitely not, we use part-time jobs hardly at all, it's not suitable for our company



(Source: own investigation, question no. 13) Note: from left: independent Czech company owned by top management – independent Czech company owned by foreign or local financial group – part of supranational corporation

Considering the size and area of companies, there are no significant differences in answers. Considering the ownership structure, it is much more interesting. The results indicate that supranational corporations are much more open to part-time employment.

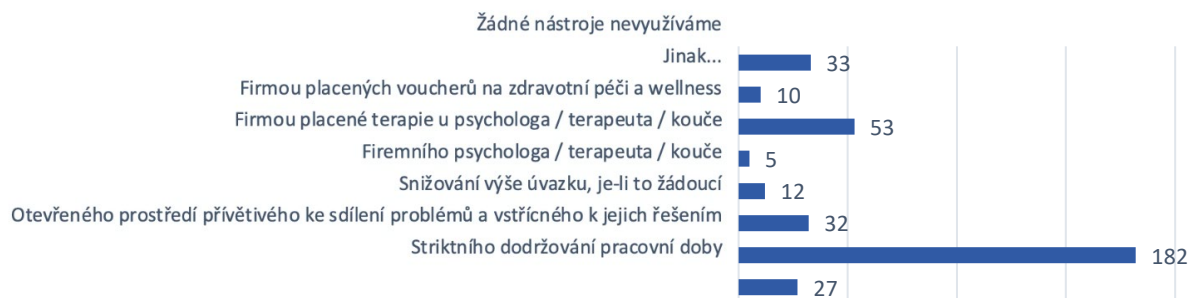
Graph no. 10: The question „Do you agree with statement „In today’s busy world and also in our company, I can see growing pressure on performance of employees and related growing risk of psychological problems“? was answered, as follows:



(Source: own investigation, question no. 14) Note: from top: absolutely agree – more agree – more disagree – absolutely disagree

Graph no. 11: Statement „In company with growing pressure on performance and psychological burden of employees, we try to work and help“ was commented, as follows:

Note:



Note: From top: We don't use any tools – Wellness and health care vouchers paid by company – Psychologist / Counsellor / Coach therapy paid by company – Company psychologist/Counsellor/Coach – Decreasing workload if desirable – Environment open to sharing problems and their solving – Strictly respecting working hours

Among the mentioned issues, there were the following: Financial bonus for better performance, Organization of work, Company events to strengthen collective and for relaxation, Flexible working hours.

(Source: own investigation, question no. 15)

Graph no. 12: Statement „Our company somehow cooperates with...” was answered, as follows:



(Source: own investigation, question no. 17) Note: from top: We don't cooperate with schools, universities and education institutions – Freetime organisations and clubs – Universities/Schools – Secondary schools/Schools – Specialised secondary schools – Primary schools - Nurseries

Graph no. 13: Statement „How do you cooperate with schools and/or education institutions?” was answered, as follows:

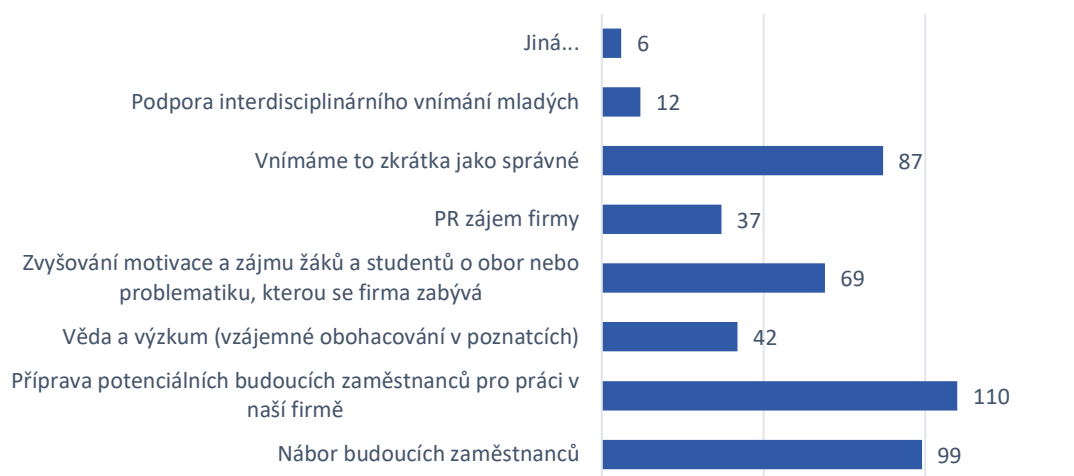


Among others, there were: science and research, excursion, projects, own seminars and business, providing learning materials, lending personnel and automobile to organise cultural events or lending equipment free of charge.

(Source – own investigation, question no. 18)

Note to the above graph: from the top: Other – Financial support of selected school, organisation or projects – Cooperation on creation of students' final works / bachelor, diploma, projects/ - Our employees participate in training, creating learning materials or hobby clubs – Organisation of excursions to our company – Providing visits and professional practical experience in our company /paid and unpaid/

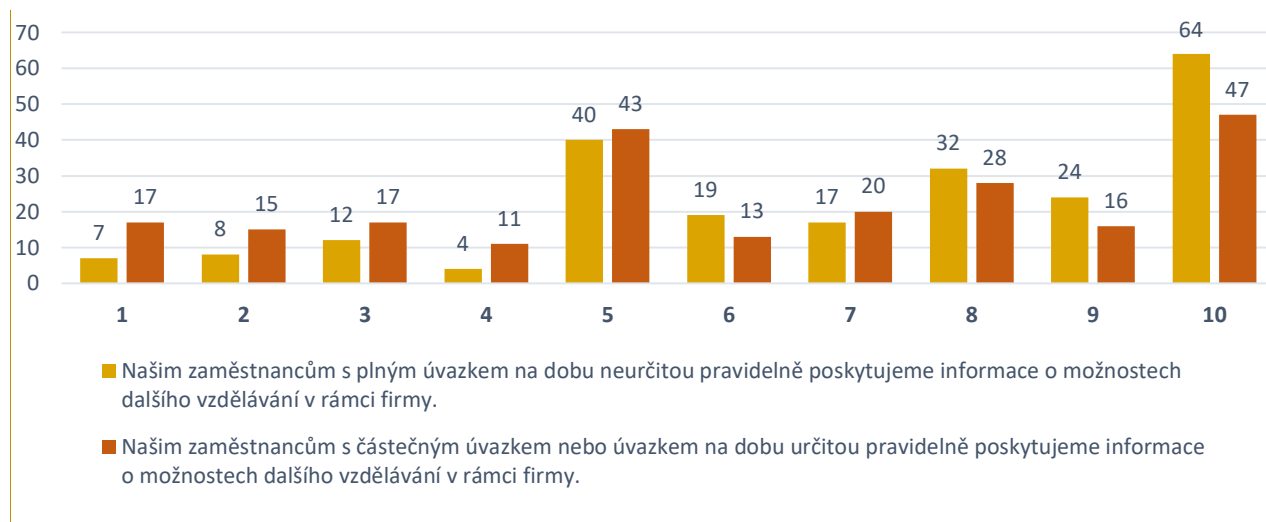
Graph no. 14: Question „What is your motivation to cooperate with schools/universities?“ was answered, as follows:



(Source: own investigation, question no. 19) Note: from the top: Other – Support of interdisciplinary perception of the youth – We see it as correct – PR interest of company – Increasing motivation and interest of pupils and students in a field or problematice the company is interested in – Science and research – Preparation of potential future employees for working in our company – Recruitment of future employees

Graph no. 15: [Education of employees; part-time versus full-time] Question „Assess the following questions and give it points depending on how much you agree“:

(1 – absolutely disagree, 10 – absolutely agree)



Light orange – We provide our full-time permanent employees regular information about opportunities of further education within our company

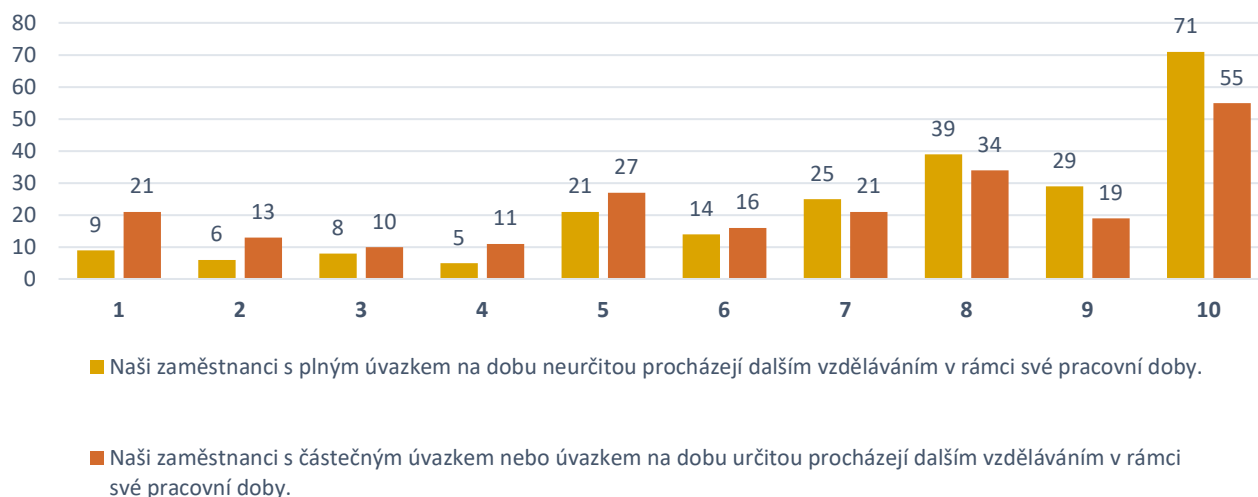
Red – We provide our part-time and temporary employees regular information about opportunities of further education within our company

(Source: own investigation, question no. 16)

An average figure for a full-time employee and a permanent contract is 7,14, whereas for a part-time employee or a temporary one, it is 6,22. As expected, the difference exists, however, it is not very big. Differences in average figures in different groups of companies are described in the attachment, in Tables no. 1 and no. 2 in the attachments.

Graph no. 16: [Education of employees; part-time versus full-time] The question „Give the following questions number of points according to how much you agree with them“:

(1 – absolutely disagree, 10 – absolutely agree)



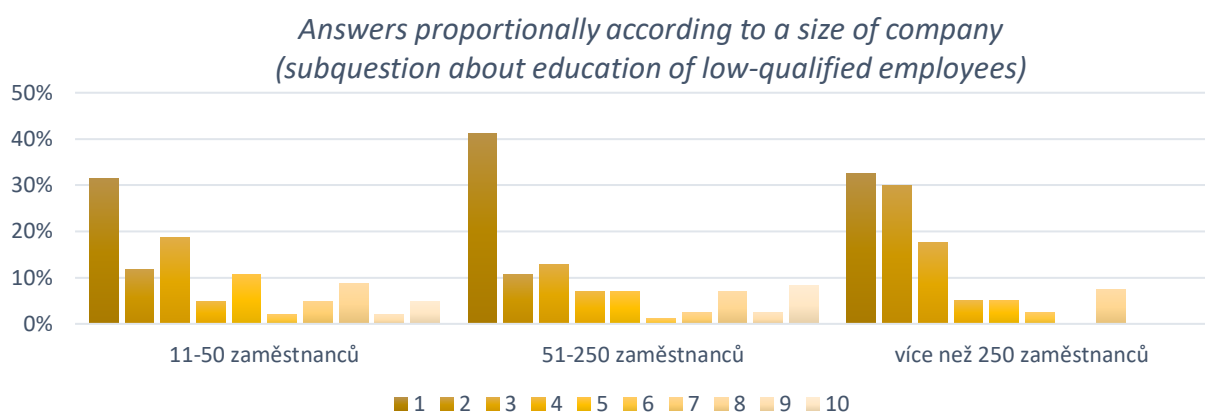
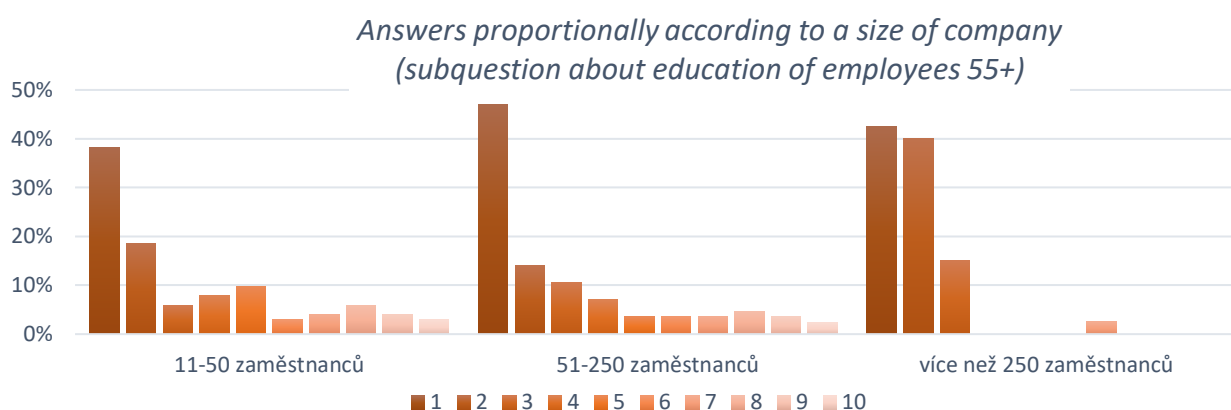
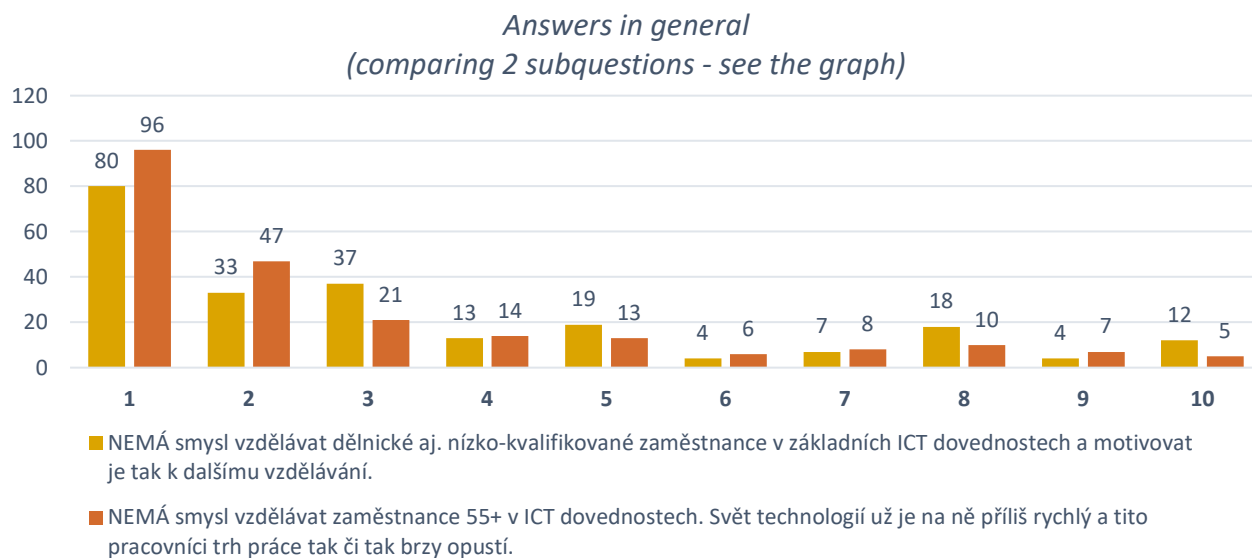
Light orange: Our full-time permanent employees participate in further education within their working hours.

Red: Our part-time or temporary employees participate in further education within their working hours.

(Source: own investigation, question no. 16)

Like in the previous question, there is an expected difference but it is not too big. An average figure for full-time employees with a permanent contract is 7,54, whereas for part-time employees or those with temporary contract, it is 6,57.

Graph no. 17: [Education of employees; older versus low-qualified workers] **The question**
„Please give points to the following questions according to how much you agree with it“:
(1 – absolutely disagree, 10 – absolutely agree)

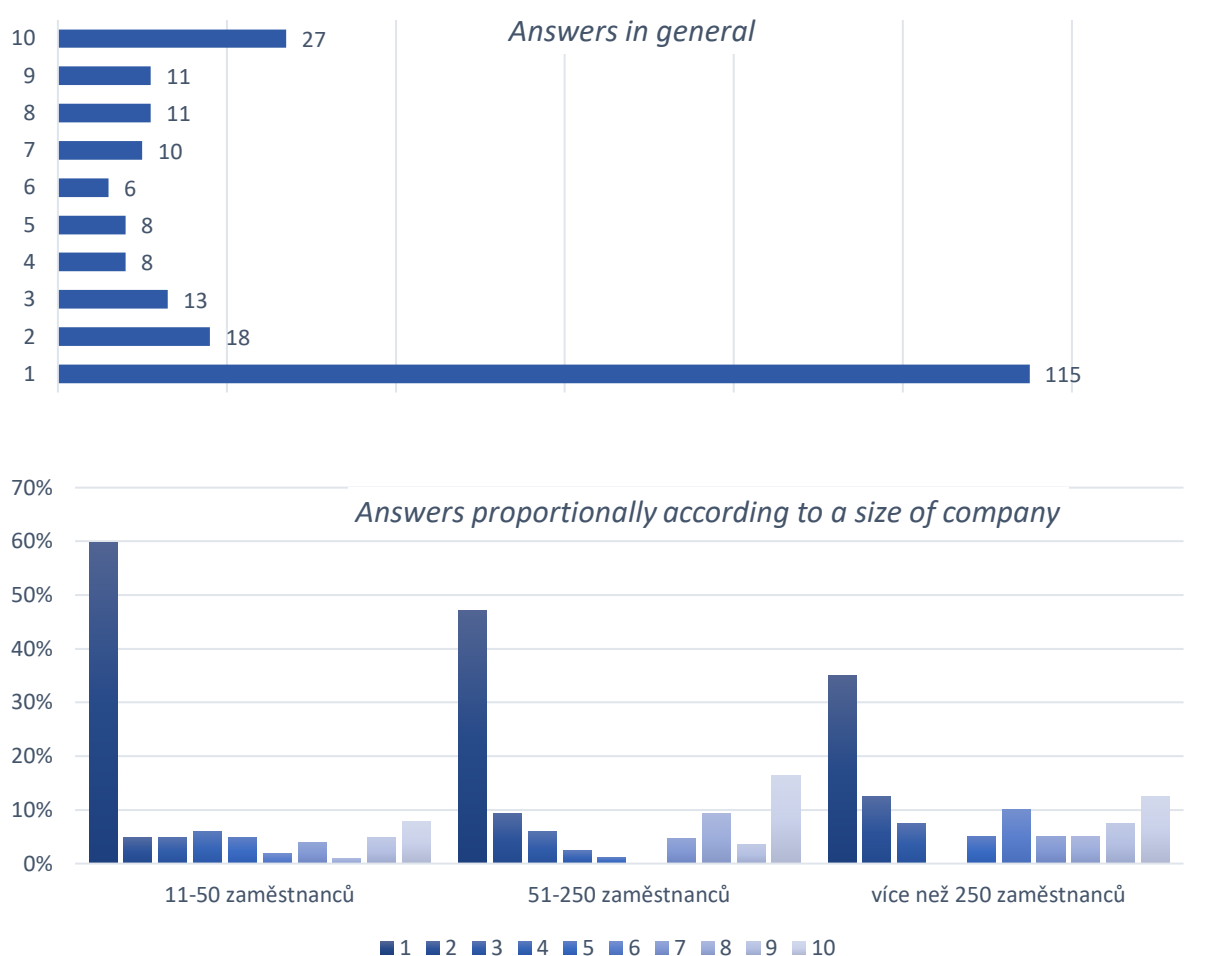


(Source: own investigation, question no. 16)

Education of people above 55 years in ICT skills is perceived by the companies as a better option (average 2,90) than educating low-qualified professions (average 3,42). We can say that particularly for the opinion on education of older people, there are significant differences depending on a size of company. On average, large companies corresponded with the figure 1,85, medium-size companies with 2,92 and small companies even with 3,30.

Graph no. 18: Question „How much do you agree with statement „Do we use financial and methodical support of the EU and CZ to educate our employees (e.g. through the Operation programme Employment)?“ was answered, as follows:

(1 – absolutely disagree, 10 – absolutely agree)

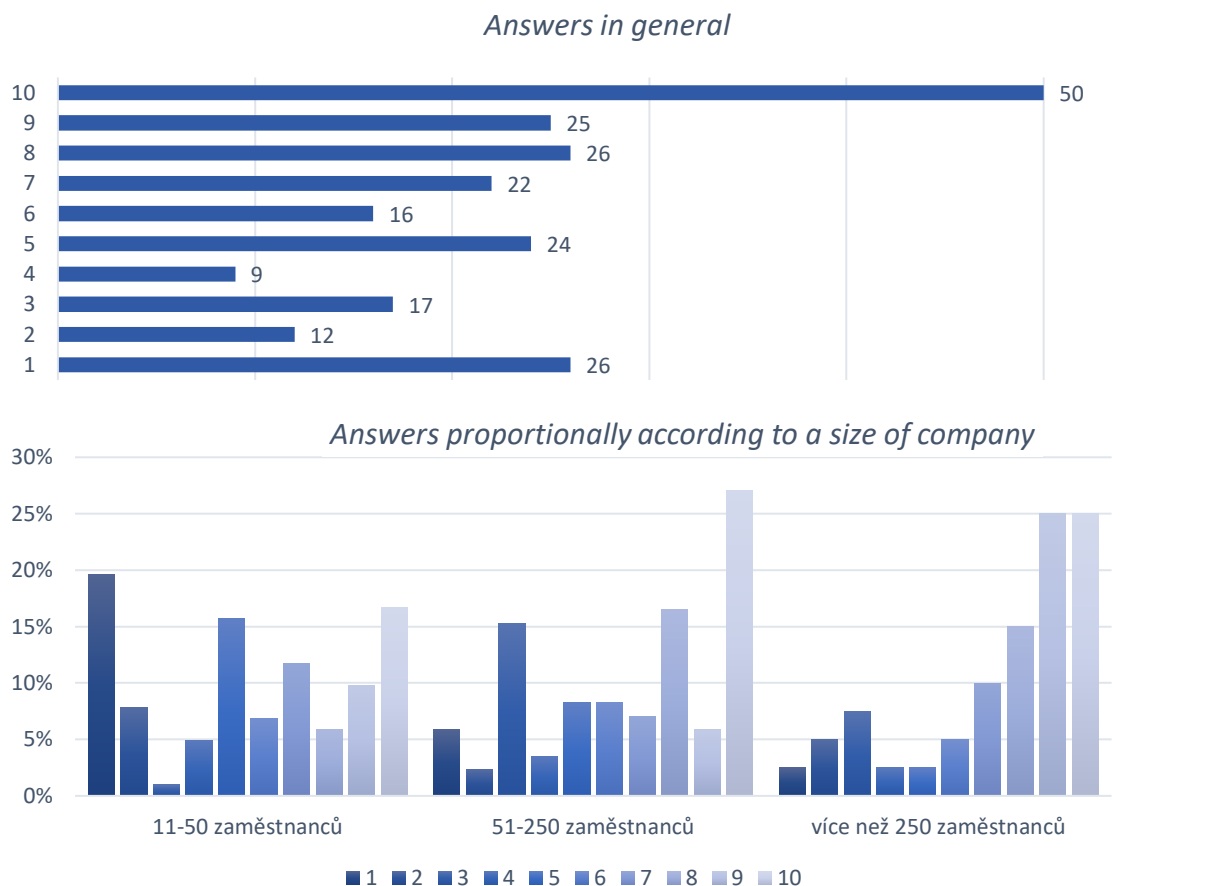


(Source: own investigation, question no. 16)

Also in this case, an interesting analysis of answers is offered depending on a size of company. Smaller companies use significantly less support in educating their employees. On average, their figure is 3,63. If we look at small companies, their average figure was 3,02, for medium-size companies 4,04 and for large companies, it was 4,35.

Graph no. 19: The question „How much do you agree with the statement „We provide training for our employees to get (broaden) PC skills“? was answered, as follows:

(1 – absolutely disagree, 10 – absolutely agree)



(Source: own investigation, question no. 16) 11-50 employees / 51-250 employees / over 250 employees

The question reached an average figure of 6,34. Again we can see significant differences in answers. Small companies assessed the question by an average number 5,62, the medium ones by number 6,66 and the large ones by 7,53. Similar big differences can be spotted depending on the type of company, where it's clear that PC education is provided to employees of particularly supranational corporations and international companies. (For more details, see the Table no. 9 in the attachment.)

Summary of chapter 4

The investigation with a participation of almost 230 representatives of top management of companies indicated the following facts.

Companies in the Czech Republic and CSR (in general)

- CSR is not strange in companies, most of them do some socially responsible activities, though they are often rather random more than conceptual.
- CSR is perceived more as a charitable activity with clearly altruistic motives. Bigger companies, especially those that make part of supranational corporations see CSR more pragmatically, therefore an intersection of what is beneficial for company and for society.

Businesses in the Czech Republic and Industry 4.0

- Smaller companies, especially local ones think automatization and digitalization is not necessary for them. This indicates that smaller and local businesses believe more in maintaining the status quo (which will probably not be realistic for many fields).
- State support in implementing digitalization is usually seen as inadequate.
- Businesses use available methodical and financial support to educate employees from the state or EU provided e.g. in a form of OP Employment very little.
- The businesses asked do not rely too much on low wages in their long-term plans, nor they use stimuli to support employment of workers with lower qualification

Businesses in the Czech Republic and CSR (in key topics for Industry 4.0)

- Businesses greatly cooperate with educational institutions, most often with universities and specialized secondary schools. Common forms of cooperation include practical experience and work stays, financial support of education institutions or excursions in companies. Not so common ones are participating in education and learning materials.
- According to investigation, there is a difference in providing company education to employees according to their contract. There is no huge difference though.
- Education people above 55 in ICT skills is perceived by companies as more meaningful than same education for low-qualified employees.
- Large companies perceive more than the small ones that they have some responsibility for the future of their employees dismissed due to automatization.
- Part-time work is something companies are open to. 20 % companies use them commonly and another 48 % stated part-time work is used but it would be used more, if the system was adjusted to that more (e.g. tax setting).
- More than 2/3 companies feel the growing pressure on performance and related risk of psychological problems. Companies try to solve it within CSR especially by attempting to maintain open and helpful environment, by vouchers for health care and wellness,

strict keeping of working hours, prospective decrease of working hours, and less by company psychologist or a coach.

CONCLUSIONS AND RECOMMENDATIONS

In the study, we have established key topics and target groups CSR attention should be paid to in relation to upcoming Industry 4.0. Another aim of the study was to analyze the topic from the viewpoint of CSR, therefore what is the role of businesses in solving related social problems and to prevent them, and how CSR can specifically react to the area.

Correct CSR strategy is not a final system of instructions and recipes but an approach containing activities that react to current needs of society and which best add to activities of each individual company and comply with its mission. At the time of upcoming industry 4.0, CSR gets new looks and it becomes more important in areas that were less important before.

1. The time of Industry 4.0 brings new challenges and risks for society. **First of all, the process of digital transformation of companies requires attention.** Especially for small and medium-size companies, there is a significant risk of too small transformation to the new digital era. Besides natural reasons like missing human capacities for strategic solutions, insufficient information or missing capital, in case of many European countries including the Czech Republic add another one to the problem - low wages that cause automatization is economically unsuitable, or using different state stimuli to artificially keep employment of the low-qualified professions.

Though the connection of the problem and the CSR concept may not be apparent at first, own digitalization represents the core of company responsibility towards society, as by investing into its competitiveness, the company prevents other social problems related to its falling behind and its employees. If the company does not responsibly in that, its other socially responsible activities are odd and unsustainable long-term.

2. **A big challenge for coming era is a new approach to education** (higher requirements of soft-skills, language equipment, social-emotional abilities, interdisciplinary thinking, digital literacy, besides narrow specialisation also a wide grasp in related topics/themes, necessity of lifelong learning instead of a classic model "it ends by leaving school"). In the system of education, companies represent an unreplaceable player on a level of company

education of employees as well as their cooperation with education institutions. Both are closely connected to CSR.

Within this key topic, we can focus on a few target groups. Working with students, pupils and teachers as a part of various internal and external participation in the education process may be a very meaningful part of CSR strategy of company (considering altruism, PR and recruitment of future employees). Providing time and resources to employees for company education is now almost an integral part of HR and CSR strategy of every (bigger) company. However, education shouldn't leave out part-time or permanent employees. It should also include older employees and workers with low qualification (especially concerning basic ICT skills, which can help to prevent digital exclusion and illiteracy of the groups at risk).

3. Just like in previous industrial revolutions, also here we can expect **principal changes in the structure of labour market. Many new jobs will come to exist but also cease to exist.** Industry 4.0 is connected with dismissing many low-qualified workers due to automatization and on the other hand with growing requirements but also wages on the other side. This may lead to great income polarization and related problems.

Polarization due to automatization may, besides the above mentioned, be solved especially by a fair approach to the leaving employees in order to decrease the risk they will be frustrated and lose motivation to be successful in today's dynamic world. This may be achieved for example by including them in company education before they leave company or by providing hardware with the aim to eliminate the risk of digital exclusion. It is also possible (if a company considers it meaningful concerning its activities and strategy) to focus on education and motivate other groups of people endangered by digital or social exclusion, such as invalide and old pensioners and people from excluded locations.

4. **Industry 4.0 goes to meet more flexible forms of work, such as part-time work, shorter working hours and work from distance.** Thanks to new technologies, borders between life at work and after work fade away more and more. In many professions, it is possible to work anytime and anywhere, and on the contrary, households can be managed from distance, e.g. from a place of work.“ For example part-time work is desirable from other points of view, too „ as they are suitable for people on or shortly after parental leave or for people who care for a weak member of household (it involves women more often in CZ),

which may have a positive effect on their overall life situation, and in a result, on solution of still significant gender differences in a position of labour market. However, this all brings a number of risks, a solution of which again partly falls under CSR.

At this time typical by a growing pressure on performance and growing mental load of employees, we need to pay more attention to the issues of psychological health and maintaining the principles of „work-life balance“.

DISCUSSION

It needs to be said that the questionnaire investigation has some significant limitations in its testifying value. It is better to take the investigation as an addition to a study with some interesting results, nevertheless, it cannot be generalized too much, as it is apparent that this voluntary investigation carried by own limited opportunities of the authors involved rather the companies with a positive approach to CSR and coming changes in society. Therefore, results cannot be considered as credible mapping of an approach to CSR and Industry 4.0 in the environment of Czech companies. Despite that, some results may imply naznačit reality and offer some look into practise, which may be a valuable enrichment of theoretical work.

The topic of CSR at the time of Industry 4.0 is wide and complex. So we think that the study could be followed by several other studies. We can suggest for example a topic of how CSR can be suitably presented (how to deal with the issues discussed at the beginning of chapter 3). It would also be beneficial to focus other works on setting up the CSR strategy and provide specific advice how to implement it. It may be useful especially for small and medium companies, which often struggle with a strategic approach to CSR and often prefer some ad hoc unconceptional activities preventing to use a full potential of CSR in company management.

Also, based on the investigation among companies, another interesting companies rises. Why is it that companies don't use more the available methodical and financial support from the state to educate employees, and what particularly should be, according to companies, based on the – still inadequate – legislative, system and/or methodical support of state in the process of digitalization and automatization?

Another idea is the study can be followed by more detailed data analysis from the investigation, which would provide more rigorous conclusions about the influences of various independent

variables to the assessed questions. It could be interesting to have well realized case studies analysing specific companies and their approach to CSR in the context of Industry 4.0.

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Images

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Image no. 4

source:
Eurostat, taken from the Initiative Industry 4.0, image 31

Image no. 5

source:
Eurostat, taken from Initiative Industry 4.0, image 24

Image no. 6

source:
Model, taken from: Dopady digitalizace na trh práce v ČR a EU, Oddělení strategií a trendů, Úřad vlády ČR. 2015, [online]. Available from:
<https://www.vlada.cz/assets/evropske-zalezitosti/analyzy-EU/Dopady-digitalizace-na-trh-prace-CR-a-EU.pdf>

Image no. 7

source:
Eurostat. Taken 23. 8. 2019, [online]. Vlastní výpočty podílu HPH průmyslu na HDP země. Available from: <https://ec.europa.eu/eurostat/web/national-accounts/data/database>

Image no. 8

source:

Eurostat, taken from Initiative INdustry 4.0, image 19

Image no. 9

source:

<http://darrennegraeff.com/the-importance-of-t-shaped-individuals/>

Image no. 10

source:

ČSÚ. Rozvoj informační společnosti v České republice a zemích EU 2018, p. 68.,

taken from:

FISCHER, J., VLTAVSKÁ, K. Zvyšování digitální gramotnosti zaměstnanců. Vysoká škola ekonomická v Praze, Fakulta informatiky a statistiky, katedra ekonomické statistiky. Praha, 2018, listopad. Available from:

https://ipodpora.odborny.info/soubory/dms/wysiwyg_uploads/e044973a33126433/uploads/zprava_final_gramotnost.pdf

Image no. 11

source:

ČSÚ. Využívání informačních a komunikačních technologií v domácnostech a mezi jednotlivci, p. 24

taken from:

FISCHER, J., VLTAVSKÁ, K. Zvyšování digitální gramotnosti zaměstnanců. Vysoká škola ekonomická v Praze, Fakulta informatiky a statistiky, katedra ekonomické statistiky. Praha, 2018, listopad. Available from:

https://ipodpora.odborny.info/soubory/dms/wysiwyg_uploads/e044973a33126433/uploads/zprava_final_gramotnost.pdf

Image from. 12

source:

Eurostat, December 2018

taken from:

FISCHER, J., VLTAVSKÁ, K. Zvyšování digitální gramotnosti zaměstnanců. Vysoká škola ekonomická v Praze, Fakulta informatiky a statistiky, katedra ekonomické statistiky. Praha, 2018, listopad. Available from:

https://ipodpora.odborny.info/soubory/dms/wysiwyg_uploads/e044973a33126433/uploads/zprava_final_gramotnost.pdf

Image no. 13

source:

own processing

Image no. 14

source:

Strategie digitální gramotnosti ČR na období 2015-2020, p. 11

ATTACHMENTS

Establishment of key terms

Social responsibility of companies (*Corporate Social Responsibility*) – considering continuous development, there is not one single definition. One of the accepted ones is the definition of the World Business Council for Sustainable Development:

„CSR is a continual obligation of businesses to behave ethically and to contribute to economically sustainable growth and at the same time to strive to improve the quality of employees' lives and of their families, local community and society as a whole“. (WBCSD, 1999)

- abbreviated to **CSR**

Social responsibility (*Social Responsibility*) – from now on abbreviated to **SR**

Triple-bottom-line (*Triple-bottom-line*) – an idea that overall behaviour of a business should be measured based on combined contribution to economic prosperity, environmental quality and social capital. (Business Leaders Forum, Slovník pojmů, 2012)

Concept of sustainable development (*Sustainable Development*) – a concept supported especially by OSN, which many countries accepted in their government strategies (in the Czech Republic in 1992). the reason is a legitimate idea that in the limited resources environment, infinite growth is not possible, therefore, it is necessary to create conditions for environmental and economic stability. (Ministerstvo pro místní rozvoj ČR, 2012)

Stakeholders (*Stakeholders*) – all people, institutions or organisations, which influence businesses or they are influenced by them (shareholders, local organisations, employees, customers). A group of stakeholders is different for every company, and also the importance of the individual members of the group varies. (Trnková, 2004, p. 9)

Dialogue with stakeholders (*Stakeholders Dialog*) – establishment and identification of needs and aims of stakeholders based on an open dialogue with them. (Trnková, 2004, p. 16)

Creating shared values (*Creating Shared Values*) – opinion that businesses may create shared values when they use key skills in a way that contributes to social development as well as economic success of a company. (Bockstette, Stamp, 2012, p. 2)

Transparency (*Transparency*) – being opened to decisions and activities that have an impact on society, economics and environment and willingness to communicate about them clearly, correctly, on time, honestly and completely (ČSN ISO, 2010, p. 15)

Corporate philanthropy (*Corporate Philanthropy*) – active donorship, ideally strategically supported and based on long-term partner relationships, particularly non-profit subjects (Trnková, 2004, p. 16)

Equal opportunities (*Equal Opportunities*) – the term is often understood here only as equal opportunities of men and women. Globally, the term means equal opportunities applies to any disadvantaged groups in society (ethnic minorities, disabled or older people in a difficult position on labour market). (Trnková, 2004, p. 16)

Corporate Community Involvement (CCI) – complex support of publicly beneficial projects, CSR tool, a company is active in the community it works in (Kuldová, 2010, p. 36)

Digital literacy (*Digital Literacy*) – a set of competences necessary to identify, understand, interpret, create, communicate and use purposefully and safely digital technologies (their technical features and content) in order to maintain or improve its quality of life and a quality of life of its environment, that is for example for the purpose of professional and personal self-actualization, development of own potential and maintaining or increasing participation in society. (Digital Literacy Strategy of the Czech Republic for 2015-2020)

Digital exclusion (*Digital Exclusion*) – Digitally excluded is a person who does not have an chance, for various reasons, to use digital technologies and services, and as a result s/he is not integrated into modern society. It is connected with demographic characteristics, particularly age, education, socio-economic position and geographic factors. A group of digitally excluded people includes parents of children, too. At the same time, it can also be the so-called avoiders, that means people who are disconnected or with mediated access. (digiPortal)

Lifelong learning - „Lifelong learning, which is a group of actions with quite a difficult structure, can be divided to two basic stages, connected if considered from time point of view, called initial and further education.

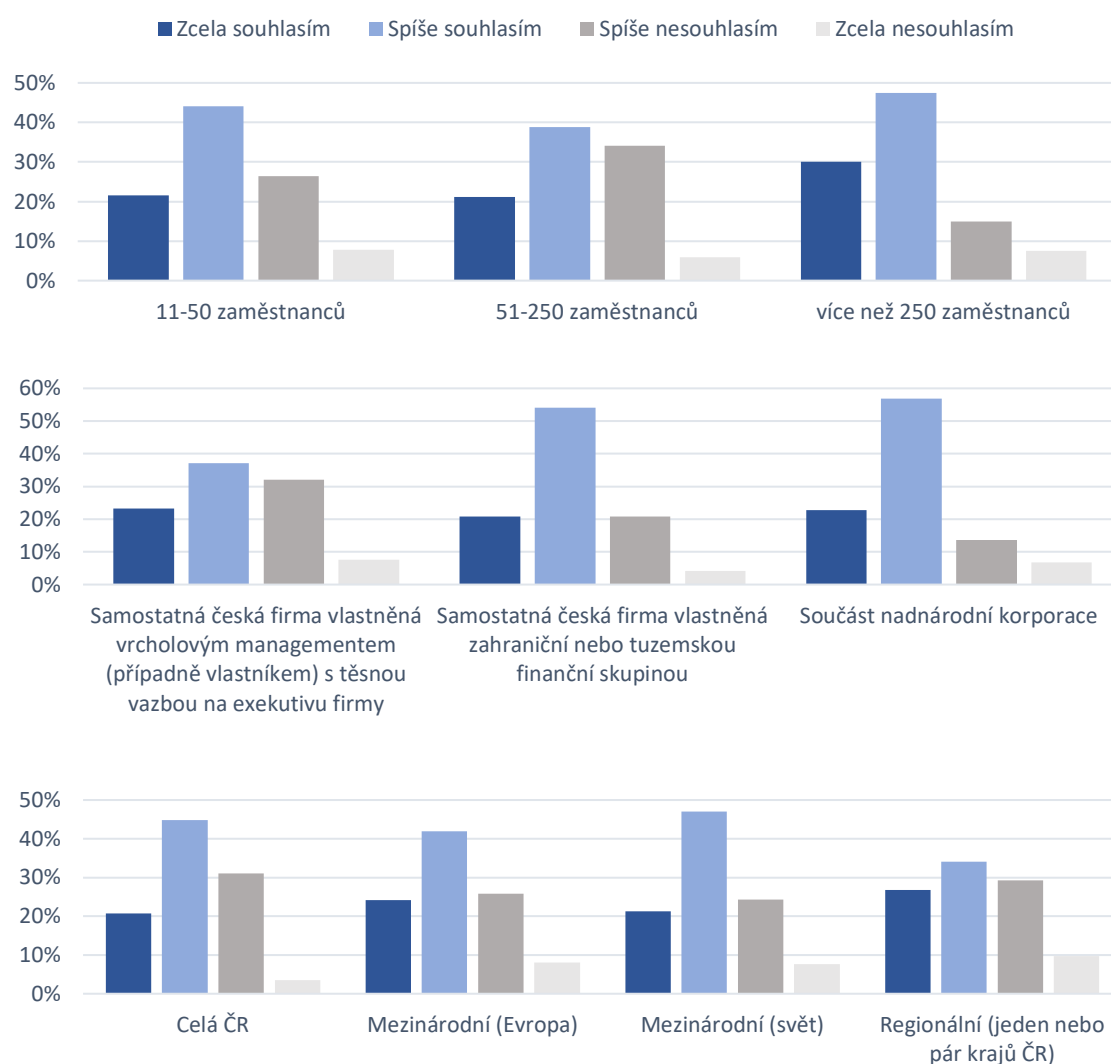
Initial education usually takes place in young age (before entering labour market) in a form of attending school. It is a formal type of education, which can be further divided according to a grade of education. It includes primary education, which involves

compulsory education (ISCED 1,2), followed by secondary education (ISCED 3,4) and finally tertiary education (ISCED 5,6).

Further education usually takes place after completing initial education, respectively when entering labour market. It can be further divided according to a way of obtaining knowledge and abilities to formal, not formal and informal education.“ (ČSU, 2009)

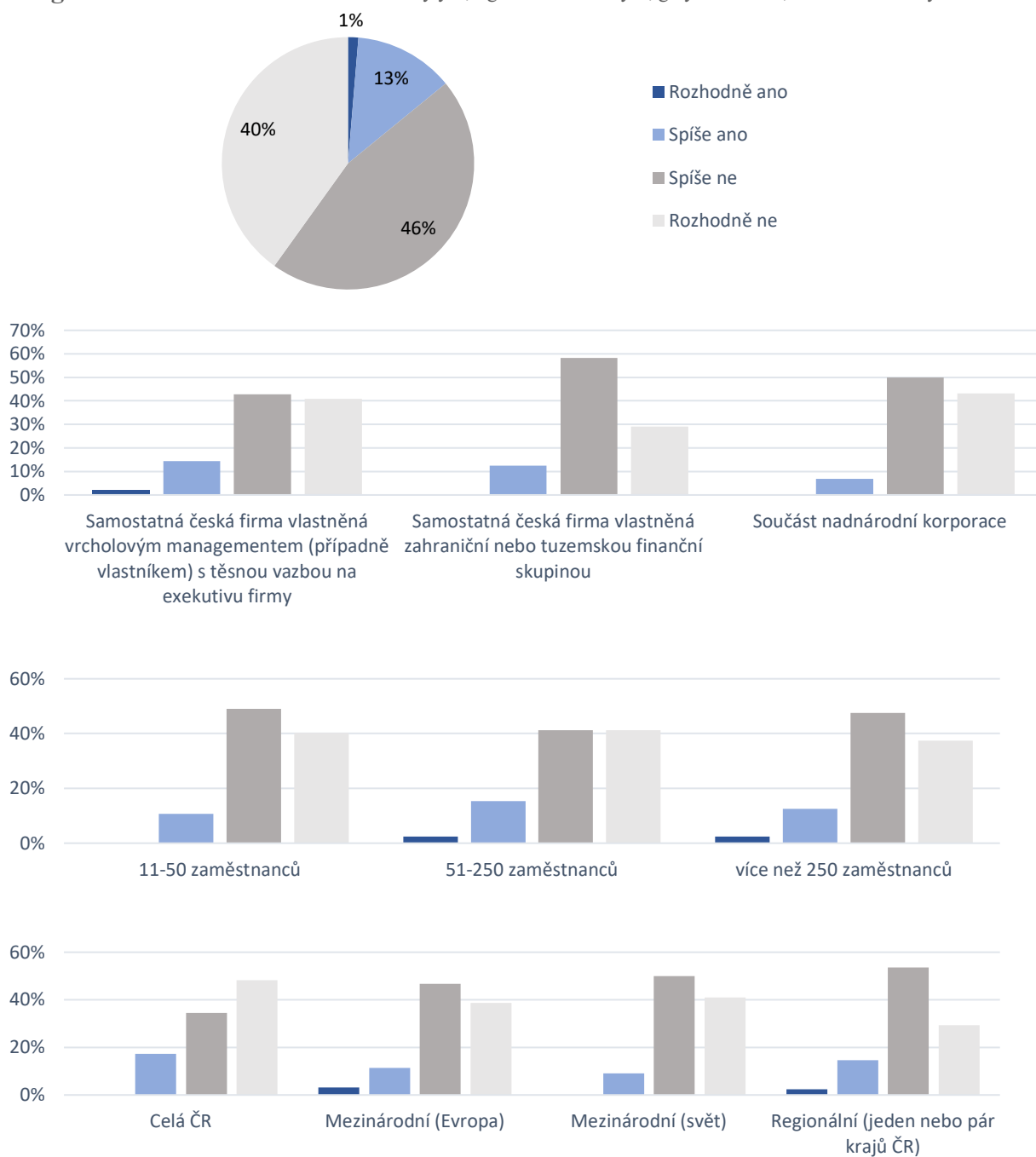
Additional findings of the investigation among companies

Graph no. 20: The question „Do you agree with statement „Is it correct when a company carries out its socially responsible activities not only for its conviction and a good think but also for profit with the aim to attract customers and strengthen its brand.“ was answered, as follows?: From the left: absolutely agree – more agree – more disagree – absolutely disagree



(Source: own investigation, question no. 11)

Graph no. 21: Answer to the question „Are you afraid of how quickly technological changes come?“ Note: Dark blue – definitely yes, light blue – more yes, grey – more no, white – definitely no



(Source: own investigation, question no. 1)

Table no. 1: Average figures for question „How much do you agree with statement „Our full-time permanent employees are regularly provided information about possibilities of further education in the company“?

(1 – absolutely disagree, 10 – absolutely agree); part 1: 11-50/51-250/above 250 workers; part 2: independent Czech company owned by top management/independent Czech company owned by foreign or local financial group/a part of supranational corporation; part 3: the whole Czech Rep./Europe/ the world / regional or a few Czech regions

11-50 zaměstnanců	51-250 zaměstnanců	více než 250 zaměstnanců	
6,65	7,32	8,00	
Samostatná česká firma vlastněná vrcholovým managementem (případně vlastníkem) s těsnou vazbou na exekutivu firmy	Samostatná česká firma vlastněná zahraniční nebo tuzemskou finanční skupinou	Součást nadnárodní korporace	
6,97	6,58	8,05	
Celá ČR	Mezinárodní (Evropa)	Mezinárodní (svět)	Regionální (jeden nebo pár krajů ČR)
6,86	7,21	7,61	6,66

(Source: own investigation, question no. 16)

Table no. 2: Average figures to question „How much do you agree with statement „Our part-time and temporary employees are regularly provided information about possibilities of further education in the company“?

(1 – absolutely disagree, 10 – absolutely agree) Note: see above for detailed explanation

11-50 zaměstnanců	51-250 zaměstnanců	více než 250 zaměstnanců	
5,96	6,09	7,18	
Samostatná česká firma vlastněná vrcholovým managementem (případně vlastníkem) s těsnou vazbou na exekutivu firmy	Samostatná česká firma vlastněná zahraniční nebo tuzemskou finanční skupinou	Součást nadnárodní korporace	
5,87	6,54	7,34	
Celá ČR	Mezinárodní (Evropa)	Mezinárodní (svět)	Regionální (jeden nebo pár krajů ČR)
5,83	6,32	6,74	5,80

(Source: own investigation, question no. 16)

Table no. 3: Average figures ofr question „How much do you agree with statement „IT HAS NO sense to educate workers and other low-qualified professions in basic ICT skills and motivate them to further education.“?

(1 – absolutely disagree, 10 – absolutely agree)

11-50 zaměstnanců	51-250 zaměstnanců	více než 250 zaměstnanců	
3,68	3,48	2,65	
Samostatná česká firma vlastněná vrcholovým managementem (případně vlastníkem) s těsnou vazbou na exekutivu firmy	Samostatná česká firma vlastněná zahraniční nebo tuzemskou finanční skupinou	Součást nadnárodní korporace	
3,64	3,83	2,43	
Celá ČR	Mezinárodní (Evropa)	Mezinárodní (svět)	Regionální (jeden nebo pár krajů ČR)
3,33	3,77	2,68	4,22

(Source: own investigation, question no. 16)

Table no. 4: Average figures for question „How much do you agree with the statement „We support our employees to obtain experience across various fields“?

(1 – absolutely disagree, 10 – absolutely agree) Note: see above for more detailed explanation

11-50 zaměstnanců	51-250 zaměstnanců	více než 250 zaměstnanců	
6,57	6,71	7,18	
Samostatná česká firma vlastněná vrcholovým managementem (případně vlastníkem) s těsnou vazbou na exekutivu firmy	Samostatná česká firma vlastněná zahraniční nebo tuzemskou finanční skupinou	Součást nadnárodní korporace	
6,74	6,04	7,07	
Celá ČR	Mezinárodní (Evropa)	Mezinárodní (svět)	Regionální (jeden nebo pár krajů ČR)
7,19	6,97	6,71	5,73

(Source: own investigation, question no. 16)

Table no. 5: Average figures for question „How much do you agree with statement „IT DOESN'T HAVE ANY SENSE to educate employees 55+ in ICT skills. The world of technology is too fast for them and the workers will leave labour market soon anyway“?

(1 – absolutely disagree, 10 – absolutely agree)

11-50 zaměstnanců	51-250 zaměstnanců	více než 250 zaměstnanců	
3,30	2,92	1,85	
Samostatná česká firma vlastněná vrcholovým managementem (případně vlastníkem) s těsnou vazbou na exekutivu firmy	Samostatná česká firma vlastněná zahraniční nebo tuzemskou finanční skupinou	Součást nadnárodní korporace	
3,08	3,00	2,20	
Celá ČR	Mezinárodní (Evropa)	Mezinárodní (svět)	Regionální (jeden nebo pár krajů ČR)
2,91	3,13	2,23	3,63

(Source: own investigation, question no. 16)

Table no. 6: Average figures for question „How much do you agree with statement „Our full-time employees with permanent contract go through further education within their working hours“?

(1 – absolutely disagree, 10 – absolutely agree)

11-50 zaměstnanců	51-250 zaměstnanců	více než 250 zaměstnanců	
6,90	7,82	8,58	
Samostatná česká firma vlastněná vrcholovým managementem (případně vlastníkem) s těsnou vazbou na exekutivu firmy	Samostatná česká firma vlastněná zahraniční nebo tuzemskou finanční skupinou	Součást nadnárodní korporace	
7,50	6,46	8,30	
Celá ČR	Mezinárodní (Evropa)	Mezinárodní (svět)	Regionální (jeden nebo pár krajů ČR)
7,36	7,31	8,33	6,88

(Source: own investigation, question no. 16)

Table no. 7: Average figure for the question „How much do you agree with the statement „Our part-time employees or employees with temporary contract participate in further education within their working hours“?

(1 – absolutely disagree, 10 – absolutely agree)

11-50 zaměstnanců	51-250 zaměstnanců	více než 250 zaměstnanců	
6,01	6,69	7,75	
Samostatná česká firma vlastněná vrcholovým managementem (případně vlastníkem) s těsnou vazbou na exekutivu firmy	Samostatná česká firma vlastněná zahraniční nebo tuzemskou finanční skupinou	Součást nadnárodní korporace	
6,33	6,38	7,57	
Celá ČR	Mezinárodní (Evropa)	Mezinárodní (svět)	Regionální (jeden nebo pár krajů ČR)
6,62	6,55	7,26	5,44

(Source: own investigation, question no. 16)

Table no. 8: Average figures for question „How much do you agree with the statement „We use financial and methodical support of EU and Czech Rep. for education of our employees (e.g. through the Operation programme Employment)“?

(1 – absolutely disagree, 10 – absolutely agree)

11-50 zaměstnanců	51-250 zaměstnanců	více než 250 zaměstnanců	
3,02	4,04	4,35	
Samostatná česká firma vlastněná vrcholovým managementem (případně vlastníkem) s těsnou vazbou na exekutivu firmy	Samostatná česká firma vlastněná zahraniční nebo tuzemskou finanční skupinou	Součást nadnárodní korporace	
3,47	3,54	4,27	
Celá ČR	Mezinárodní (Evropa)	Mezinárodní (svět)	Regionální (jeden nebo pár krajů ČR)
3,19	3,81	4,27	2,98

(Source: own investigation, question no. 16)

Table no. 9: Average figures for question „How much do you agree with the statement „To our employees, we provide training to get (broaden) PC skills“?

(1 – absolutely disagree, 10 – absolutely agree)

11-50 zaměstnanců	51-250 zaměstnanců	více než 250 zaměstnanců	
5,62	6,66	7,53	
Samostatná česká firma vlastněná vrcholovým managementem (případně vlastníkem) s těsnou vazbou na exekutivu firmy	Samostatná česká firma vlastněná zahraniční nebo tuzemskou finanční skupinou	Součást nadnárodní korporace	
6,04	5,92	7,68	
Celá ČR	Mezinárodní (Evropa)	Mezinárodní (svět)	Regionální (jeden nebo pár krajů ČR)
5,72	6,34	7,39	5,54

(Source: own investigation, question no. 16)