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Abstract

Despite all the technological innovations that this era brings, companies are suffering from a shortage of talented and creative workers, and the labour market is becoming increasingly competitive worldwide. It is believed that since the companies are aware of the shortage of talented people and the skills gap that they would know how to solve this issue effectively. However, the reality is different, as companies do not have proper talent acquisition and retention HR strategies that would help them to fight the war of talent. Therefore, this research explores whether and how companies in Prague, Czech Republic utilise HRM processes, particularly job profiling and forecasting for hiring future talented employees. Secondly, the purpose is to investigate the perception of IT employees in Prague regarding these HRM practices. The primary method for collecting the data is semi-structured interviews conducted with HR managers of Prague's IT companies. The secondary method for collecting the data is a questionnaire distributed among IT companies' employees to fulfil the research requirement. Followingly, data collected by semi-structured interviews will be analysed by qualitative data analysis, coding methods.

Data collected by questionnaires will be analysed by quantitative data analysis, mainly using existing statistical indices, formulas, and statistical tests. The research findings show that IT companies in Prague hire future talented employees primarily through job profiling however reversed hiring is performed as well, a new job position is created when a talented person appears and is attractive to the company. Forecasting of future employees is not that common in every company as companies need to be flexible regarding the number of employees and their skills, to fulfil business and customer needs. However, if future employees' forecasting is performed, it is done upon evaluation of current employees. Majority of IT employees positively perceive job profiles when applying for an open job position. Additionally, IT employees have mostly positive perceptions of workforce planning processes, such as

evaluating job responsibilities and career development built upon job profiling. This research emphasises companies' need to place even greater emphasis on job profiling and forecasting processes to successfully hire future talented employees and diminish the impact of the shortage of talent in the Czech labour market.

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Background

Based on Collings et al. (2019), over the past centuries, the term talent has been described differently such as "a feeling that makes a person want to do something" or "a person's mental endowment". Nowadays, the term talent is everywhere - newspapers, company reports, vacancy advertisements, television, or the internet - a Google search provides more than one billion results. Over the last decade, talented people have become corporate assets that are extremely valuable for a company as they contribute to maximising the company's performance. Companies' need for qualified people is increasing, as it becomes more demanding to succeed in a rapidly evolving global economy and stay competitive in the global market. Due to the increasing need for talented people (PwC, 2018), it is becoming difficult to access enough talent to sustain competitive growth. Moreover, as reported by PwC (2018), the shortage of talent is becoming a global issue as the demand for talented people is outpacing its supply.

According to Carreau (2020), despite all the technological innovations this era brings, companies suffer from a lack of talented and creative workers. The labour market is becoming increasingly competitive across the globe. Finding talented workers with the right skills is becoming an issue for many companies. As reported by PwC (2018), "Finding and hiring employees with the key skills they need to succeed in the digital world continues to keep CEOs awake at night: 80% of CEOs say they are worried, and 38% are extremely concerned". The scarcity of talent and availability of key skills is a global issue, and business threat (PwC, 2018) as up to 80% of PwC survey respondents responded that they are "extremely concerned" about the availability of key skills to sustain competitive business growth. According to Michaels et al. (2001), the scarcity of talent has three primary sources: transformation from the Industrial Age to the Information Age, increasing need for talented workers, and high employee turnover as people often seek to switch jobs. Therefore, there is a great need to create a successful

employee value proposition to find, attract, and retain talented and creative workers and establish a long-term recruitment strategy.

According to Manpower Group (2020), despite the company size, whether small or large, all suffer from talent shortage and the struggle to attract talent is increasing significantly. In Czech Republic (ManPower Group, 2020), companies from micro-size (<10 employees) up to large size (250+) go through talent shortage: 28% of micro-companies, 55% of small companies, 74% of medium companies, and 85% of large companies based in the Czech Republic confirmed there is not enough talent in the labour market. The fact that there is a very low employment rate in the Czech Republic (These Are the Jobs that Need Filling in the Czech Republic, 2018) also contributes to a lack of talent. According to the Ministry of Labour and Social Affairs (2020), in 2019, the unemployment rate had decreased from 3.3% to 2.6%. Due to the COVID-19 pandemic crisis caused by SARS-CoV-2, the 2020 unemployment rate has risen from 3.1% in January to 3.8% in September. Even though the Czech Republic's unemployment rate is increasing, there is a continuous need for talented people to sustain business growth.

Nevertheless, the unemployment rate in the Czech Republic is rising due to the COVID-19 pandemic. The Czech Republic's capital city, Prague, continuously suffers from a low unemployment rate of 2.4% as of April 2020 (Czech Republic - Hlavni Mesto Praha, 2020), the lowest unemployment rate of all Czech cities. Ongoing demand for talented and creative workers (Czech Republic - National Level, 2020) is mainly in "IT, technology, administration, medicine, health care, and in legal" professions. As stated by Kučera (2018), The Czech market is experiencing a massive shortage of talented people who possess IT skills such as coding and programming. Furthermore, the Czech Republic's economic growth is negatively affected by a lack of talented workers who would have enough technical skills to boost business growth. However, despite the ongoing scarcity of talented people possessing enough technical skills,

(Why Prague is One of the EU's Interesting Tech Industry Hubs?, 2017), in recent years, Prague is considered as "One of Europe's Most Interesting Emerging Destinations for Tech Industry". Moreover, Prague has become one of the largest start-up ecosystems in Central and Eastern Europe and has proven to be a pleasant environment for these start-ups.

As Dalayga et al. (2017) argue, in the era of talent scarcity and shortage of skills needed for business growth, when the lack of talent is a global issue affecting all companies of different size, it is suggested to implement effective human resource strategies to effectively cope with talent shortage as an ongoing global issue with no defined end. According to Donkor et al. (2017), these strategies include aligning HR with business objectives, correct techniques for attracting and retaining the right talent, leadership development, and preparing current workers for the future. As stated by Keller and Meaney (2017), "failure to attract and retain top talent was the number-one issue in the Conference Board's 2016 survey of global CEOs—before economic growth and competitive intensity". It is believed that since the companies are aware of the shortage of talented people and the skills gap that they would know how to solve this issue effectively. However, the reality is different, as HR departments do not have proper HR strategies regarding talent acquisition and retention.

According to Keller and Meaney (2017), "only 23 per cent of managers and senior executives active on talent-related topics believe their current acquisition and retention strategies will work". Therefore, companies should improve their acquisition and retention strategies to avoid additional employee turnover costs (Keller and Meaney, 2017). As stated by Michaels et al. (2001), "the war for talent is creating a new business reality", where companies thrive more with talented people who are scarce and contribute to business growth and competitive advantage. Therefore, companies should place a great deal of emphasis on HR processes, such as HR planning to acquire and retain talented workers. However, the question is whether companies focus on their short-term needs or consider their long-term needs and use job

profiling and forecasting techniques to find talented workers that would fit into their company culture and contribute to business growth and company competitiveness. Therefore, this research explores whether and how companies in Prague, Czech Republic utilise HRM processes such as job profiling and forecasting to fight against the war of talent and skill gap in the Czech labour market.

Aim

Investigate whether IT companies in Prague use human resource management practices, particularly job profiling and forecasting, to find future talented employees for open job positions. Secondly, the aim is to investigate what Prague IT employees' perception of these HRM practices is.

Objective 1

To explore the literature on job profiling and forecasting related to the human resource department.

It is essential to explore the literature on job profiling and forecasting related to the human resource department to properly understand the dissertation's main aim. Literature in terms of academic theories, models, and debates is used to understand the meaning of job profiling and forecasting in the human resource department. Based on the literature, there is a profound examination of the importance of job profiling and forecasting in the human resource department.

Objective 2

To investigate whether IT companies in Prague use human resource management practices, particularly job profiling and forecasting, to find future talented employees for open job positions.

Once the theoretical basis has been explored, it is then necessary to investigate the human resource practices of IT companies in Prague, particularly job profiling and forecasting HRM practices and whether these practices are used to find future talented employees for open job positions. It is essential to investigate this topic to explore whether these practices, when

incorporated into HRM practices, help IT companies in Prague to find future talented employees in the labour market where talent is scarce.

Objective 3

To investigate job profiling and forecasting and what Prague IT employees' perception of these HRM practices is.

After investigating if and how IT companies in Prague use job profiling and forecasting as an HRM practice for finding future talented employees for open job positions, it is essential to investigate these practices' perception among employees. Additionally, it is crucial to examine whether they perceive them as helpful in applying for open job positions and whether they help employees in their professional career.

Objective 4

To draw conclusions.

Once the theoretical bases, IT companies' HR practices in Prague, particularly job profiling and forecasting, have been explored, the research conclusion can be drawn. The proposed research investigates whether IT companies in Prague use human resource management practices, particularly job profiling and forecasting for finding future talented employees for open job positions. Secondly, the aim is to investigate what Prague IT employees' perception of these HRM practices is. The research findings resulting from the proposed research will show whether Prague IT companies use these practices for finding future talented employees for open job positions. Additionally, the recommendations on how IT companies in Prague may improve their job profiling and forecasting HRM practices will be provided.

Research Questions

Objective 1	1. What is job profiling / job description?
To explore the literature on job profiling and forecasting related to the human resource department.	1. Why is it important?
	2. How is job profiling / job description used?
	3. What is forecasting / workforce planning?
	4. Why is it important?
	5. How is forecasting / workforce planning used?
Objective 2	6. How is job profiling used in IT companies?
To investigate whether IT companies in Prague use human resource management practices, particularly job profiling and forecasting for finding future talented employees for open job positions.	7. Why is job profiling important in the HR department of IT companies?
	8. How companies use job profiling in the hiring process?
	9. How is profiling related to forecasting in the HR department of IT companies?
	10. How do IT companies use forecasting in the HR department of IT companies?
	11. Why is forecasting important in the HR department of IT companies?

Objective 3	12. What is the perception of an IT employee regarding job profiling in terms of descriptiveness?
To investigate job profiling and forecasting and what Prague IT employees' perception of these HRM practices is.	13. Is job profiling important for an IT employee?
	14. Has an IT employee ever been involved in job profiling processes (promotion, retention processes)?
	15. Do these processes have any impact on job satisfaction/motivation/performance?
	16. Has an IT employee ever been involved in workforce planning processes (evaluating the position, job rotation, training)?
	17. What is the perception of IT employees regarding workforce planning practices?
	18. Has an IT employee ever been involved in improvement processes regarding skills and knowledge due to the shortage of talent in the labour market?
Objective 4	19. How is profiling used in IT companies in Prague?
To draw conclusions.	20. How is forecasting used in the human resource department of IT companies in Prague?
	21. What impact does job profiling have in the process of hiring people in general?
	22. What impact does forecasting have on the human resource process in general?
	23. How are job profiling and forecasting practices perceived by IT employees?

Literature Review

Guest's model of HRM

The strategic model developed by David Guest (1990) integrates hard and soft approaches towards HRM and consists of four essential components: strategic integration, flexibility, quality, and commitment. These components support business efficiency and bring three different outcomes in terms of business behaviour, performance, and finance that depend on each other and lead to overall business effectiveness. According to Becker et al. (1997), by incorporating Guest's model into HRM practices, the company can become more profitable and significantly improve its return on investments. Financial outcomes (Kukreja, n.d.) depend on employees' performance, resulting from employees' behaviour and actions. Moreover, as Kukreja (n.d.) argues, "the behavioural outcomes are the result of employee commitment, quality and flexibility" that are influenced by HRM practices. Therefore, having HRM practices aligned with HRM strategies might help IT companies in Prague better identify their needs in terms of employees, their skills, and knowledge required to improve the recruitment process of future talented employees.

Additionally, as Marsden (2002) argues, Guest's strategic model is one of the only HR models that clearly shows a correlation between human resource practices and a given organisation's business strategy. Guest holds the idea that commitment of highly qualified employees is a fundamental result of HRM practices that lead to behavioural outcomes (e.g. increased employees effort) followed by performance outcomes (e.g. increased productivity) that consequently result in financial outcomes (e.g. increased profits). According to Compton et al. (2009), recruitment and selection processes as part of HRM practices are "the most difficult and yet the most crucial of all human resource management strategies". Getting the best candidates can be a big bonus for companies in terms of sustainable competitive advantage

(Compton et al., 2009). Therefore, by combining Guest's strategic model and proper recruitment and selection processes such as job profiling and forecasting of future employees, IT companies in Prague might win the war of talent and successfully attract and retain talented employees that would fit into the company culture as well as make a contribution towards long-term competitive advantage.

Furthermore, as Gill (1999) noted, David Guest combined two opposing models: the Harvard model focused on a soft approach towards HRM, and the Michigan model proposing a hard approach towards HRM. Despite the fact these two HRM approaches have "opposing views of human nature and managerial control strategies" (Truss et al., 1997), David Guest recognised the differences between these two HRM approaches and incorporated them into his strategic model, resulting in two common conclusions (Gill, 1999):

1. "HR policies should be integrated with strategic business planning and used to reinforce or change an appropriate organisational culture" (Legge, 1995).

2. "Human resources are valuable and a source of competitive advantage and are tapped most effectively through policies that promote commitment" (Legge, 1995).

Therefore, by applying the Guest strategic model and its hard and soft approach towards HRM, IT companies in Prague might retain their talented employees more effectively and decrease employee turnover. Treating employees as valued assets and rewarding them accordingly as well as managing them in a way that creates added value for the company results in a more substantial competitive advantage in the economy of talent scarcity.

Despite the mentioned contributions possessed by Guest's strategic model, certain limitations need to be examined before companies decide to incorporate this model into their HRM operations. According to Truss et al. (1997), David Guest recognises the differences between soft and hard HRM approaches. However, he "abandons the distinction when embarking upon theory-building" (Truss et al., 1997). As claimed by Truss et al. (1997), incorporating both soft

and hard HRM approaches into a normative HRM model is very problematic. Each approach involves "different sets of assumptions in the two key areas of human nature and managerial control strategies". Moreover, BPP Learning Media (2015) argues that line managers manage their employees in a preferable way for them, whether in a harder rational approach or softer approach focused on individual development. Regardless of such a limitation, the combination of Guest's model with proper evaluation of company needs in terms of human resource and appropriate forecasting processes of these resources, allows Prague IT companies to more efficiently recruit talented candidates that would be valuable for the company.

Furthermore, according to BPP Learning Media (2015), Guest's strategic model does not consider external factors such as technological innovation, economic, political, or even social and cultural factors that might significantly impact HRM practices. As argued by Marsden (2002), in contrast with other HRM models such as the Harvard or Warwick model, Guest's strategic model does not consider internal factors such as company culture or competitive strategy. As mentioned by Shatilo (2020), there is a significant impact of external and internal factors that affect company performance. Although external factors are uncontrollable by companies (Dragnic, 2014), companies may use their business strategies as an alignment instrument by coordinating internal factors towards external factors that impact overall business operations. Therefore, by simultaneously incorporating Guest's strategic model into HRM practices with detailed evaluation of the Czech labour market where there is a significant talent shortage, Prague IT companies might develop the right recruitment strategies towards finding enough talented employees. Therefore, they may achieve greater recruitment satisfaction.

In addition to the limitations mentioned above, as stated by Kaila (2005), in an era of uncertain and unpredictable future it is demanding to have HRM strategies built on traditional HRM models such as Guest's strategic model. As claimed by Vaishali and Jyotsana Sharma (2018),

companies need to be innovative in terms of HRM practices to sustain in a highly competitive business environment where scarcity of talent is becoming a global issue (PwC, 2018). Attraction and retention of highly talented people is becoming more demanding (Keller and Meaney, 2017). Moreover, according to Lapina et al. (2013), "in the modern global economy, the increasingly rapid flow of information, and the growing recognition of the significance of intellectual capital, knowledge is increasingly claimed to be a critical resource of competitive advantage for organisations". Hence, IT companies in Prague, to improve their HRM strategies in terms of attraction and retention processes such as job profiling and forecasting of future talented employees, should place a great deal of emphasis on the regular reassessment of their current HRM practices and strategies and always try to innovate them.

Considering all the mentioned contributions and limitations held by Guest's strategic model, it is still considered a useful HRM model. It is recommended (Marsden, 2002) to blend HRM practices with a detailed assessment of companies' core requirements regarding human resources and proper human resource forecasting. By this combination, IT companies might better identify what skills and knowledge are required of their future employees, so companies can still thrive in an environment of talent scarcity. Even though HRM specialists hold a different approach towards HRM than their line managers (Truss et al., 1997), the strategic model in combination with proper forecasting processes is beneficial for Prague IT companies in finding talented employees that would be beneficial to business operations and fit into the company's culture. According to Kaila (2005), in an era of uncertainty of what the future holds, the association of Guest's strategic model with complementation of human resource planning might help Prague IT companies find future talented employees with the right skills and knowledge for achieving business effectiveness in the IT sector.

Human Resource Planning

According to Dimitrievska (2017), HRM practices, especially human resource planning, are crucial for sustaining pressure resulting from this market competition due to the market competitiveness. They help identify gaps in company abilities that might lead to ineffectiveness. Human resource planning is considered a fundamental tool for gaining "a focus of the capacity on the organisation's business. It is a basic guide in recognising the areas in which it must excel to be profitable" (Dimitrievska, 2017). The traditional type of planning includes forecasting of employees that are required to accomplish future business goals. Without human resources planning, the company might find that many of its employees do not have sufficient skills due to changing technologies and processes. That appropriate competence may be achieved through training and recruitment programs as part of a human resource planning strategy (Dimitrievska, 2017). Therefore, IT companies in Prague need to incorporate human resource planning into their business operations. It is considered a helpful practice for identifying company needs in terms of future employees and their skills and knowledge vital for gaining and sustaining competitive advantage.

According to Lunenburg (2012), without human resources, the company cannot accomplish its objectives. Therefore, human resources need to be utilised appropriately so the company can achieve "high-performance standards". Human resource planning is an effective system for building durable capacity to respond to challenges of the workforce quickly and efficiently (Choudhury, 2007). As argued by De Cenzo and Robbins (1988), "Human resource planning is one of the most important elements in a successful human resource management program", therefore, as mentioned by Mello (2001), it is crucial for a company to have appropriate human resource planning in times of low unemployment. Moreover, in the labour market of low unemployment, human resource planning practices help companies more efficiently identify the pool of candidates to select the most talented future employees that would fit into their

company culture. Therefore, due to low unemployment in the Prague labour market — 2.4% by April 2020 (Czech Republic - Hlavni Mesto Praha, 2020) — IT companies in Prague should build healthy human resource planning practices, to find the right talent in a labour market suffering from a shortage of skilled people with sufficient experience.

According to Mello (2001), human resource planning is not only vital for companies' proper analysis of human resource demand required for accomplishing company objectives as well as the examination of labour market supply, but the planning is also essential for retention of current employees and employee turnover reduction. As stated by Mello (2001), "functional HR activities, such as staffing, training, performance management, compensation, labour relations and employee separation are derived and should flow from the strategic workforce planning process". Hence, companies should focus on employees' needs and provide them with enough training for improving their hard and soft skills. Companies should also boost their career development to satisfy employees' needs and increase their productivity and, therefore, overall business productivity. Moreover, as mentioned by Edwards and Pearce (1988), human resource planning is crucial for companies operating in a fast-paced, emerging high-tech industry. A highly-skilled workforce is essential for achieving business goals. Therefore, Prague IT companies should put a great deal of emphasis on human resource planning processes in terms of providing employees' specific training according to their skill sets that need to be improved to contribute to accomplishing business objectives.

Despite the mentioned contribution of HR planning, there are certain limitations as well. Harbison (1973) stated that HR planning incorporates several complex HRM activities such as forecasting workforce, examining current employees, assessing their skills and knowledge, and whether they reflect current human resource needs. Moreover, this process includes "planning the necessary programs of requirements, selection, training and development, utilisation, transfer promotion, motivation, and compensation to ensure that future human resource

requirements are properly met" (Samwel, 2018). However, as argued by (2009), HR planning as a system of complex activities for allocating supply and demand of human resources requires additional costs. Specifically, companies should consider the costs related to HR planning activities such as employee cost-per-hire and total training expenses. They disclose "the comparable amount of value" the company is getting from their current human resources (Wilson, 2020). Therefore, even though the HR planning process might be expensive, it helps companies properly allocate expenses related to their current human resources. Hence, it is advised for Prague IT companies to incorporate HR planning into their business operations to allocate human resource supply and demand and its actual costs.

According to Bombas (2017), companies face an age of uncertainty due to different kinds of forces such as Brexit, U.S. elections, and fast-paced technological advancements in the rise of robotics. As stated by Pradip (2017), in an era of uncertainty, it is very demanding to determine the company's future in terms of future human resources. Even though the future is unpredictable, and companies might struggle with planning (Bombas, 2017), it is inevitable for them to plan human resources to remain on track with a fast-changing world. Understanding the situation regarding the availability of talent and developing a framework appropriate for extensive changes and the consequences of unforeseen circumstances is key to "remaining resilient and ensuring competitiveness and growth in a slow-growth environment" (Bombas, 2017). Despite the mentioned limitations, companies should perceive HR planning as a useful practice for examining the workforce's future supply and demand to effectively respond to dynamic business environments (Normi, 2017). Therefore, it is recommended for Prague IT companies to incorporate HR planning into HRM practices to identify future talent demand for successful business operations.

According to Kokemuller (2018), another limitation of HR planning that needs to be considered before companies incorporate HR planning into HRM practices is that companies might over-

plan their demand for human resources. As discussed by Entrekin and Court (n.d.), overestimating the demand for human resources leads to hiring more employees than companies need for their operations, resulting in unnecessary increases in their fixed costs. If companies poorly identify the competencies necessary for success in each job position, this might lead to substantial employee compensation "with little potential for effective performance" (Kokemuller, 2018). Therefore, companies must have a clear understanding of HR planning. With proper planning of future workforce demand, companies systematically identify various dimensions of this workforce such as "headcount number, job types, competencies, location, demographics, and people costs" (Weiss, 2015). Once HR planning is well understood and rigorously performed by companies, it is recommended for Prague IT companies to incorporate it into HRM practices. This approach by IT companies in Prague might identify future workforce needs for their business operations to avoid increased costs.

Considering all the contributions mentioned above, and limitations associated with human resources planning, it has become useful for identifying future workforce demands. Once Prague IT companies correctly understand the HR planning and are also aware of its limitations, it is recommended for them to implement it into their human resources processes. By HR planning, Prague IT companies might better identify what skills are missing by their current employee and proactively react by providing employees appropriate training for re-skilling or up-skilling. Therefore, companies respond more effectively to the dynamics of the business environment (Dimitrievska, 2017). Furthermore, HR planning is instrumental in times of low unemployment (Mello, 2001). Hence it is useful for IT companies operating in Prague, where the unemployment rate is 2.4% (Czech Republic - Hlavni Mesto Praha, 2020). It helps to identify the right pool of candidates for open vacancies. Therefore, human resource planning is recommended for IT companies in Prague for allocating future talent employees. It is advised

to complement it with personal specification frameworks such as Rodger's Seven-Point Plan and its alternative, Fraser Five-Fold Grading System.

Rodger's Seven-Point Plan and Fraser Five-Fold Grading System

According to Mehrabad and Brojeny (2003), one of the most significant managerial responsibilities is selecting future employees for open vacancies to ensure that the candidates meet all the requirements to perform a specific job and fits into the company culture. The selection process's core is to create "selection criteria for job/person specification" based on different frameworks (Mehrabad and Brojeny, 2003). The most widely known frameworks for creating selection criteria are Rodger's Seven-Point Plan and an alternative, Fraser Five-Fold Grading System used in the job profiling process. According to Prospero (2020), the Seven Point Plan "ensures that no aspect of the person is neglected and prevents irrelevancies from being introduced". Furthermore, the Fraser Five-Fold Grading System, the alternative to Rodger's Seven-Point Plan, serves as a personal specification framework for the creation of selection criteria, helping companies to identify "how close candidates come to being the ideal" for an open vacancy. Therefore, Rodger's Seven-Point Plan and its alternative, Fraser Five-Fold Grading System, are recommended by IT companies in Prague. These frameworks help identify what criteria future talented candidates need to be successfully hired for a job vacancy. As Edenborough (2005) claimed, Rodger's Seven-Point Plan and its alternative, Fraser Five-Fold Grading System, might be useful for forming structured interviews in the selection process. Both frameworks help set more organised approaches towards the construction of interview questions. Edenborough (2005) argued that companies ensure that several aspects of the person considered to be of general relevance are examined during the interview process by implementing these two frameworks into the selection process. As noted by Kidd (1996), the Seven-Point Plan is especially useful in the talent matching part of the selection process when

"a list of questions organised under seven headings" is given to candidates before the actual interview, as it helps to identify the pool of right applicants for undergoing the interview. Therefore, it is recommended to IT companies in Prague to incorporate Rodger's Seven-Point Plan as well as its alternative, Fraser Five-Fold Grading System into the pre-interview process as well as the interview process of future talented employees to hire candidates with the right skills and knowledge that would fit into the company culture and contribute to business competitiveness.

According to Onyeaghala and Hyacinth (2016), personal specification frameworks such as Rodger's Seven-Point Plan and Fraser Five-Fold Grading System contribute to a more efficient and more effective selection process of future talented candidates. They are "intended to be used to interpret a job analysis in human terms and to set standards against which individual candidates may be measured" (Onyeaghala and Hyacinth, 2016). In addition, as argued by Joy et al. (2015) based on study research regarding "impact of recruitment and selection criteria on organisational performance", the study revealed, "that selection criteria have significant effect on organisation's performance". Furthermore, as stated by Djabatey (2012), to build long-term sustainable competitive advantage, proper selection of future employees from a pool of applicants is inevitable. Hence selection processes have therefore become a necessity in organisations, as "individuals need to be attracted on a timely basis, in sufficient numbers and with appropriate qualifications" (Joy et al., 2015). Therefore, it is recommended for IT companies in Prague to incorporate Rodger's Seven-Point Plan and Fraser Five-Fold Grading System into future talented employees' selection process to make the selection process more effective leading to improved business performance.

Despite the mentioned contributions of both frameworks, certain limitations need to be investigated before they are recommended for companies to be used in HRM processes. According to Mehrabad and Brojeny (2003), selection criteria built upon personal specification

frameworks like Rodger's Seven-Point Plan and Fraser Five-Fold Grading System, arise from analyses of specific job positions as well as manager judgements on persons' requirements. As stated by Mehrabad and Brojeny (2003), "this is the most important step in the selection process and is done on the basis of expert judgement about the required persons' specifications for successful performance in a specific organisational job". Hence, selection criteria are no more acceptable for proper selection of future talented employees for open job vacancies. Despite this experts' judgemental limitation, Rodger's Seven-Point Plan and Fraser Five-Fold Grading System are recommended for IT companies in Prague in the selection process of future talented employees in case these frameworks are combined with some other selection technique. It is recommended by Mehrabad and Brojeny (2003), to combine these frameworks for example with multidimensional scaling models, as it helps to "extract basic expert criteria for successful job performance" avoiding experts' judgement.

Furthermore, as argued by Cushway (2016), not all "headings [of Rodger's Seven-Point Plan and Fraser Five-Fold Grading System] under which the attributes of an ideal candidate can be classified" might be used for personal specification for open job positions to avoid any level of discrimination. For example, physical make-up heading of Rodger's Seven-Point Plan including appearance, bearing, or speech might be used in the personal specification for job vacancies "relevant for customer-facing roles but not for those in research or back-office jobs" (Cushway, 2016). The personal specification should be mainly defined by the requirement of a specific job position and a link to the job description to diminish any level of discrimination arising from the use of all headings and their aspects of Rodger's Seven-Point Plan Fraser Five-Fold Grading System. Despite such limitations, both frameworks are still recommended by Prague IT companies in the selection process; however, with certain modifications. IT Companies in Prague should carefully consider which heading from Rodger's Seven-Point Plan

and Fraser Five-Fold Grading System should be used to create the personal specification for open job positions, as not all headings will be suitable for a particular job vacancy.

In addition to that, as mentioned by Shalini (2020), in a fast-paced world driven by technological innovations, recruitment methods divide into traditional recruitment methods and modern ways of recruiting future employees that "opens new channels and ways of recruiting". Rodger's Seven-Point Plan and its alternative, Fraser Five-Fold Grading System, as a traditional way of selecting applicants for a pool of candidates, served companies well in the past in terms of providing a significant number of candidates. However, nowadays, the world is fast-changing and heavily influenced by technological innovation. Hence technological innovations have a substantial impact on how companies recruit their future talented employees. In the modern way of recruitment, technology helps decrease human bias in prospective employees' selection processes. HR professionals "often bias their decisions on bases of issues like sex, race and age rather than merit or experience" (Shalini, 2020). Despite the influence of the fast-paced world-impacting recruitment methods, the traditional way of recruitment might still be used by IT companies in Prague, in terms of internal hiring, when candidates are selected from current employees and attracted to another position with the companies.

Considering all the mentioned contributions as well as limitations possessed by Rodger's Seven-Point Plan and Fraser Five-Fold Grading System, both frameworks are considered to be useful in the selection process of future talented employees and therefore recommended to be implemented by IT companies in Prague into processes regarding recruitment of future talented workforce needs to business operations. Despite these frameworks' mentioned limitations, they positively impact the candidates' selection process for open vacancies. Both frameworks help identify personal specifications such as skills and knowledge required for an available job position (Prospero, 2020). Moreover, these frameworks set more organised approaches towards forming interview questions for a structured interview (Kidd, 1996). In addition to that, by

incorporating Rodger's Seven-Point Plan and Fraser Five-Fold Grading System into recruitment processes, these processes are more efficient in finding enough employees for open vacancies with appropriate qualities in a timely manner. Therefore, it is suggested to IT companies in Prague to incorporate Rodger's Seven-Point Plan and its alternative, Fraser Five-Fold Grading System, into recruitment processes of future talented employees to experience all the mentioned benefits of these frameworks.

Today's times provide a wide range of recruitment methodologies and technological innovations that improve the whole selection process of future employees. Despite this fact, from identifying the personal specification for a particular job position to different kinds of interviews until the end of the recruitment life cycle when successful candidates are introduced to a new working environment, companies struggle with finding the right candidates for their open job positions (Azmi, 2019). The Randstad (2016) Talent Trends report revealed that up to 79% managers from the human resource department struggle to find people whose skills and knowledge would correspond to specifications the job position requires. Even though Guest's human resource management strategies and human resource planning models, Rodger's Seven-Point Plan, and its alternative Fraser Five-Fold Grading System are all considered reliable for this research, the reality needs to be investigated. In the proposed research, researchers investigate whether and how IT companies in Prague use job profiling and forecasting in human resource processes, particularly in the recruitment process of future talented employees required for open job positions to perform certain business operations and contribute to business competitiveness.

Methodology

Research Philosophy

According to Saunders et al. (2009), research philosophy refers to developing knowledge in a specific subject area and "nature of that knowledge". It involves numerous assumptions about the way people perceive the world. Based on these assumptions, the primary researcher's strategy and methods are established and used as the main research strategy. As Johnson and Clark (2006) claimed, the researcher must carefully consider the research strategy chosen as it significantly affects how the researcher understands and performs the given research. As believed by Easterby-Smith et al. (2008, pp. 368) "there are three ways to understand the philosophy of research": ontology, epistemology, and methodology. Ontology deals with general assumptions concerning the perception of society's real nature to understand it properly. As determined by Easterby-Smith et al. (2008, pp. 368), Epistemology deals with "general parameters and assumptions associated with an excellent way to explore the real-world nature". Followingly, the methodology is built upon the researcher's different methods for investigation of given research problems.

As stated by Saunders et al. (2009), there are two opposing ontological stances, objectivism, and subjectivism. As noted by Saunders et al. (2009), Objectivism "portrays the position that social entities exist in reality external to social actors concerned with their existence". As opposed to objectivism, subjectivism "holds that social phenomena are created from the perceptions and consequent actions of those social actors concerned with their existence" (Saunders et al., 2009). This research's central ontological stance is subjectivism, where the social phenomena (Bryman, 2012), results from perceptions of social actors and their actions who deal with their existence. Furthermore, as mentioned by Levers (2013), in terms of the objectivism stance, "observations are influenced by the observer and the observer is influenced

by the observed" and the goal of the subjective stance is to create more awareness towards "ethical and moral issues, and personal and political emancipation". Therefore, given the ontological stance, it is required in the proposed research to analyse how IT companies in Prague perceive human resource practices, especially job profiling and forecasting of human resources to find future talented employees with specific skills and knowledge.

Subjectivism as an ontological stance, has its limitations (Bryman, 2012), as the researcher is a part of the research process, hence researcher is influenced by the research as well as the research is influenced by researcher perception. Given the limitation of subjectivism, there is a need for supporting ontological stance and objectivism. From an objectivist stance, (Easterby-Smith et al., 2008, pp. 368) researchers are not explicitly focused on the research's details. Instead, there is interest in general information and collection of extensive social data to evaluate specific outcomes.Furthermore, as mentioned by Zukauskas et al. (2018), "in line with this position, the researchers' own personal attitudes are not relevant and do not affect the scientific research". Therefore, considering objectivism as an ontological stance, the proposed research requires investigating the Czech labour market situation. In the era of talent scarcity, it is crucial to analyse what skills and knowledge are possessed by candidates looking for open vacancies. Therefore, quantitative research regarding the Czech labour market and particularly the unemployment situation in Prague, are required for completing the proposed research.

Following the ontological stance, the epistemological beliefs need to be examined to perform the proposed research properly. According to Crotty (1998), epistemology refers to the nature of knowledge and how it is understood and explained by the researcher. Moreover, Moon and Blackman (2014) said epistemology is "concerned with all aspects of the validity, scope and methods of acquiring knowledge" and it is essential as it influences the way the researcher shapes the given research to discover knowledge. Additionally, as mentioned by Hiller (2016), epistemological stances are built upon assumptions that there is an evident relationship between

researcher and expertise related to the research and it provides a rationale for research decisions made by researchers. According to Orlikowski and Baroudi (1991), there exist three opposing epistemological stances: interpretivism, positivism and criticism. Interpretivism assumes that reality is only accessible through specific social structures such as common meaning, language, or consciousness. Positivism perceives that the reality is given and measurable by conditions independent from researchers. Oppositional stance, criticism, presents the reality as "historically constituted and that it is produced and reproduced by people" (Orlikowski and Baroudi, 1991).

Considering different epistemological assumptions for the proposed research, the primary epistemological stance is interpretivism. According to Saunders et al. (2009, p. 116), interpretivism is a social approach from two "intellectual traditions", symbolic interactionism and phenomenology. As stated by Kent (2007), interpretivism "emphasises the need to understand or interpret the beliefs, motives, and reasons of social actors to understand social reality". The interpretivism (Denzin and Lincoln, 2005), is built upon research's beliefs towards the world and how it should be perceived and studied. Therefore, the proposed research requires examining Prague IT companies' attitude towards job profiling and forecasting techniques to find talented employees for job vacancies. However, according to Dudovskiy (n.d. (A)), the authenticity and the representativeness of data are not ensured in an interpretive approach towards given research because personal considerations and values strongly influence data. Hence interpretivism provides "great room for bias on behalf of researchers" (Dudovskiy, n.d. (A)). Due to such limitations of the interpretive paradigm and the nature of the proposed research, it is necessary to consider and examine the supporting epistemological stance, positivism, to properly perform proposed research.

As claimed by Saunders et al. (2009), in positivism, research's beliefs towards the world and reality itself are objective and independent from social actors. Moreover, in a positivist stance,

research is not "affected by the subject of the research" (Saunders et al., 2009). According to (Dudovskiy, n.d. (B)), as research beliefs are independent of given research, human bias is avoided and "there are no provisions for human interests within the study". Moreover, in a positivist paradigm, trustworthy knowledge is only that one which is observed and measurable. Hence, a positivist stance "depends on quantifiable observations that lead to statistical analyses" (Dudovskiy, n.d. (B)). Therefore, the proposed research requires observing IT companies' attitudes in Prague towards job profiling and forecasting future talented employees. However, according to Gavrilov (2020), positivism has lost its foundation over centuries because "it neglected the human role in building or changing the world". In addition to that, as argued by (Dudovskiy, n.d. (B))., data collection and interpretation in a positivist stance is limited as the researcher must take an objective approach towards given research. Given such limitations of positivism, for the proposed research, a pragmatic approach needs to be followed. Pragmatism as a philosophical movement (Maxcy, 2003), dates back to the 19th century when American pragmatic scholars rejected "traditional assumptions about the nature of reality, knowledge, and inquiry" (Kaushik and Walsh, 2019) and the idea that social-science research can enter reality via only one scientific method. According to Pansiri (2006), the word pragmatism has a Greek origin from "pragma", that stands for action, and it is a crucial concept of pragmatic approach towards research methods. Following a practical stance, human actions originate from past experiences. Therefore, thoughts of human beings are so inherently connected with their actions as well as past experiences. The central claim of pragmatic philosophy (Kaushik and Walsh, 2019) is that the meaning of human actions and faith is in their consequences. External factors do not determine humans; however, by their actions and level of intelligence. As stated by (Kaushik and Walsh, 2019), "pragmatists believe that reality is not static", reality changes with each development of events. Equivalently, the world is not

static. It is changing all the time through actions, and through actions, existence is changing. Hence, "actions are pivotal in pragmatism" (Kaushik and Walsh, 2019).

According to Rorty (1980), pragmatism does not consider knowledge to be a reality, but rather (Goldkuhl, 2017), as a guide for human experience and participation in the world. Knowledge of human beings is unique and arising from individual experience. Even though the human experience is unique, it comes from socially shared experiences. Hence knowledge is social knowledge from a pragmatism point of view (Morgan, 2014). According to Biesta (2010), through the concept of inquiry, human beliefs and actions arising from social experiences are connected and linked with further consequences. The inquiry is defined as humans' ability to plan and control their actions to achieve specific results wisely. Such ability is vital in times of uncertainty. In uncertain situations, "before taking any action, a pragmatist considers the consequences of different actions and the potential benefits of one action over another" (Kaushik and Walsh, 2019). Therefore, in a pragmatic approach towards specific research, the researcher always considers various consequences arising from applying different research methods to design and conduct the proposed research and whether these consequences would coincide or differ from goals resulting from the proposed research.

According to Morgan (2007), once the researcher decides to take a pragmatic approach towards specific research, the methodology, as well as epistemology, should be carefully investigated as the methodology is directly related to the proposed research and epistemology is concerned with the belief that directly impacts the way how the research is conducted. Therefore, the methodology should be considered a mechanism for connecting research's thought about the nature of knowledge, rather than perceiving it as a separating tool of "philosophical threads from the research design" (Morgan, 2007). Pragmatists believe that the process of acquiring knowledge is a continuum of objectivity and subjectivity, despite the fact, that these are two opposing ontological poles. Therefore, "pragmatism is situated somewhere in the centre of the

paradigm continuum in terms of mode of inquiry" (Kaushik and Walsh, 2019). By the pragmatic approach, the researcher can select the most appropriate design and methodology for specific research to address the research problem adequately. Additionally, as argued by (Kaushik and Walsh, 2019), "pragmatism is typically associated with abductive reasoning that moves back and forth between deduction and induction. In this way, the researcher is actively involved in creating data as well as theories".

As mentioned by Kaushik and Walsh (2019), "pragmatism is a paradigm that claims to bridge the gap between the scientific method and structuralist orientation of older approaches and the naturalistic methods and freewheeling orientation of newer approaches". In a pragmatic research approach, researchers have a choice to choose the most suitable method to be applied to research and problems to be investigated. It gives researchers the freedom to either choose a philosophical approach, methodological approach, or a combination of both to solve research problems. As the pragmatic approach towards particular research gives researchers flexibility in the way of choosing from a wide range of quantitative as well as qualitative research methods and examining the research problem from different perspectives, it is considered as a useful way to understand human beings and the world around them (Kaushik and Walsh, 2019). As argued by Plath (2006), as a pragmatic research approach combines various qualitative as well as quantitative research methods, it is considered "an appropriate research paradigm for social work research", despite the fact, the (Johnson and Onwuegbuzie, 2004) pragmatic research approach adopts different, even contradictory theories and perspectives toward specific research.

According to Mitchell (2018), a pragmatic research approach is associated with an abductive research process. Different research methods are applied in a pragmatic approach, and diverse analytical models are used and "combined with a continuous cycle of abductive reasoning". The abductive research process follows a pragmatic approach as it combines two opposing

research approaches, deductive and inductive research approach, towards specific research problems. Abductive research process starts with unexpected facts that need to be examined. Due to unexpected fact, (Mitchell, 2018), the researcher might "experience an empirical phenomenon that cannot be explained by the existing range of theories". Hence, the researcher can select the most appropriate answer from several alternatives to explain the proposed research's unexpected facts. Davenport (2009) believed that adopting different research approaches and their combination results in better decision-making and more reliable conclusions, where bias and weaknesses resulting from a single method approach towards research are omitted. Moreover, the abductive research process gives the researcher an excellent opportunity to explore the world from different angles, hence giving the most appropriate methodology towards proposed research (Davenport, 2009).

Research Approach

According to Bryman (2012), there are two distinct research approaches; inductive research approach associated with qualitative data collection methods and the deductive research approach affiliated with quantitative data collection methods. The main difference between these two approaches (Deborah, 2013) is that the inductive research approach aims to create new theory from observations and findings. Contrarily, the deductive research approach aims to test the pre-existing theory. As argued by Saunders et al. (2009) inductive research approach involves creating generalisable conclusions based on a set of observations and finding, where the outcome is emerging theory. Thomas (2003) noted that the main aim of an inductive research approach is to enable research results to be based on "frequent, dominant or significant" topics rooted in raw data and omit certain restrictions resulting from structured methodologies. The inductive research approach (Azungah, 2018) involves going back and

forth between findings from qualitative data collection methods and literature to create emerging theory. Although the research findings arise from research's individual observation (Thomas, 2006), what is important to note is that these findings originate primarily from raw data analysis, through reflexivity leading to the creation of new concepts and themes.

On the contrary, as Bryman (2012) mentioned, the deductive research approach represents the most common "view of the nature of the relationship between theory and social research". In the deductive research process towards proposed research, the researcher derives a hypothesis, based on what is known in a particular field and theoretical considerations in relation to this field. Followingly, the derived hypothesis is subjected to empirical examination. Once the derived hypothesis is empirically examined, researchers must specify the method for data collection that is the most appropriate to the pre-existing theories upon which the research hypothesis is built up. Therefore, the deductive research approach and data collection are mainly driven by pre-existing theories and research hypotheses (Bryman, 2012). As Snieder and Larner (2009) mentioned, following a deductive research approach, the researcher analyses the pre-existing theory and tests it for possible validity under certain circumstances. As Pelissier (2008) explained, the deductive research approach is a process from the general to the precise, having an advantage over the inductive research approach. It deals with the creation and testing of hypotheses, resulting in potential modification of the pre-existing theory.

Considering both research approaches and previous philosophical positions on which the research process is based on, the primary research approach for the proposed research would be inductive. According to Bernard (2011), the inductive research approach starts with searching for patterns based on researcher's observations, leading to elaboration and creation of emerging theories "through a series of hypotheses". The inductive research approach allows the researcher to change the research direction after starting the research process as no theory or hypothesis has been proposed at the beginning of the research. However, though any theory

is used initially, the inductive research approach allows the researcher to use pre-existing theories to formulate and examine research questions (Bernard, 2011). Therefore, in the proposed research, the researcher would first explore whether IT companies in Prague use job profiling and forecasting techniques as a part of human resource practice for finding future talented employees for open job positions. According to the researcher's observations, whether these practices are used, findings need to be examined and a conclusion in terms of theory generated.

The inductive research approach is selected to be the primary research approach for the proposed research. According to Thomas (2003), this approach is considered a "convenient and efficient way" to analyse qualitative data for diverse research types. Jebreen (2012) mentioned that the inductive research approach enables the researcher to incorporate different raw data and clearly structure them into a summary. Furthermore, it allows the researcher to establish clear connections between research objectives and findings resulting from observation processes of raw data collected by research. Moreover, this approach enables us to address these links more clearly to other researchers and readers to make the findings and conclusions of the proposed research more understandable. Additionally, as argued by Jebreen (2012), this approach enables the collection of raw data rather than creating and testing specific hypotheses. After the data collection process, the research might have many qualitative and quantitative data that needs to be first observed. Then new hypotheses can be built up and emerging theories created. Therefore, an inductive research approach results in more specific outcomes from observations of collected raw data without using any structured methodology.

Despite the mentioned contributions possessed by the inductive research approach, there are also certain limitations as well. According to Raths (1967), the biggest drawback of inductive research approach is that it "cannot be used to prove anything". As the process starts with data

collection, these data may only support or disprove specific general knowledge. In addition to that, raw data used as the foundation for emerging hypotheses or theory is limited to some extent *(Inductive Reasoning*, 2020). The raw data for the proposed research is collected from a particular area in a certain time frame. Therefore, the researcher needs to be aware of possible errors resulting from this approach towards the research. While the inductive research approach it is possible to use various data to support newly created hypotheses or theories *(Inductive Reasoning*, 2020), there is still a chance of new evidence to be discovered that may disclaim the newly created hypothesis or theory to be true. Due to such limitations resulting from the inductive research approach towards specific research, it is important to use this approach combined with other research approach types (*Inductive Reasoning*, 2020).

Considering the nature of the inductive research approach and the mentioned limitation, particularly for the proposed research, the supporting research approach is deductive. According to Creswell and Clark (2007), the deductive research approach is a top-down research approach built upon pre-existing theories. In conclusion, these theories are approved or disapproved based on findings resulting from hypotheses tested during the deductive research process. In addition to that, as stated by Dudovski (n.d., (C)) by deductive research approach, the researcher has an opportunity to explain "causal relationships between concepts and variables" in a more understandable way. Therefore, for the proposed research, theory related to job profiling and forecasting future employees as a part of human resource practices needs to be explored. Specific hypotheses related to the proposed research are required to be formulated. Following the deductive research approach, hypotheses that have been created need to be tested to determine whether IT companies in Prague use job profiling and forecasting for finding future talented employees. Based on finding results from the testing process of hypothesis, the pre-existing theory is approved or disapproved.

Considering the nature of both research approaches and previously mentioned research philosophy, the pragmatic approach in terms of combining inductive and deductive research approaches into the abductive research approach needs to be considered to complete the proposed research properly. According to Staat (1993), by abductive research approach, the researcher can formulate hypotheses evaluated by deductive research approach. These hypotheses are advocated with empirical data through inductive research approach. As argued by Patokorpi (2006), the abductive research approach "is a way of rewriting rules" where human beings can form credible theories about how certain things work. Therefore, particularly in the proposed research, following the abductive research approach, there is a need to investigate literature related to job profiling and forecasting future talented employees in Prague IT companies to find future talented employees for open job positions. Subsequently, potential hypothesis and research questions can be formulated upon pre-existing theories. Afterwards, answers for research questions are required to be collected in a chosen way by the researcher. Lastly, based on research findings, credible theories can be formulated, and hypotheses can be approved or disapproved.

Research Strategy

According to Bryman (2012), research strategy depends mainly on an epistemological and ontological basis and research approaches related to this philosophy. Therefore, there are two different research strategies, quantitative and qualitative, that are fundamentally different in three areas - The focus on the role of theory in connection to the particular research, epistemological, and ontological stance. As stated by Bryman (2012), the quantitative research strategy "involves a deductive approach to the relationship between theory and research", emphasising testing theories. Additionally, this strategy emphasises positivism as an epistemological stance and from an ontological point of view and objectivism is promoted. On

the contrary, the qualitative research strategy aims to generate new theory by inductive research approach. This approach promotes interpretivism as an epistemological stance and subjectivism as an ontological stance towards particular research. Despite the fact that these research strategies are opposing, representing different roles of theory within the research, epistemological as well as ontological stance, they might be combined to mixed research strategy as according to Bryman (2012), "studies that have the broad characteristics of one research strategy may have a characteristic of the other".

Following the previous research philosophy and approach that underlines the proposed research, the primary research strategy for collecting qualitative and quantitative data is grounded theory. According to Francis et al. (2019), grounded theory is an approach towards creating theory based on collected data. Grounded theory (Bryant and Charmaz, 2007), involves careful application of specific methods used for collecting and analysing raw data processes so the theory may emerge from those data. However, as argued by Birks and Mills (2015), a new theory is not discovered, but only constructed through the researcher's own lens and how the nature of the world is perceived. Grounded theory involves iteration (Strauss and Corbin, 1998), a process when a researcher goes back and forth between collecting data and research analysis. Hence this process allows diminishing discrepancies between empirical research related to theory and theory not based on empirical research. Also, as noted by Milliken (2010), grounded theory is beneficial particularly for examining research topics that have not been investigated much, where the depth of the research is lacking, "or where a new point of view on familiar topics appears promising".

According to Glaser (1992), grounded theory as the research strategy for collecting qualitative and quantitative data is applicable in many research fields. It allows the researcher to dive deeply into data research. However, unlike other strategies, grounded theory offers explicit instructions that direct the researcher to conduct the particular research. Grounded theory is

valuable in a pragmatic approach, in the formulation of research questions. It helps to align the researcher's thinking with the purpose of the research and reassures in doubt times during the research process. As noted by Strauss and Corbin (1998), grounded theory is a systematic approach to data analysis as it utilises a systematic approach for developing and inductively inferring grounded theory about the phenomenon. Moreover, as argued by Charmaz (2006), grounded theory is associated with rich and logical collection of raw data as it allows the researcher to explore the different types of data and go back and forth in data analysis to specify "emerging theoretical framework" resulting in a new view on emerging theory built upon findings from quantitative and qualitative data research.

The primary method for collecting raw data in grounded theory is a semi-structured interview for the proposed research. According to Saunders et al. (2009), semi-structured interviews are a useful method for data collection, as it enables collecting different kinds of data. Such a method is used when there is a need to deeply dive into the topics and adequately understand the interview process's answers. Semi-structured interviews enable one to ask additional questions in case the topic requires more in-depth analysis. In the opinion of Adams (2015), the semi-structured interview is useful in mixed research methods for collecting raw data when there is a need to conduct detailed research before conducting an extensive survey or when there is a need to develop an overall research strategy. When considering all the mentioned benefits resulting from semi-structured interviews, such a method is deemed the primary method for collecting data for the proposed research. The proposed research explores whether IT companies in Prague use job profiling and forecasting as human resource practices for finding future talented employees for open job positions. Therefore, there is a need to interview managers of human resource departments of IT companies in Prague.

According to Bryman (2012), once the qualitative data collection through semi-structured interview has been finished, there is a need for qualitative data analysis to process further

research. The primary grounded theory process is coding when qualitative data collected through semi-structured interviews are analysed and transformed into codes through three different coding processes. As mentioned by Saunders et al. (2009), in open coding that is the first part of the coding process, qualitative data is broken down into codes and named. In axial coding as the second part of the coding process, specific code categories and sub-categories are created based on relationships among codes created in the previous step of the coding process. In the last step of the coding process, selective coding, these newly created code categories are logically combined into a model upon which the emerging theory is created. As stated by Creswell (2015), data coding helps the researcher to understand data that have been collected and make sense of them. In the coding process, data is mapped and transformed into a more understandable form, codes, to link them to research questions.

Additionally, as Basit (2003) stated, there are several assumptions regarding coding as qualitative data analysis. The coding process does not require that much time to process compared to quantitative data analyses, whereas such an approach to research analyses "does not deal with large datasets" (Basit, 2003). Moreover, coding as qualitative data analysis is considered consistent and not independent from the actual research process, but it is instead considered throughout the research. In addition to that, as argued by Linneberg and Korsgaard (2019), in data coding, the researcher has the opportunity to acquire an in-depth, comprehensive, and thorough view of data collected whereas, the coding process helps the researcher to notice some aspects that were not spotted during data collection. Therefore, considering the contributions from data coding as an analysis of qualitative data, particularly for the proposed research, once the researcher finishes qualitative data collection through semi-structured interviews with the manager of the human resource department of IT companies in Prague, these data should be analysed by the coding process to properly understand data collected upon which emerging theory can be created.

According to Saunders et al. (2009), despite all the mentioned advantages of semi-structured interviews as a method for collecting raw data for specific research, certain limitations are associated with such methods. Due to the absence of standardisation in semi-structured interviews, this method might lead to data collected reliability. Due to this fact, the research findings and newly established theory might be questioned by other researchers. Issues related to reliability of semi-structured interviews are closely related to different types of bias, such as interviewers' bias, interviewees' bias, as well as bias resulting from the "nature of the individuals or organisational participants who agree to be interviewed" (Saunders et al., 2009). As mentioned by Adams (2015), another limitation of the semi-structured interview is that such a method is very time-consuming. The whole process from the preparation of interview questions and actual interview and conduction of interview requires much time and effort to properly conduct such an interview and properly collect qualitative data required for the specific research. On top of that, findings resulting from semi-structured interviews require comprehensive investigation that might take much time.

Considering the limitations mentioned above possessed by semi-structured interviews as a method for data collection, the supporting research strategy and data collection methods need to be considered. To fulfil the needs of the proposed research, the supporting research strategy is a survey. According to Glasow (2005), the survey is a data collection tool capable of collecting large data sets from population samples. The main benefits of such a strategy are that it offers opportunities to investigate different variables for low investments and to obtain information that would be otherwise difficult or not even possible to gather through other observational techniques. Furthermore, as noted by Showkat and Parveen (2017), surveys conducted with an appropriate population sample are considered to have excellent validity and reliability and provide even more accurate findings when combined with other research strategies aimed for data collection. As mentioned by Kraemer (1991), the main aim of the

survey as a research strategy is to collect data from a sample of population leading to the collection of a wide range of data that may be used for research analyses and upon which research conclusions of specific topics can be drawn.

As argued by Showkat and Parveen (2017), surveying as a research strategy for collecting data from a population sample is built on a set of questions formulated for testing hypotheses "developed after reviewing the literature" and related to the research topic. Data that have been collected from conducted surveys need to be analysed and afterwards summarised into a report that will serve as a source of information resulting from specific research. Furthermore, according to Showkat and Parveen (2017), surveying is a research strategy where data is collected consistently and systematically. Therefore, such a strategy is considered a proper instrument for measuring an individual's attitudes, knowledge, and preferences. Moreover, as McIntyre (1998) stated, the survey is considered a unique research strategy, unlike other observational techniques as it is functional in obtaining information about attitudes. In addition to that, in the opinion of McIntyre (1998), although dependent and independent variables are out of the researcher's control in the survey, they may clarify the specific research scope.

For the proposed research, the supporting research method for data collection in surveying as a research strategy is a questionnaire. According to Saunders et al. (2009), questionnaires allow the researcher to formulate questions in a specific order in advance and distribute these questions questionnaire respondents simultaneously. Therefore, this method is considered an efficient and convenient way of collecting data from a large population sample. Furthermore, as argued by Sagar (2019) questionnaire, provides an inexpensive method for data collection where interviewer biases are omitted as the respondents of the questionnaire answer the questions on their own. Moreover, as Grangrade (n.d.) mentioned, the questionnaire is an anonymous data collection method. Hence the "respondents may have greater confidence and thus feel freer to express [their] views" (Grangrade, n.d.). Considering the advantages

possessed by questionnaires, this method is considered to be a reliable data collection method. Notably, for the proposed research, the questionnaire is used to collect data related to employees' perception of IT companies in Prague about human resource practices such as job profiling and forecasting future talented employees.

According to Mertler (2016), once the quantitative data collection through a questionnaire has been finished, there is a need for quantitative data analysis to process further research. Quantitative data analysis is primarily focused on using existing statistical indices, formulas, and various statistical tests that are considered consistent, disregarding research topics or research variables to be examined. By this approach, the objectivity is ensured in data analyses of the particular research. According to Mertler (2016, pp. 118), in the questionnaires, collected data might be analysed and interpreted by various statistical methods such as "frequency distribution, descriptive statistics, correlations, or group comparisons". As Richmond (2006) argued, after qualitative data collection has been completed, the researcher should first ensure that expectations regarding the data's characteristics and quality have been met. Subsequently, the research should choose the most appropriate method for analysing those data. Research choice regarding data analyses should also be partially based on the data's nature - nominal/categorical, ordinal, interval, and ratio data. Bryman (2001) stated that the main advantage of statistical analysis of quantitative data is time and resource efficiency.

Furthermore, according to Gorard (2001), quantitative data can be analysed by SPSS software, allowing researchers to perform such analyses more efficiently. In addition to that, as mentioned by Williams and May (1998), the use of statistical methods for quantitative data analysis allows the researcher to group research variables leading to a generalisation of research findings. Another advantage of statistical analysis towards quantitative data analyses (Lichtman, 2013) is replicability, as such an approach relies heavily on hypothesis testing,

where clear guidelines and goals are followed. Hence, hypothesis testing allows the researcher to predict and generalise the research findings. This approach enables the researcher to examine the relationships between certain research variables analysed by statistical analyses. Taking into consideration the advantages resulting from using statistical analyses for the quantitative data analysis, once the quantitative data collection is completed through questionnaires distributed among employees of selected IT companies in Prague, data should first be reviewed, and decisions related to the choice of a particular statistical approach should be made depending on the nature of collected data (Christensen and Johnson, 2014).

According to Munn and Drever (1990), despite all the mentioned advantages possessed by questionnaires as a method for data collection for specific research, there are also certain limitations related to these research methods that need to be taken into consideration before the researcher decides to use this method for collection of data. First, questionnaire answers are more descriptive than explanatory as the respondents tend to describe certain things how they are. Secondly, the information provided by respondents might be superficial and not explained in-depth as they should. In addition to that, questionnaires require a specific time for drafting and piloting. However, this time is, in most cases, underestimated, therefore leading to inadequate preparation of the questionnaire. Insufficient preparation (Munn and Drever, 1990) might negatively impact the questionnaire's quality as data collection methods. Furthermore, as Beiske (2002) argued, one of the questionnaire's main limitations is the low response rate, especially concerning post and electronic questionnaires. Additionally, the questionnaires do not provide any opportunity to clarify respondents' answers when the researcher is not sure what was meant by some answers (Beiske, 2002).

Considering all the advantages and disadvantages resulting from the questionnaire as a supporting data collection method, particularly for the proposed research, the researcher should consider the mixed research method. According to Wisdom (2013), mixed research methods

refer to the systematic combination of quantitative and qualitative research methods to examine the qualitative and quantitative data within single research. The basic assumption of such a research method is that the combination of quantitative and qualitative research methods enables more complete and synergetic investigation of data rather than "separate quantitative and qualitative data collection and analysis" (Wisdom, 2013). Furthermore, as noted by Creswell (1994), the main advantage of mixed research methods is that research is not limited to using a single data collection method but is instead built upon research investigation that underlines the research itself. According to Morgan (2007), mixed research method arises from the pragmatic research approach that emphasises the use of abductive research approach in specific research. Additionally, as argued by Johnson and Onwuegbuzie (2004), the use of both methods in particular research supports both methods' strengths and at the same time mutually minimises their weaknesses.

According to Greene et al. (1989), several benefits are resulting from mixed data collection methods. Whereas both types of data might be combined, this method enables greater research validity. Moreover, as stated by Greene et al. (1989), mixed research methods result in "a more complete and comprehensive picture of the study phenomenon". In addition to that, mixed research methods allow the researcher to obtain answers for questions that otherwise would not be possible to obtain when only a single research method towards research would be applied. Therefore, for the proposed research, a mixed research method is recommended to be applied. In particular, semi-structured interviews as a qualitative data collection method should be conducted with human resource managers of IT companies in Prague to investigate whether IT companies in Prague use human resource practices such as job profiling and forecasting for finding talented employees for open job positions. Furthermore, the questionnaire as a quantitative data collection method should be provided to IT companies in Prague to investigate

employees' perception and their satisfaction with human resource practices such as job profiling and forecasting future talented employees in their companies.

Secondary Data Needs

Data Need 1: No. of IT Companies in Prague

Semi-structured interview as the primary method for qualitative data collection has been conducted with managers of human resources departments of IT companies in Prague to investigate human resource practices, primarily whether IT companies in Prague use job profiling forecasting practices for finding future talented employees for open job positions. Therefore, for the given data collection method, the number of IT companies in Prague has been required. The required secondary data regarding the number of IT companies in Prague was obtained from the Czech Statistical Office, in particular, from a public database including statistical data regarding the number of registered businesses in the ICT sector in Prague, Czech Republic (Businesses by principal activity - territorial comparison, 2020). As Annapurna (2017) mentioned by incorporating statistical data as a secondary data source for any research, the researcher has an excellent opportunity to use empirical evidence to test the hypothesis and develop emerging theory. Additionally, as stated by Annapurna (2017), statistical data might be used in different stages of the research, "including the planning, sampling and interpretation stages of a research plan".

There are several reasons why the researcher has considered the Czech Statistical Office as a relevant source for collecting secondary data for the proposed research. Czech Statistical Office activities ensure the trustworthiness of statistical data produced by Czech Statistical Office (2014) that are publicly available for a large audience to be strictly professionally independent from other political or administrative institutions and private actors. Moreover, the Czech Statistical Office always ensures that their activities align with current environmental conditions and emphasise "continuous improvement of the state statistical service" (Czech Statistical Office, 2014). Additionally, The Czech Statistical Office has a dedicated legal team

of authorities and tools for proper data collection to produce statistical data according to their customers' requirements. To produce reliable and up-to-date statistical data, the Czech Statistical Office has established formalised processes regarding data collection, evaluation, and preparation to meet all the quality policy resulting from relevant legislation. The statistical confidentiality is also strictly preserved by the Czech Statistical Office has strictly defined rules toward statistical confidentiality to preserve "security and integrity of confidential data" (Czech Statistical Office, 2014).

According to Bryman (2012), despite the mentioned benefits resulting from statistical data as a secondary data source used for data collection methods, certain limitations are associated with statistical as secondary research data are considered during the proposed research process. As argued by Bryman (2012), statistical data is a set of data that has been collected by some other researchers/institutions. Hence there might be a lack of familiarity with these data, especially with the technique of how these statistical data has been collected, analysed, and formulated into a given format. Furthermore, statistical data are usually a comprehensive data set with many variables over a particular time scale presented on many different levels, such as households or individuals. Using statistical data as a secondary data source for particular research, researchers cannot be sure about the quality of these statistical data used. Apart from that, as stated by Bryman (2012), statistical data have been collected by someone else for a specific purpose. Therefore, some key variables that would be required by another researcher for given research might be missing.

Given the limitations possessed by statistical data as a secondary data source for the proposed research, the researcher also considered supporting secondary data sources for the proposed research. To ensure reliability and validity of the secondary data, in particular, the statistical data, as well as to correctly complete the proposed research, there was a need to compare these statistical data regarding the number of IT companies in Prague obtained from the Czech

Statistical Office with other relevant data from different sources. Reliability and validity of the statistical data have been supported with the CzechInvest sector database related to the IT sector of Czech Republic, including information related to several companies' operating in Czech IT sector, point of company contact as well information about companies product portfolio and their quality certificates (Sector databases, n.d.). Data provided by CzechInvest were considered to be reliable and trustworthy (CzechInvest Fact Sheets, 2010), as since 1992 CzechInvest has been a non-profit, governmental organisation that "provides foreign investors and new partners with information support" of many kinds, such as business infrastructure development, financial support information as well as identification of commercial property and identification of suppliers.

Additionally, based on the CzechInvest Fact Sheets (2010), the organisation is continuously working on finding new business projects with higher added value to increase the Czech Republic's economic level and actively support the Czech Republic's long-term economic growth. Moreover, The CzechInvest organisation is focused on traditional industries that have a long and rich history in the Czech Republic and developing industries that have significant potential in the world. Additionally, CzechInvest organisation strives for the proper presentation of the Czech Republic "as a modern developed country with extensive experience in the area of science and technology" (CzechInvest Fact Sheets, 2010). Data available to CzechInvest website are collected from everyday work among CzechInvest representatives and state administration representatives, regions, and cities and local entrepreneurs to ensure high quality of data produced (CzechInvest management, n.d.). Notably, for the proposed research, the advantages of both secondary data sources, statistical data obtained from the Czech Statistical Office, and ICT sector data obtained from the CzechInvest database have been examined and therefore considered useful and reliable for the given research some extent.

Data Need 2: No. of IT Workers in Prague

Questionnaire as the supporting method for quantitative data collection has been used for the proposed research and distributed among employees of IT companies in Prague, to find out what is the perception of employees of IT companies in Prague towards human resource practices such as job profiling and forecasting for finding future talented employees for open job positions. Therefore, for the given data collection method, the number of employees employed by IT companies in Prague was required. The required secondary data regarding the number of employees employed by IT companies in Prague has been gathered from the Czech Republic population census on the Czech statistical office website. According to Edmonston and Schultze (1995), a population census is used to support quantitative data collection methods such as questionnaires indirectly. Moreover, a population census is considered the only comprehensive data source used for various research regarding minority groups or researchers regarding population age, income, or professional groups. In addition to that, as mentioned by Edmonston and Schultze (1995), the population census is essential in the design process of research as upon which sample for the questionnaire is drawn.

Furthermore, as argued by Foley (2018), one of the advantages of using secondary data such as the population census for specific research is time and come effectiveness when it comes to the data collection process for the specific research. Whereas the data used for conducting quantitative research methods such as questionnaires are already collected, and the researcher needs to retrieve these data from a particular website, a population census is considered time as well cost-efficient. In some cases, the population census might not be free of charge. However, such costs are always lower than the researcher's costs related to collecting the same data set. A population census is also time efficient as such data set is available online for the public, usually free of charge and easily readable. Moreover, the population census serves as a comprehensive data source, and such amount of data would not be able to be collected by

individual researchers. Therefore, according to Foley (2018), researchers should take advantage of such data collected by the government that requires significant investment in time and money.

According to Perez-Sidin (2017), despite the mentioned advantages of population census as a secondary data source used for data collection methods for various research, some disadvantages must be examined. Secondary data sources such as population census may provide a vast amount of information. However, significant data volume does not always mean the reliability and suitability of such data. Moreover, as argued by Perez-Sidin (2017), data from population census that were initially collected to answer different research questions may not be suitable for all research topics as they may be outdated or "have a different scope". Additionally, as stated by Baffour and Valente (2008), there might be insufficient control in regarding data quality, as the quality of population census conducted by governments cannot be quarantined due to errors that might happen during data collection "in terms of coverage and content". Furthermore, based on the 2011 Census Methodology (2015), data for population and housing census are collected on a decade basis. The latest Czech population census occurred in 2011. Therefore, the number of people might have significantly changed since then. Therefore, the data might be no longer relevant to the proposed research.

The above-mentioned advantages and disadvantages of population census as a secondary data source for quantitative data collection methods have been considered. Therefore, supporting secondary data sources needed to be taken into consideration. To ensure reliability and accuracy of Czech population census these data needed to be compared with Czech statistical data such as time series related to the unemployment rate in Prague, Czech Republic (Time-series - labour, 2020). Such data were used to get more information regarding the Prague labour market situation and how it is affected by the insufficient number of talented people for open job positions. Additionally, statistics related to the ICT sector in the Czech Republic has been

used to get more information about the number of people employed in that sector (ICT sector in the Czech Republic, 2020). The statistical data were chosen as supporting secondary data sources as according to Harris (2007) using statistical data in specific research makes the research findings more accurate as such data are measured and shows individual relationships and predictions that might be used for testing hypotheses and for constructing certain concepts or for developing emerging theory.

For the proposed research, the Czech statistical office's data was chosen as supporting secondary data sources as according to the Czech survey of the Public Opinion (Cieslar, 2014), Czech statistical office and their data are considered reliable and trustworthy by members of the public older than 15 years old. As mentioned by Cieslar (2014), the survey revealed that up to 62% of respondents older than 15 years old consider "the information published by the Czech Statistical Office to be reliable, accurate and impartial". Based on the Czech Statistical Office (2014) the reliability and trustworthiness of publicly available data are ensured because the Czech Statistical Office has dedicated legal authorities, instruments and formalised processes for data collection, evaluation and preparation to fulfil all the quality policy results from relevant legislation. To preserve reliability, transparency and validity of data produced by The Czech Statistical Office, the institution continuously complies with legal requirements and other standards concerning official statistics. Therefore, considering the above-mentioned justification, the researcher has considered the Czech Statistical Office a relevant source for collecting secondary data for the proposed research.

Main Method: Semi-structured Interview

For the proposed research, to meet a grounded theory's requirements as the primary research strategy, semi-structured interviews have been used as the main method for collecting qualitative research data. According to Harrell and Bradley (2009), primary data collection is

vital for any research. To ensure that qualitative data are collected properly, the appropriate method for collecting data needs to be applied. By appropriate data collection method (Harrell and Bradley, 2009), "accuracy, validity, and reliability of research findings" is ensured and leads to exceptional research with trustworthy discoveries from collected data observations. According to Saunders et al. (2009), a semi-structured interview is considered a useful method for data collection, as, by this method, different kinds of data can be collected.

Moreover, by this method, the researcher can deeply explore the given topic. This method allows the researcher to ask additional questions if there is a need to investigate further and understand the topic. Furthermore, according to Adams (2015), semi-structured interviews as a data collection method might be used in mixed research methods.

As argued by Adams (2015), mixed research methods enable the researcher to use different data collection methods. In such a way, a semi-structured interview is used for detailed research that is followed by a comprehensive survey. Additionally, when further investigation of the topic is required after completing standardised questionnaires, a semi-structured interview is useful for exploring the specific topic more into the depth. Semi-structured interviews have been considered the most appropriate method for collecting qualitative data for the proposed researcher. According to Cohen and Crabtree (2006), such a method is useful when several interviews need to be done on the first try without a room to ask additional questions next time. This method allows the researcher to prepare questions in advance, follow the sequence of questions during the interview, and ask additional questions when there is a need for further discussion. Apart from that as stated by Cohen and Crabtree (2006), whereas the semi-structured interview does not enable to ask open-ended questions, by this method, there is an "opportunity for identifying new ways of seeing and understanding the topic" into the depth.

Considering all the mentioned advantages of semi-structured interviews as a method for collecting qualitative data, such a method has been considered the primary method for

collecting raw data for the proposed research. In particular, as there was a need to explore the human research topic regarding whether IT companies in Prague use job profiling and forecasting as human resource practices for finding future talented employees for open job positions, several interviews have been conducted with managers of human resource departments of IT companies in Prague. Managers of the human resources department of IT companies in Prague have been considered as the most appropriate representatives of Prague IT companies due to their nature of the profession. HR managers (GISMA Business school, 2019) are responsible for assessing current employees and evaluating future ones to meet business demands. They ensure that proper onboarding and development training has been provided to increase employee satisfaction and performance. In addition to that, HR managers help effectively resolve conflict and issues among employees and their managers.

IT companies in Prague and their HR managers have been selected by convenience sampling. According to Saunders et al. (2009), convenience sampling is a non-probability sampling called haphazard sampling and involves the random selection of objects into a research sample for examination purposes. In this process, the researcher selects objects for the research sample until the sample size is big enough. As argued by Lavrakas (2008), convenience sampling as non-probability sampling "does not involve known nonzero probabilities of selection" but rather the researcher subjectively decides whom to select into the research sample. The researcher considered this selection method to be the most appropriate. According to Jager et al. (2017) by convenience sampling, the researcher selects objects into research samples "based on their accessibility and/or proximity to the research". Additionally, as the most used non-probability sampling method, convenience sampling does not require significant money and time investments. Moreover, this method is considered an efficient sample method that is easier to execute than other sample methods. The researcher considered the mentioned advantages

possessed by convenience sampling and therefore decided to implement such a sample method into research.

During October 2020, the researcher contacted seven IT companies in Prague via email to introduce herself, the purpose of the research itself and the criteria related to the semi-structured interviews. Furthermore, by this email communication, the researcher officially has asked selected companies, particularly their HR managers for the consent to participate in those semi-structured interviews and whether HR managers and their companies may be mentioned in the master dissertation or instead remain anonymous. Due to the current COVID-19 pandemic, online communication via email has been considered the most appropriate for contacting selected companies. There IT companies in Prague have given replies and provided consent for participating in the semi-structured interview. Predefined questions have been sent by email to managers of IT companies' human resource department in Prague to investigate given topics, whether IT companies in Prague use human resource management practices such as job profiling and forecasting for finding future talented employees for open job positions. Once the researcher obtained the answers from interview participants, additional questions were asked where the answer was not clear, and further investigation was required to understand the given answers.

The researcher asked several companies to participate in the research to ensure triangulation within the proposed research. According to Noble and Heale (2019), triangulation is a method of combining two and more different research theories, methods, or data sources to increase the credibility and validity of findings resulting from specific research. This method enables the researcher to understand better and explain different human beings' behaviours, opinions, and actions to offer readers a more balanced explanation of specific research topics. The main advantage of triangulation is that this method enhances qualitative and quantitative data's validity and credibility. Moreover, as argued by Noble and Heale (2019), triangulation method

enriches the overall research, as it allows the researcher to use various datasets to explain "differing aspects of a phenomenon of interest". Furthermore, this method helps confirm certain hypotheses resulting from two or more different datasets used in the specific research. Considering the advantages of the triangulation method, the researcher conducted several interviews with the HR manager of Prague IT companies to collect different datasets that helped increase the credibility and validity of findings resulting from the proposed research. Figures 1 to 5 below represent the connection among research objective two, literature used in the proposed research, and interview questions asked by the researcher during the primary data collection process. The inductive approach has been followed in creating interview questions. The researcher examined the pre-existing theories regarding job profiling and forecasting process and considered those theories. The interview questions have been formulated. By this approach, the researcher has connected research objectives and findings through interview questions. First, the researcher asked general questions regarding company profile to know the company better. Afterwards, questions related to job profiling processes were formulated to examine whether and how IT companies in Prague use such practices for finding future talented workers. Followingly, interview questions related to forecasting processes were formulated to investigate whether IT companies in Prague use forecasting processes for finding future talented workers. Lastly, interview questions related to employees' skills and talent were formulated to investigate the company situation regarding the shortage of talent in the Czech labour market.
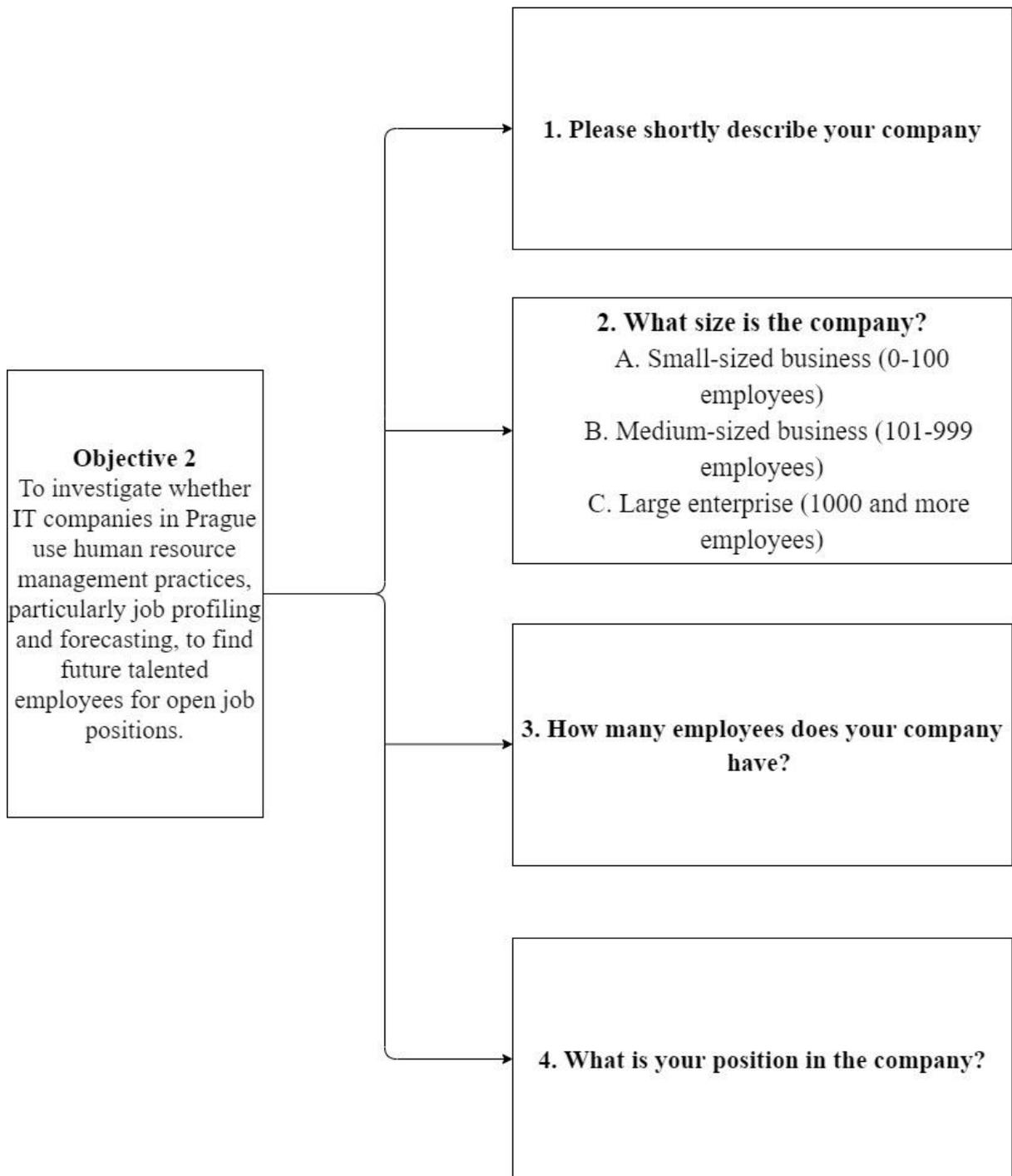
Figure 1: Company Profile Related Questions
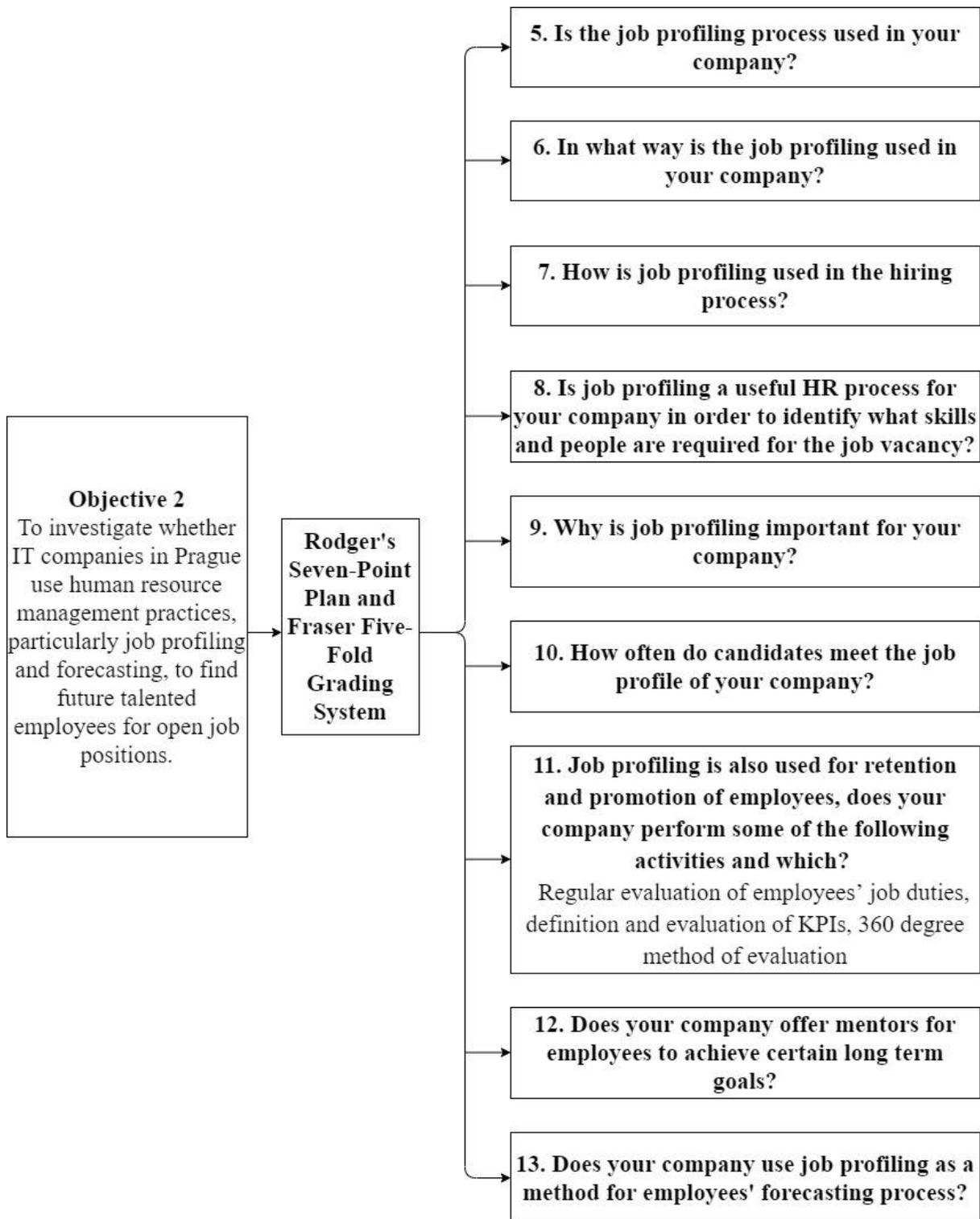
Figure 2: Job Profiling Related Questions

Figure 3: Forecasting of Future Employees Related Questions
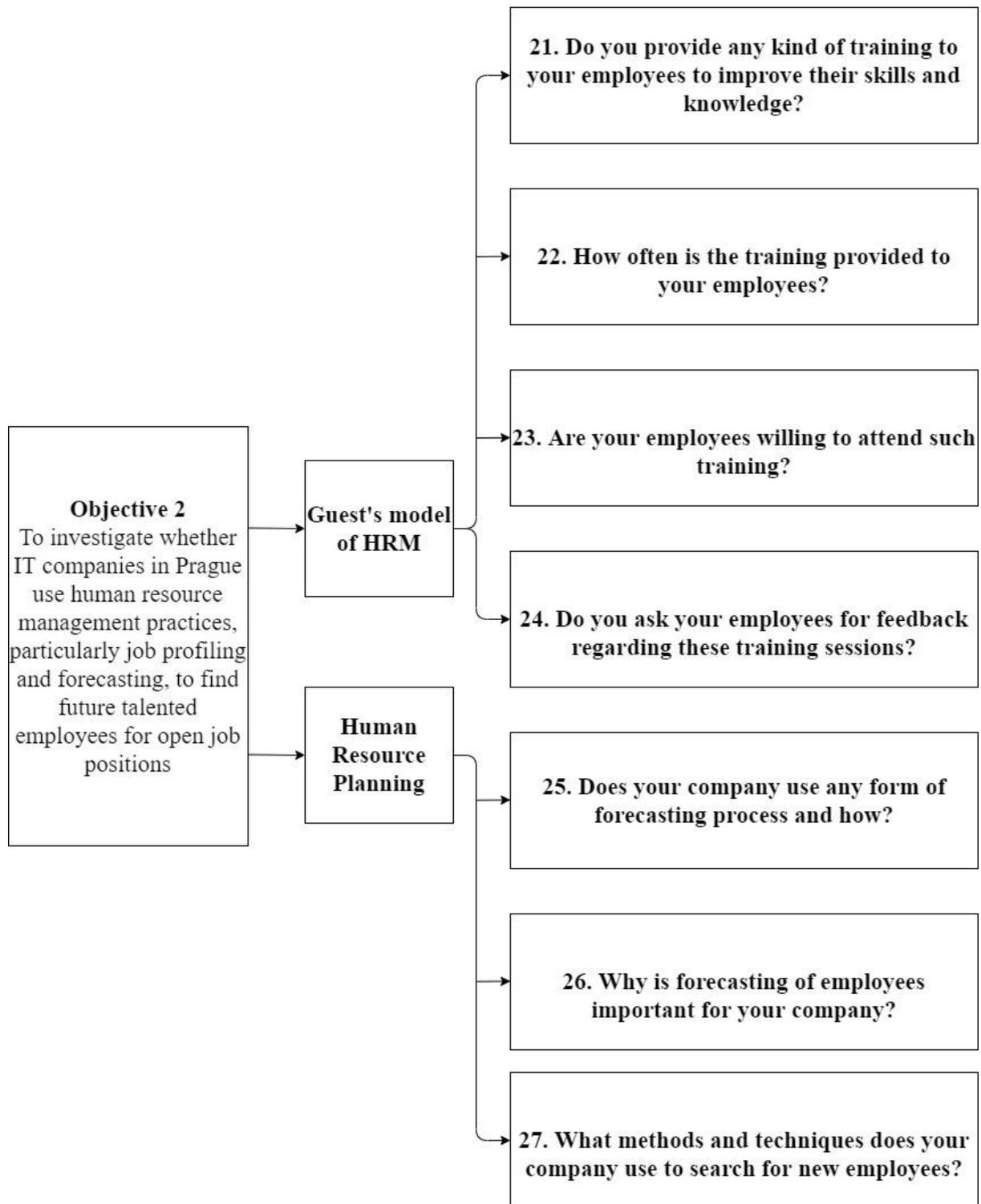
Figure 4: Forecasting of Future Employees Related Questions
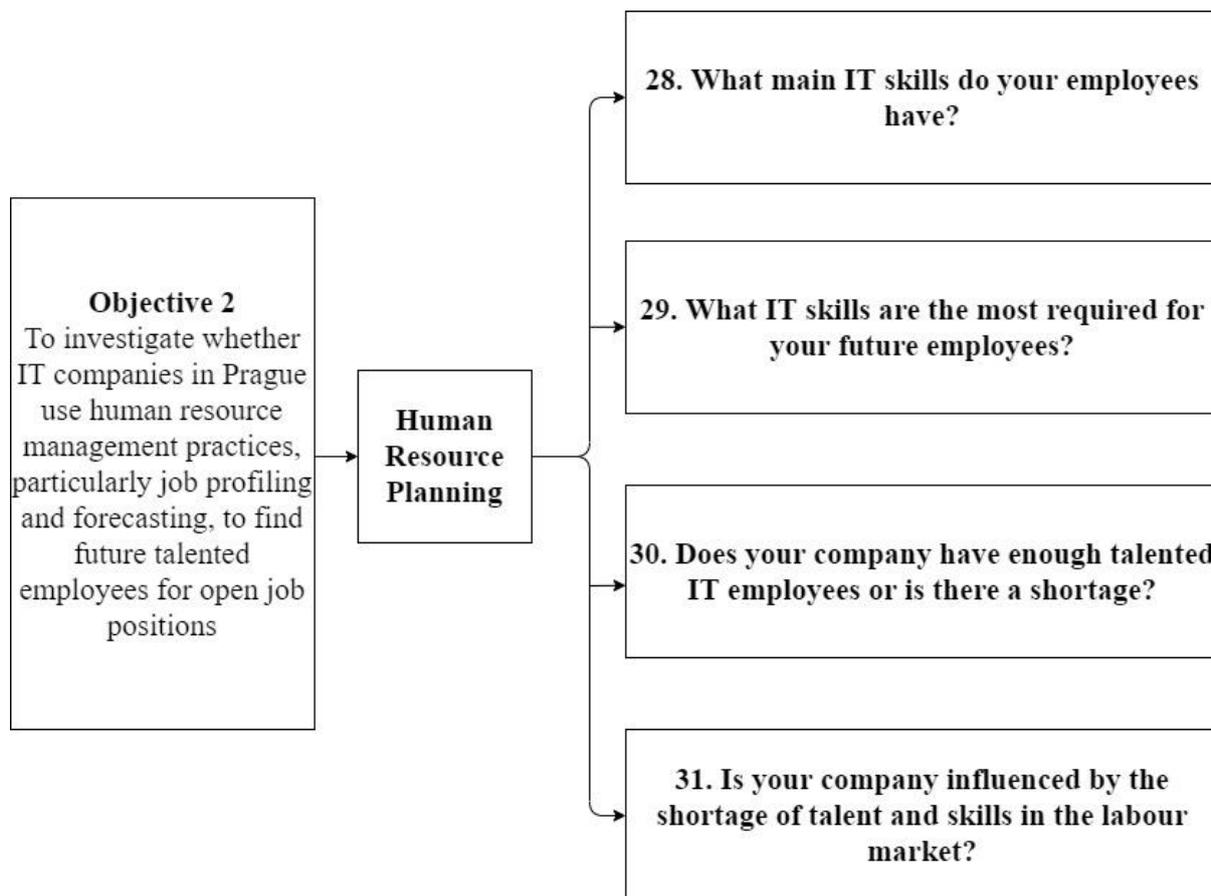
Figure 5: Employees Skill and Talent Related Questions

To further process the proposed research, there was a need for data analyses once the researcher finished qualitative data collection through a selected data collection method, the semi-structured interview. The researcher analysed the data collected by the coding process. According to Creswell (2015), by coding, data collected are transformed into specific codes, categories, and finally into models that help the researcher understand the data better and make more sense of them. Furthermore, the researcher selected this data analysis process. According to Basit (2003), this analysis process poses several advantages. It does not require that much time as qualitative data analysis. It is considered consistent and can be performed continuously throughout the whole research. Furthermore, as stated by Linneberg and Korsgaard (2019), data coding helps the researcher spot some details that were not noticed during the data

collection process because data coding enables the researcher to perform in-depth, comprehensive research. A thorough analysis of data by decomposing the interview provides more understandable codes and categories or even sub-categories if required.

As mentioned by Namey et al. (2008), data coding is closely associated with the data reduction process. In the data reduction process, the researcher decides" which data chunks to code and which to pull out, which evolving story to tell" Namey et al. (2008). Moreover, data reduction is considered a form of data analysis that enables the researcher to be sharp, discard and organise the data to verify and draw research conclusions. Therefore, considering the advantages mentioned above, particularly for the proposed research, the researcher decided to select coding as a qualitative data analysis process. According to Bryman (2012), coding consists of three different levels when data goes through three stages of analyses - open, axial, and selective coding. As stated by Saunders et al. (2009), in the open coding stage of the coding process, data is broken down into codes, each code having its label and evidence. Additionally, due to the various kinds of interview answers, such as facts, beliefs or opinions of HR managers, code created from these answers needs to have a different discourse level.

Therefore, for the proposed research, the researcher has first reviewed interview questions and answers and then created code labels and code evidence from every single question and related answer. Some codes have a second and third level of discourse. These are interview respondents' opinions in the second level of discourse and third level of discourse representing assumptions about other people's opinions, particularly employees of IT companies in Prague. Additionally, as noted by Bryman (2012), related codes are put together in the coding process's axial stage, creating categories or even sub-categories if required. Therefore, for the proposed research, collected data have been reviewed together with codes created, and the researcher subsequently created categories and subcategories. Categories were created to group codes that have similar labels, therefore similar meaning to perform data reduction. Codes grouped into

one category having different evidence have been grouped separately into sub-categories. The researcher did create sub-categories as well, whereas some codes grouped into one category had different meanings in the evidence part of the code.

As mentioned by Bryman (2012), in the last stage of the coding process, selective coding, categories and subcategories, created from the grouping process of codes, are mapped into models depending on the number of interviews conducted. These models then can be combined into the one primary model upon which the emerging theory can be created. Therefore, for the proposed research, the researcher has created three separate models, each resulting from individual interviews conducted with IT companies' HR managers. These models serve as a simplified interpretation of conducted interviews when categories and their subcategories are linked together with other categories and their subcategories to represent certain relationships. These models have a similar structure as they result from the same interview questions; however, due to the complexity of answers provided by HR managers of IT companies, these models differ slightly in several categories and sub-categories. Additionally, to properly complete the last stage of the data coding process, the selective coding, and to draw one compact conclusion from conducted interviews, these three models need to be merged creating one primary model.

Supporting Method: Questionnaire

For the proposed research, to meet a survey's requirements as a supporting research strategy, questionnaires have been used as a supporting method for collecting quantitative research data. According to Bryman (2012) questionnaire is a structured data collection method where the researcher sets out in advance the broad outline of what needs to be investigated and proposes research tools to implement what needs to be discovered. As stated by Saunders et al. (2009), a questionnaire is mainly characterised by a set of questions that are predefined in a particular

order and provided to respondents. As questionnaire participants are provided with the same set of questions, this method is an efficient and convenient way to collect data from a large population sample. According to Saunders et al. (2009), it is crucial to be cautious when designing the questionnaire. This process impacts "the reliability and validity of the data" being collected in such a research method. Therefore, it is important to emphasise an appropriate explanation of the questionnaire's main aim, the formulation process of questionnaire questions, and precise questionnaire arrangement.

As Sagar (2019) argued, the questionnaire does not require significant investments in terms of money. Therefore, such a method is cheap. Using this method, potential interviewer biases are omitted as interviewers are not present when questionnaire respondents provide their answers. In addition to that, with questionnaires, the time is not limited. Therefore, the respondents are not placed in stressful situations and have enough time to think about their answers carefully. Hence, as noted by Grangrade (n.d.), the questionnaire is less stressful than other data collection methods when it comes to time for answering the specific questions. Moreover, participation in questionnaires is anonymous, no personal data regarding participants are being collected. Therefore, respondents might feel more confident about what they honestly think or believe regarding a specific topic. In addition to that, as Sagar (2019) mentioned, a questionnaire is considered one of the most convenient ways of collecting large numbers of quantitative data. By this method, the researcher can reach many respondents conveniently either by email or post.

Considering all the mentioned advantages possessed by questionnaires to collect quantitative data, such a method has been considered the supporting method for data collection for the proposed researcher. There was a need to investigate Prague IT companies' perception of human resource practices such as job profiling and forecasting of future talented employees. To understand how Prague IT companies perceive human resource practices in their

companies, especially job profiling and forecasting, the questionnaire with predefined questions has been distributed among these employees. The questionnaire's main aim has been to investigate job profiling and forecasting future talented employees, from Prague IT companies' employees' perspective. Employees' opinions were supposed to help the researcher understand whether these human resources practices help companies fight the war of talent in the labour market and help companies find talented employees for open job positions. Additionally, employees' opinions were supposed to help the researcher understand whether such practices impact current employees' satisfaction and employee turnover.

The questionnaire with standardised questions has been prepared in online Google form and distributed to Prague IT companies' employees through their HR managers to collect the required responses. Data were collected from October 2020 to November 2020, until the minimum number of required respondents was not collected. The questionnaire's standardised questions focused on a topic related to job profiling and forecasting future talented employees. The questionnaire's main aim was to determine employees' perception of job profiling, whether they consider it essential in applying for an open job position and whether they perceive it to be well informed concerning the open job position. Moreover, employees were asked to answer whether job profiling practices contributed to improved job motivation or job satisfaction. Additionally, Prague IT companies' employees were asked to answer several questions about employees forecasting practices, whether they experienced some employees forecasting practices during their IT professions such as job rotation and skills training. Apart from that, the questionnaire aimed to investigate the employee's satisfaction with employee forecasting practices.

Figures 6 to 14 below, represent the connection among research objective three, literature used in the proposed research and questionnaire questions asked by the researcher, during the supporting data collection process. The deductive approach has been followed in creating

questionnaire questions, meaning that the researcher formulated the questionnaire questions from general to more particular questions. The pre-existing theories regarding job profiling and forecasting processes were considered and applied while formulating questionnaire questions, to investigate the employee's perception of profiling and forecasting processes for finding future talented employees. This approach allows the researcher to connect research objectives and findings through interview questions to support the main data collection method's findings. First, the researcher asked demographic questions regarding questionnaire participants' age and gender to know certain fundamental characteristics of those questionnaire participants. Afterwards, questions related to job profiling processes were formulated to examine IT employees' perception of those processes. Followingly, questionnaire questions related to forecasting processes were formulated to investigate IT employees' perception of those processes.
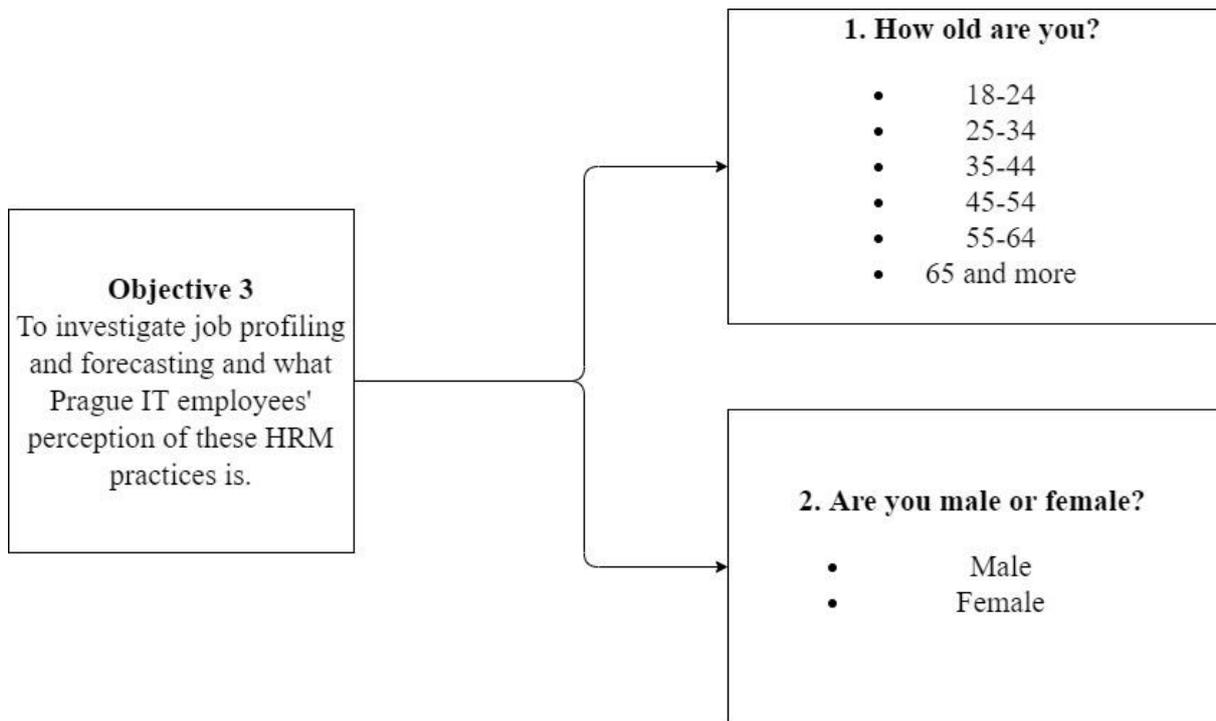
Figure 6: General Questions of the Questionnaire
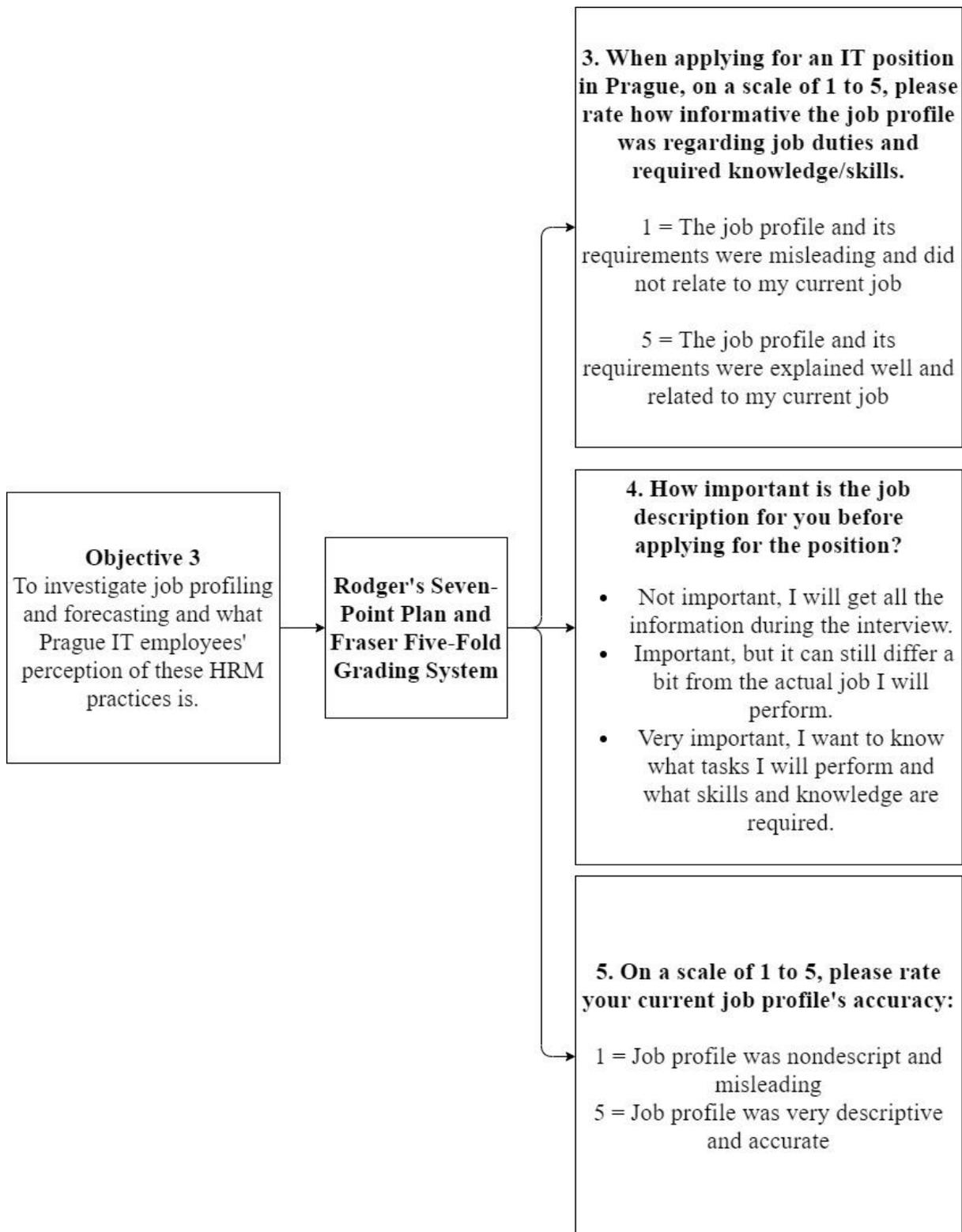
Figure 7: Specific Questions of the Questionnaire
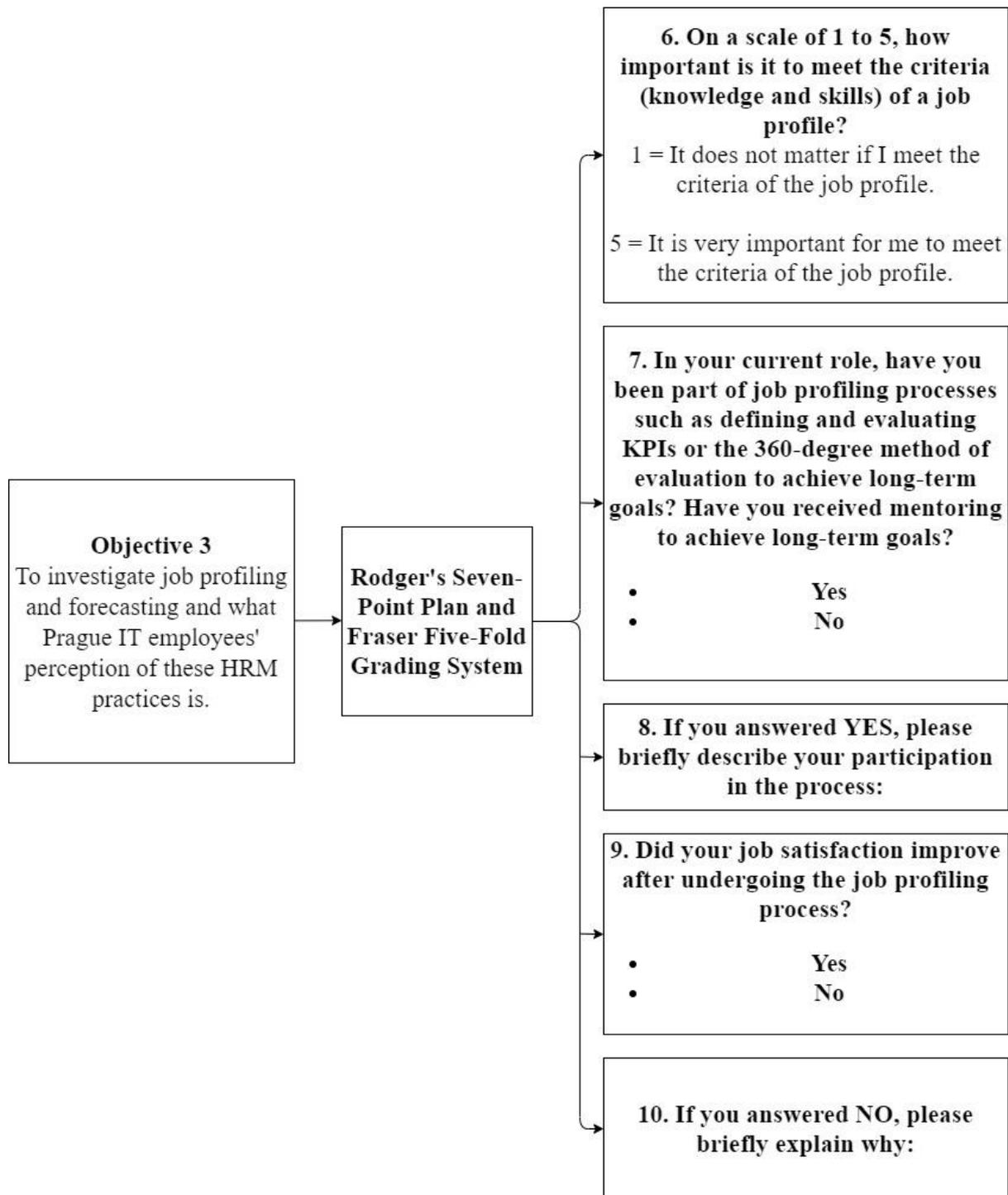
Figure 8: Specific Questions of the Questionnaire
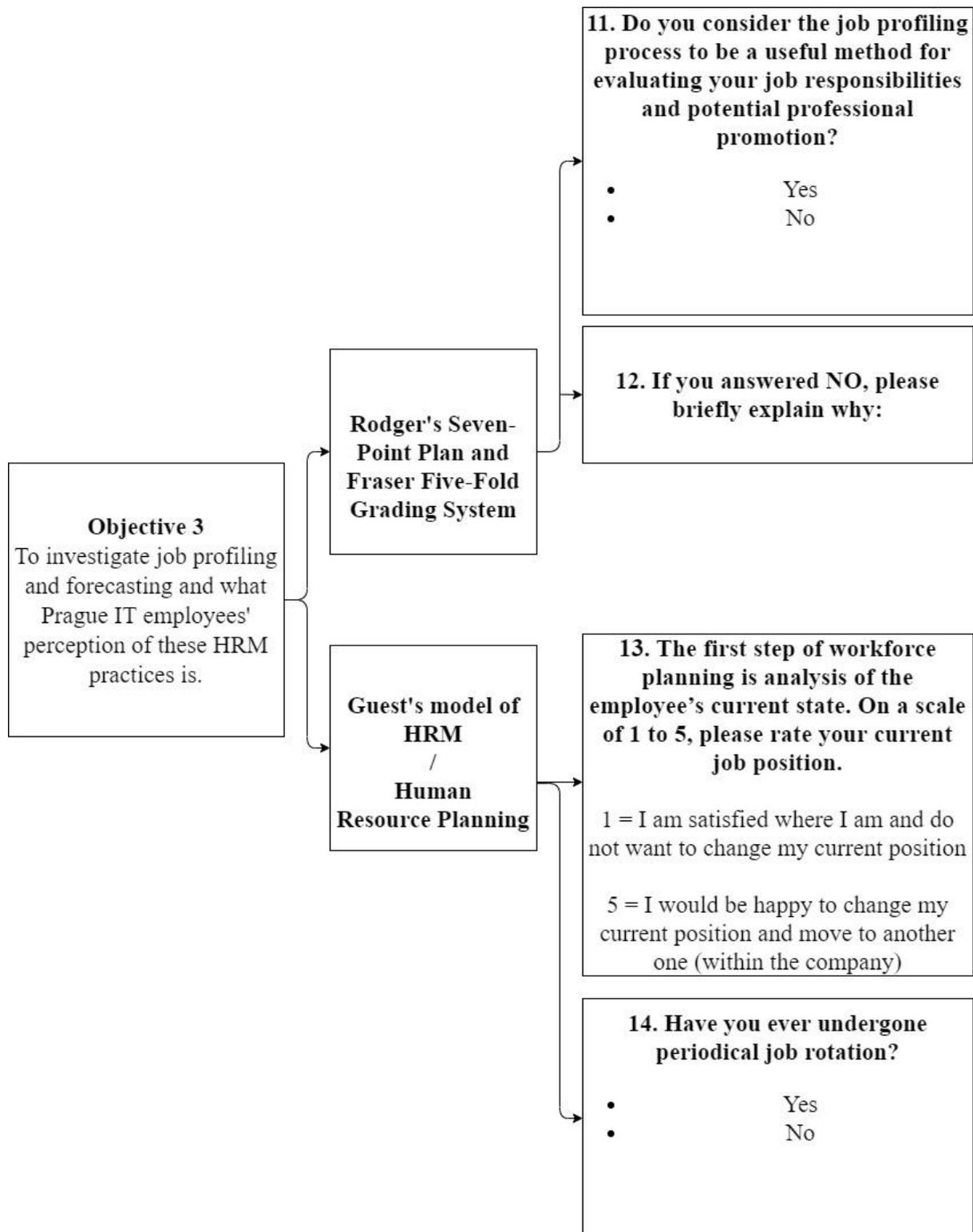
Figure 9: Specific Questions of the Questionnaire

Objective 3
To investigate job profiling and forecasting and what Prague IT employees' perception of these HRM practices is.

Guest's model of HRM / Human Resource Planning

15. On a scale of 1 to 5, how do you perceive job rotation in terms of motivation?

1 = Job rotation has no impact on my motivation to work.

5 = Job rotation highly motivates me.

16. On a scale of 1 to 5, what is your perception of job rotation in terms of improvement of skills and knowledge?

1 = Job rotation would not help me to improve my skills and knowledge.

5 = Job rotation would significantly improve my skills and knowledge.

17. Would you be willing to undergo rob rotation for a certain period of time?

- Yes
- No

18. If you answered NO, please briefly explain why:

Figure 10: Specific Questions of the Questionnaire
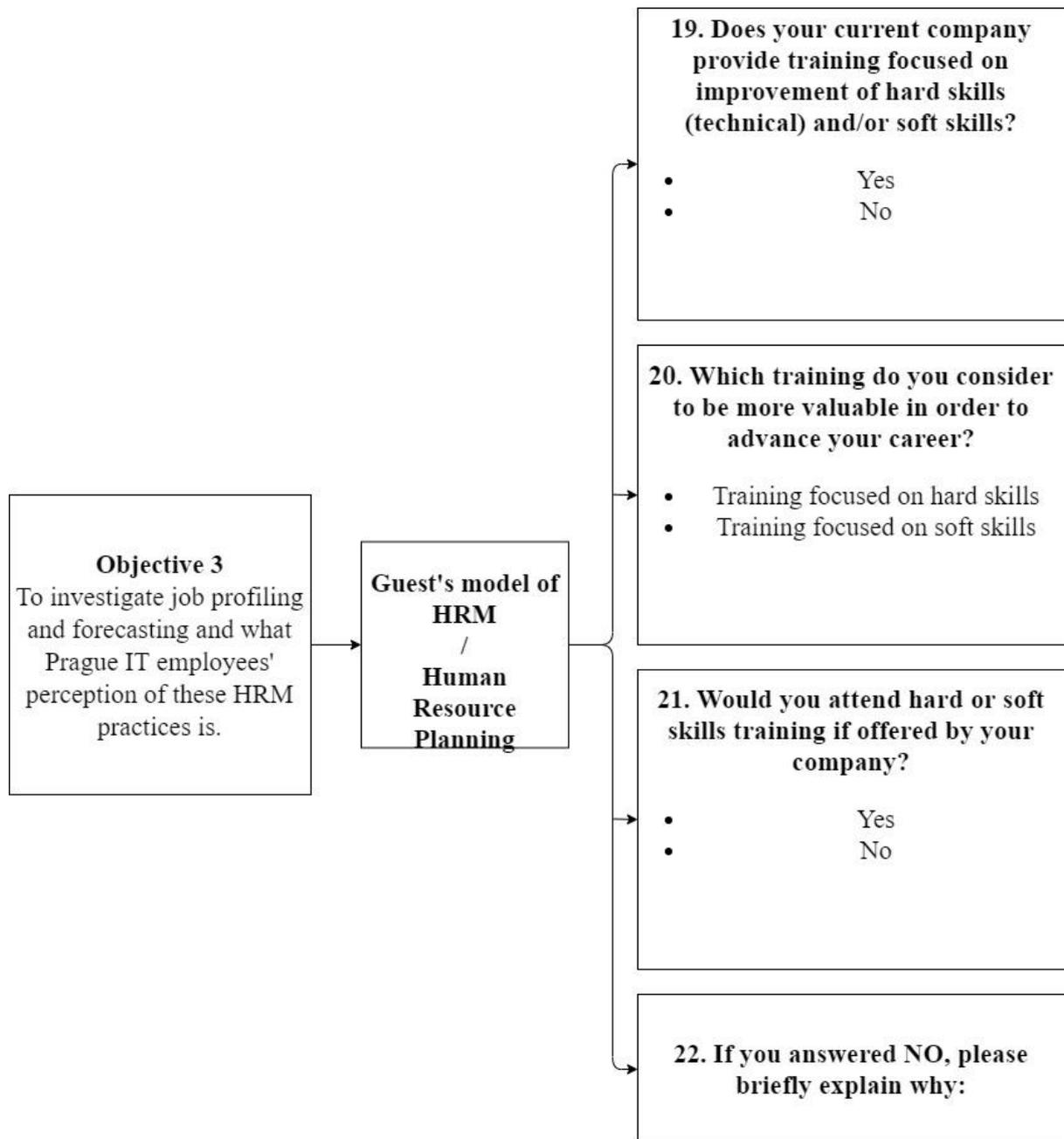
Figure 11: Specific Questions of the Questionnaire
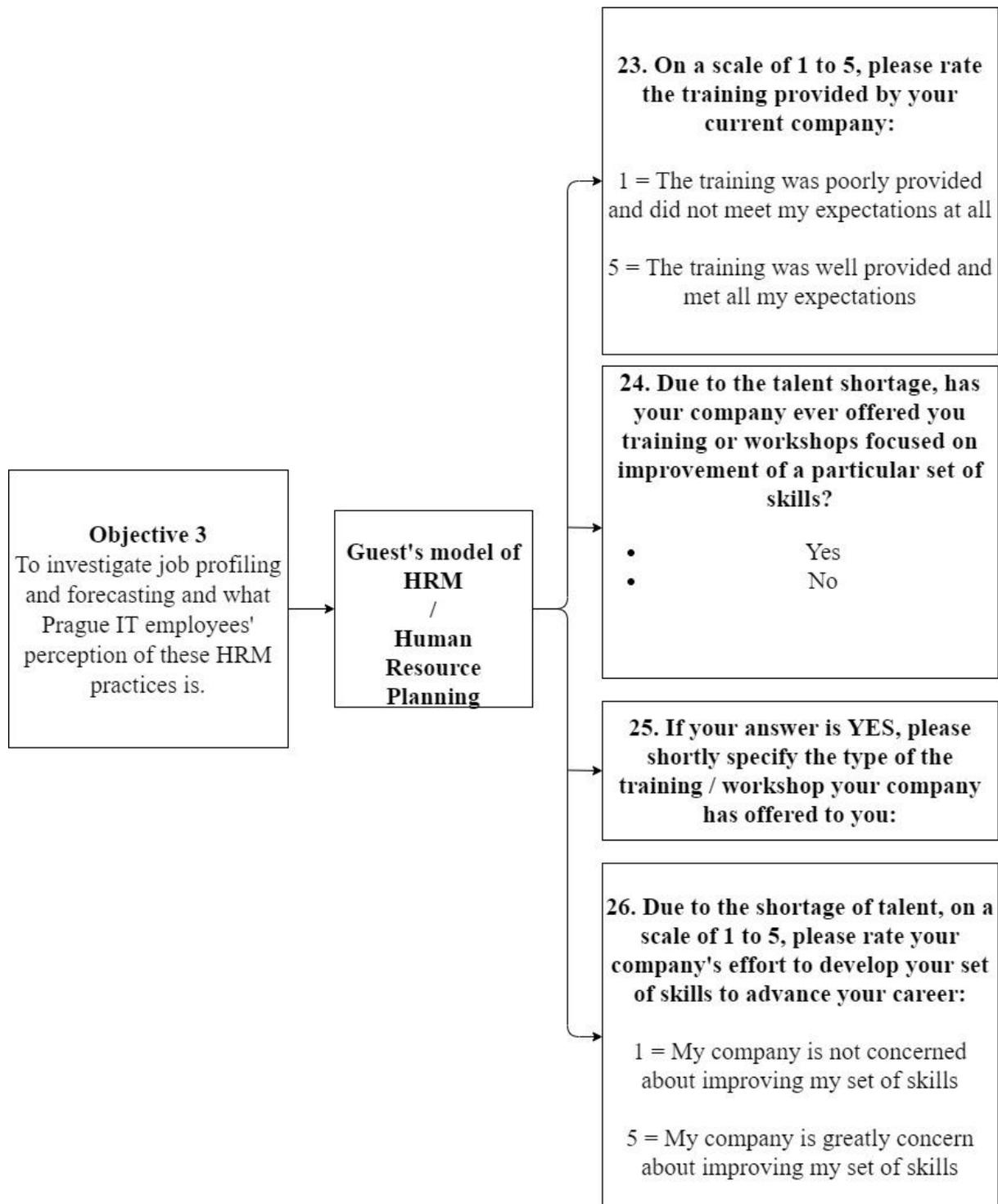
Figure 12: Specific Questions of the Questionnaire
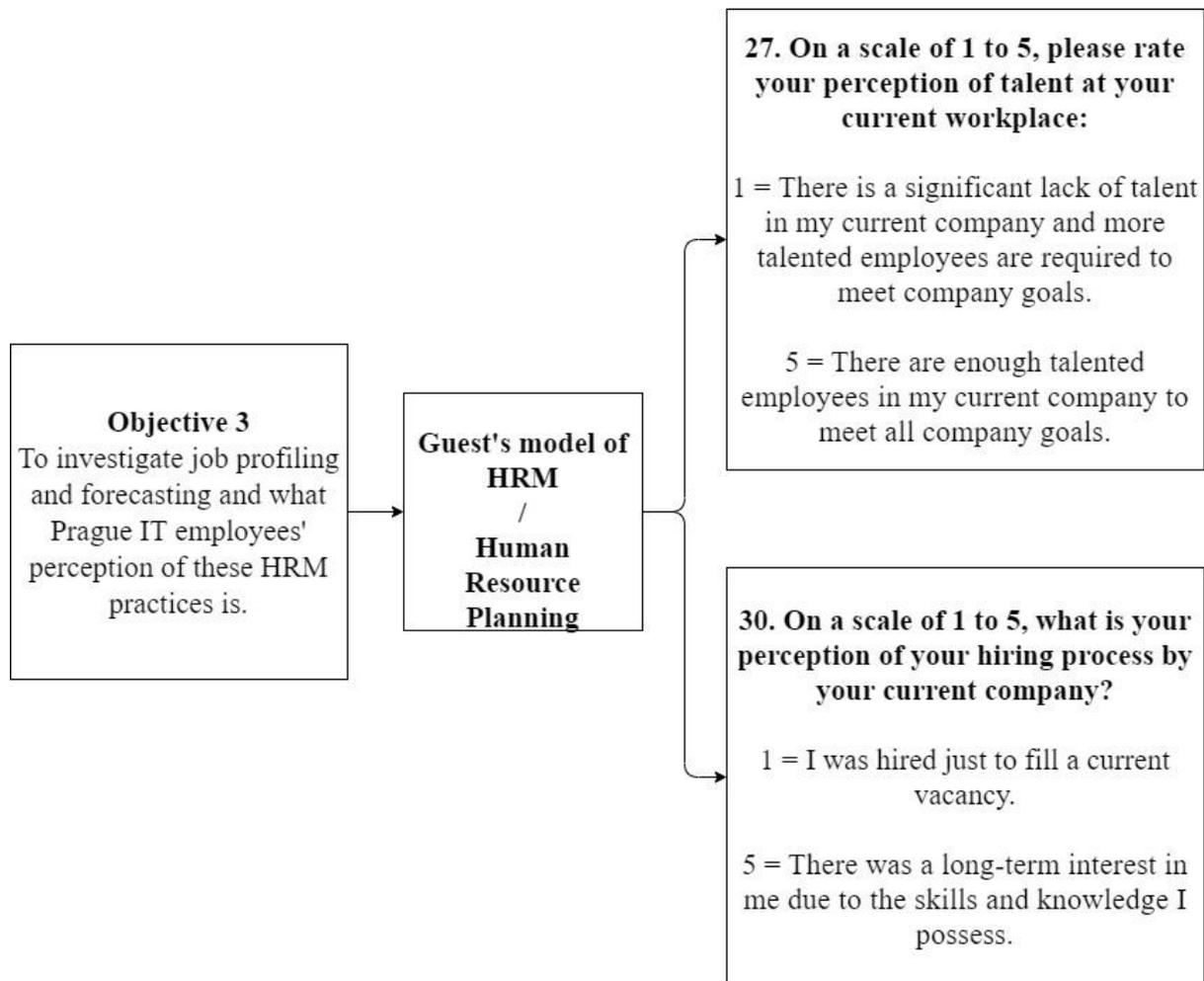
Figure 13: Specific Questions of the Questionnaire
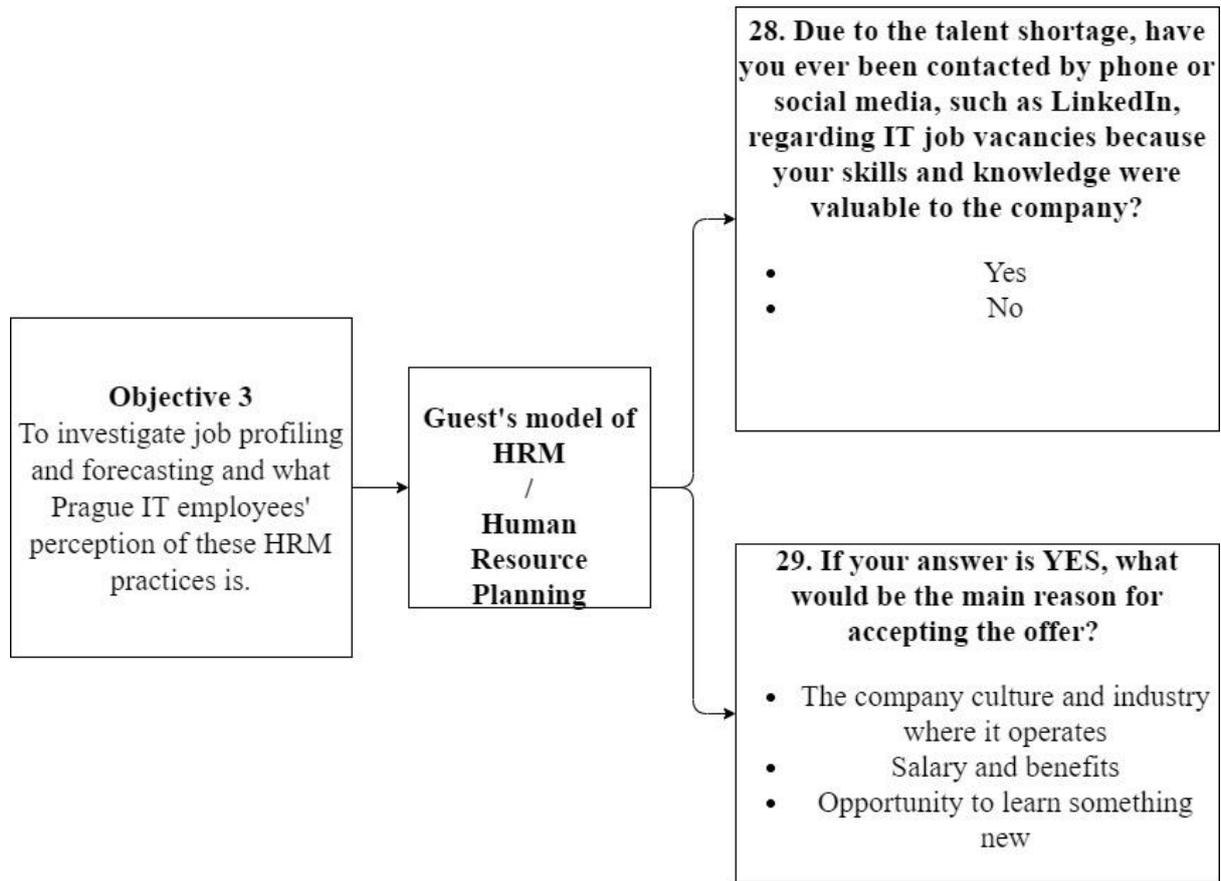
Figure 14: Specific Questions of the Questionnaire

To further process the proposed research, there was a need for data analyses once the researcher finished quantitative data collection through selected supporting data collection methods - questionnaires. Collected data have been analysed primarily by descriptive statistics such as frequency distribution, the central tendency - mean, median, mode; and dispersion, including range. Followingly, quantitative data analysis was supported by statistical tests; in particular, the Spearman's rank correlation coefficient has been applied. According to Ferreira (2020), descriptive statistical analysis is considered an essential aspect of any research. It contributes to proper decision-making related to the adequate choice of statistical mechanisms and how analysed data will be presented. Moreover, the decision making related to the choice of statistical mechanisms highly depends on the type of data. Data are divided into parametric data, including interval and ratio data, and nonparametric data, including nominal and categorical data. Statistical mechanisms for parametric data are primarily mean and the standard deviation and for non-parametric data median and frequency distribution. Decisions related to statistical mechanisms based upon certain data categories are important. By wrong decisions, the quality of data presented is questioned and "may lead to conclusions that will be unreliable" (Ferreira, 2020).

Therefore, particularly in the proposed research as the first step of data analyses, the researcher examined the data collected. The data collected was primarily nominal, followed by ordinal type; both classified as nonparametric data. Hence the statistical mechanisms used for nominal data was primarily mode and frequency distribution and for ordinal data, the researcher used mode, frequency distribution, minimum, maximum and range. All the data were analysed by computer, in excel and excel formulas were used for calculating mentioned statistical indices. Afterwards, the Spearman's rank correlation coefficient has been applied. According to Saunders (2009), Spearman's rank correlation coefficient is statistical analyses used for measuring statistical dependence between two nonparametric variables from a sample that has

been "selected at random and the data are ranked". As mentioned by Elfving and Sundqvist (2011), Spearman's rank correlation coefficient is a numerical value "within the range -1 and 1" (Figure 15), that represents the strength of statistical correlation between those ranked variables. Particularly in the proposed research, the researcher has calculated Spearman's rank correlation coefficient for several research variables to examine whether there is an association between those variables that might support qualitative data analysis findings.
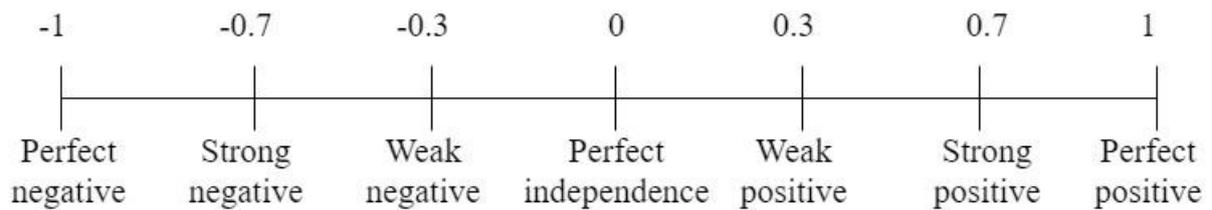
Figure 15: Spearman's rank correlation coefficient values

Project Management

Piloting

To perform and complete the given research, there was a need to do a piloting process before performing a data collection process for the given research. According to Bryman (2012) before conducting real research, there is a need to conduct a small pilot study to identify and eliminate research instruments that might harm the actual research process and its results. The pilot study is instrumental for the researcher to identify the adequacy of interview questions and questionnaire questions supposed to collect primary data for the specific research. Moreover, the pilot study helps the researcher rewrite the interview questions and questionnaire questions that are not understandable for the respondents or make them uncomfortable. Furthermore, as argued by Bryman (2012, pp.264), the pilot study should be conducted with participants that are not going to be part of real research however these participants should be "comparable to members of the population from which the sample for the full study will be taken" and should possess similar characteristics to participants selected for real research.

Therefore, for the given research, the researcher conducted small pilot research before the data collection process, before conducting semi-structured interviews with HR managers of IT companies in Prague and before distributing questionnaires among employees of selected IT companies in Prague. Due to the world's current situation caused by the COVID-19 pandemic, the pilot study was conducted online via email communication. The researcher has selected three different HR managers of companies located in Prague and from three different sectors - IT sector, Energy Trading sector and Relocation & Moving Services sector. The researcher has asked those HR managers for email feedback regarding pre-defined interview questions, whether they understand them and whether it is comfortable to answer those questions. After receiving the feedback from HR managers, the researcher has reviewed these questions, sorted

them according to relevance, improved those that were considered relevant for further research, and those questions that seemed to be confusing to the HR managers were improved or even removed when considered not relevant for the given research. In this way, the predefined questions for semi-structured interviews were improved and updated.

Additionally, the researchers prepared questionnaire questions that might be relevant for the given research and after that asked the HR managers via email to distribute the online questionnaire among few of their employees, preferable from the IT department of those companies, so these employees have certain similar characteristics to those employees that will be participants of the real questionnaire. There was a need to distribute those questions among selected companies' employees to give the researcher short feedback on how they perceive the questionnaire questions. The employees were asked to provide feedback on whether those questions are easily understandable and whether employees feel comfortable and confident to answer given questions. After receiving feedback from those employees, the researcher has adequately examined the feedback and reviewed all the questionnaire questions. The researcher reconsidered the use of certain questions, as some seem to be irrelevant for the given research. In addition to that, the researcher re-writes some of these questions, as they were not easy to understand and not easy to give proper answers. In such a way, the questionnaire questions were improved and updated.

Ethical Consideration

To properly perform and complete the given research and be fully compliant with all the policies related to Teesside University's research ethics, there was a need to have an ethical approach towards given research and therefore identify the potential ethical issues as well as have a proper strategic approach to prevent these issues or at least mitigate them. There were

certain secondary data collection issues from the Czech Statistical Office as a secondary data source for the given research. The issue was related to whether those data are accurate enough, valid, up to date, and reliable enough to use them as secondary data sources for given research. Therefore, to ensure the accuracy, validity, and reliability of those data sources for the secondary data collection process, the researcher also considered supporting secondary data sources potentially used for given research. Additionally, to advocate the factuality and truthfulness of the secondary data sources used for the given research, there was a need to academically and adequately cite all the secondary data sources used in the proposed research. Furthermore, the first set of primary data was collected by semi-structured interviews with HR managers of IT companies in Prague as a main data collection method. Due to the nature of the data collection process, there were certain issues related to this process. Participants who have been selected to participate in the given research needed to be aware that the participation was completely voluntary and that participants have a right to refuse to participate or to withdraw from the proposed research at any time. Therefore, before conducting the semi-structured interviews via email, all the participants have been provided with the Participant Consent Form. Moreover, there was a need to preserve the interview participants' anonymity as they requested to remain anonymous throughout the research process. Therefore, participants' names and their companies were not mentioned in the master dissertation and were replaced with the wording: HR managers of "Company A", "Company B" and "Company C". In addition to that, there was a need to preserve the confidentiality and integrity of data collected by semi-structured interviews. Therefore, those data have been separately on storage devices (USB key).

Followingly, there were certain ethical issues related to the second set of primary data collected by electronic questionnaires that have been electronically distributed among employees of IT companies in Prague to collect data via supporting data collection methods. First, the ethical issue was related to the age of the questionnaire participants. All the participants must be above

18 years to take part in the questionnaire. Therefore, the questionnaire participants have been informed about age limit requirements by Informed Consent Form provided at the beginning of the online questionnaire sheet. Furthermore, all the participants had to be informed about the purpose of the given research. The participation in the questionnaire was entirely voluntary, anonymous, and no personal data will be collected. Therefore, the Informed Consent Form provided at the beginning of the online questionnaire sheet had dedicated sections related to the purpose of the research, anonymity of the participants, and voluntary participation. Additionally, to preserve the confidentiality and integrity of data collected by questionnaires, there was a need to store the collected data on storage devices (USB key) separately.

To properly fulfil the purpose of the given research and follow ethical requirements resulting from Teesside University's research ethics, there was a need to ethically perform data analysis. First, there was a need to carefully analyse the data collected by the interviews and the questionnaires. The data analysis had to be especially objective and purely based on hard facts resulting from participants' answers to conducted semi-structured interviews and online questionnaires. The researcher needed to be fully aware that subjective perspective should be avoided to mitigate researcher bias. Secondly and even more importantly, to properly and ethically perform data analysis, this process had to include all the data collected by both leading and supporting data collection methods, particularly data collected by semi-structured interviews and data collected by electronic questionnaires. The purpose of including all the collected data into data analyses was to avoid any misrepresentation of those data and avoid any negative impact on research finding and avoid distortion of research conclusions.

Project Budget

ITEMS	Estimated Costs	Real Costs
Proofreading services	4 000 CZK	11 200 CZK
Printing services	1 500 CZK	0 CZK
2x Binding services	600 CZK	0 CZK
Storage device - USB	250 CZK	250 CZK
Total costs:	**6 350 CZK**	**11 450 CZK**

Table 1: Project Budget

The estimated and real cost of the proposed research significantly differs due to several aspects. First, due to the number of research pages and number of words, the real cost of the proofreading services increased by 7200 CZK up to 11 200 CZK. Second, due to the current situation caused by the COVID-19 pandemic, there was no need to print the master dissertation and physically deliver it to Teesside University's Prague premises. Therefore, the real costs for printing and binding services have decreased to 0 CZK. Real costs for storage devices - USB remained the same. Therefore, the proposed research's real costs have increased by 5100 CZK up to 11 450 CZK.

Project Timeline

Months / Activities	06/20	07/20	08/20	09/20	10/20	11/20	12/20	01/21
Creating research materials	Estimated	Estimated	Real	Real				
Piloting		Estimated	Estimated	Real				
Redrafting			Estimated	Estimated	Real	Real		
Data collecting				Estimated	Real	Real		
Data Analysis					Estimated	Estimated	Real	Real
Writing up					Estimated	Estimated	Estimated / Real	Real
Redrafting							Estimated	Real
Submission							Estimated	Real

Estimated project timeline / Real project timeline

Table 2: Project Timeline

The researcher's development caused the estimated project timeline and the real project timeline in a professional career that impacted postponing the research's start. Due to this situation, each part of the research has started later than estimated. In addition to that, due to the complexity of the proposed research, first redrafting, and data analyses of collected data took longer than expected. Therefore, the writing up and second redrafting section of the proposed research started later than estimated.

Analysis and Findings

For the proposed research, the central ontological stance is subjectivism. Therefore, this research's analysis and findings section is based on the conceptual models resulting from data collected by semi-structured interviews and afterwards analysed by the coding process. The researcher conducted three interviews. Therefore, three conceptual models have been created as a result of the coding process. Afterwards, those conceptual models have been combined into one main conceptual model. Each conceptual model is supported by relevant data resulting from the quantitative analysis of data collected by questionnaire. Questionnaires have been provided to employees of selected IT companies. The researcher collected anonymous data from 57 participants. Appendix E of the proposed research includes general information related to questionnaire participants.
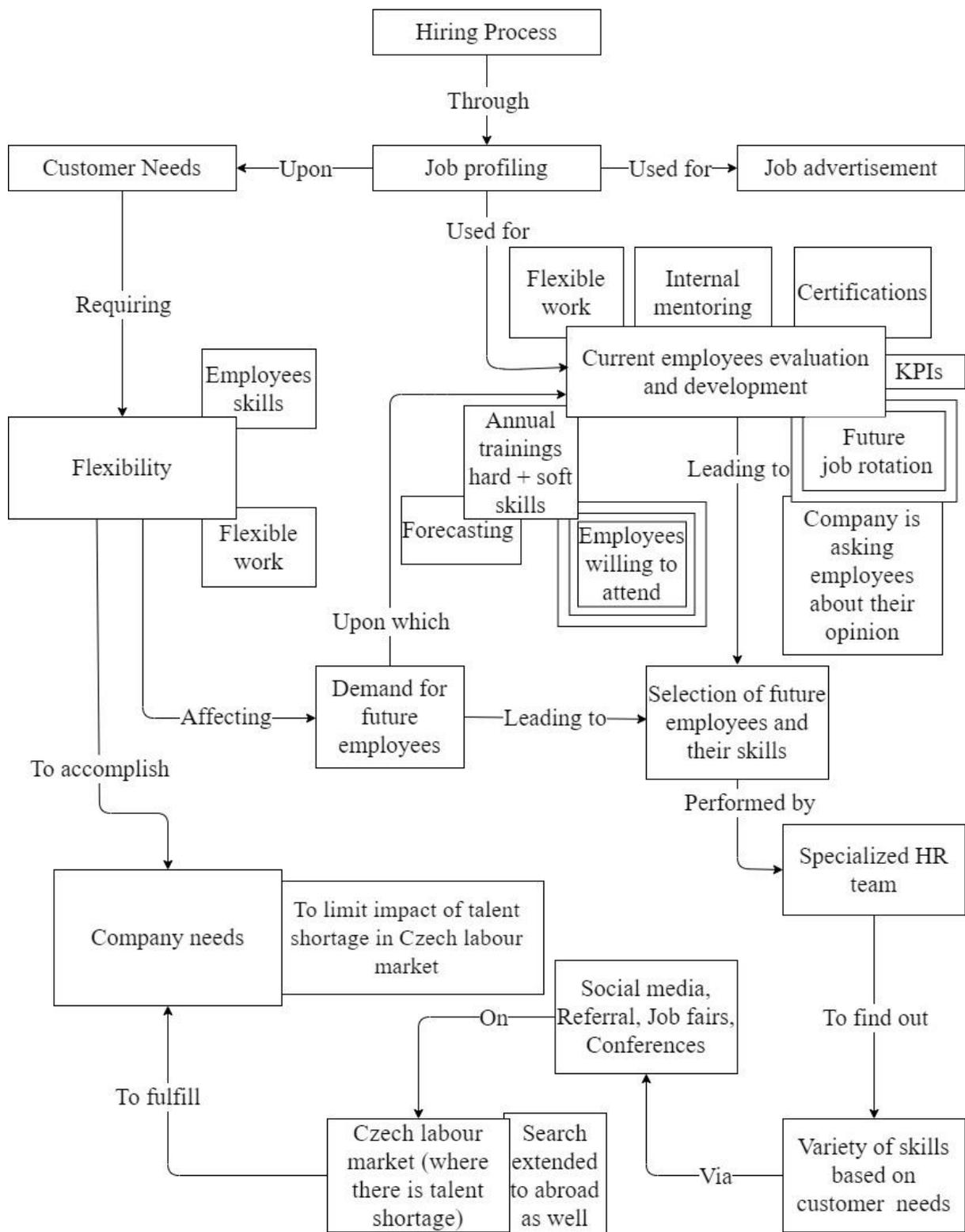
Figure 16: Interview 1; Conceptual Model 1

Conceptual model 1 (Figure 16), has been created from interview 1 conducted with the HR manager of Company A that is a middle-sized business with 150 employees, based in Prague and operating in the IT sector, offering a wide range of ICT solutions and services, such as data analytics, cloud services and cybersecurity services. The conceptual model 1 indicates that the hiring process is done through a job profiling process used for job advertising. It is essential for the evaluation of current employees and their development. According to Figure 17, 51% of respondents consider the job profile to be quite well informed, meaning the job description and requirements were explained and related to some extent to the job performed by the employee.
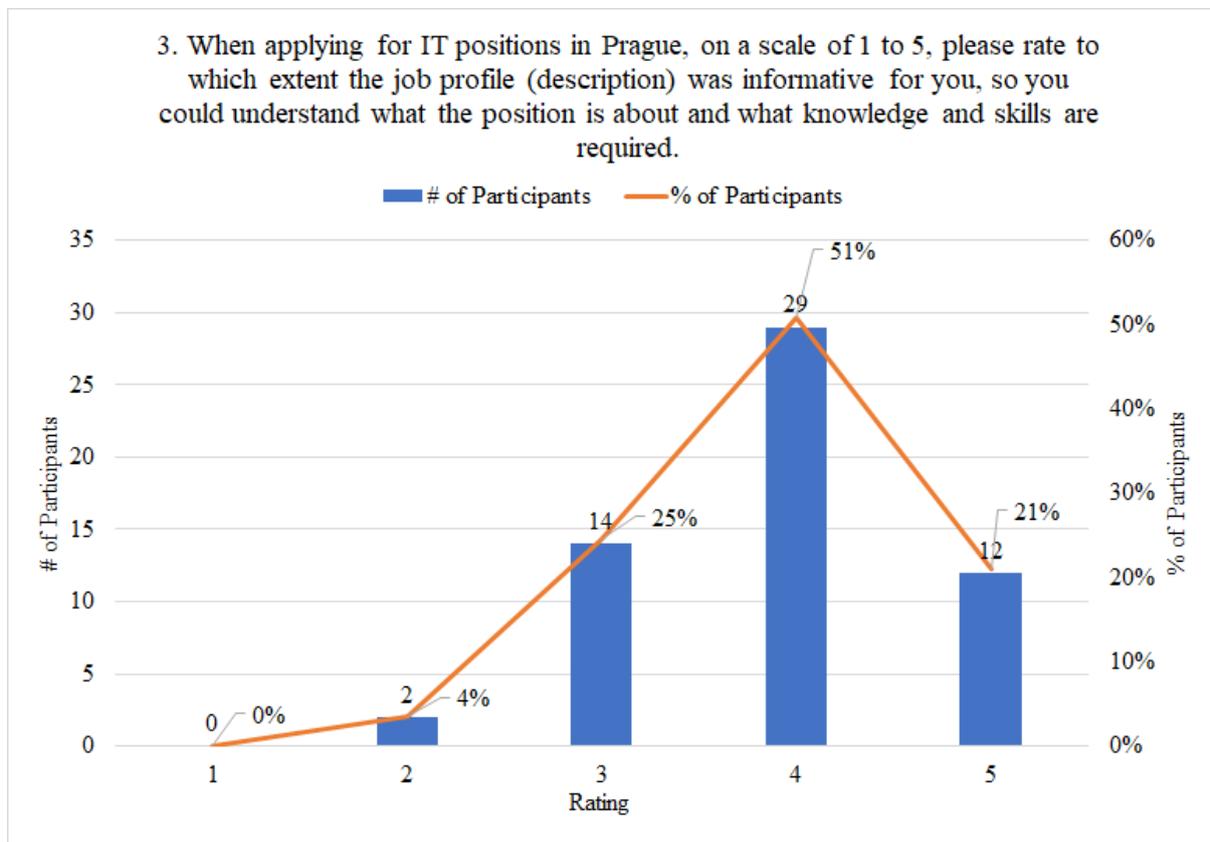
Figure 17: Informativeness of Job Profile

According to Figure 18, 46% of respondents rate their current job profile to be well-provided and accurate.
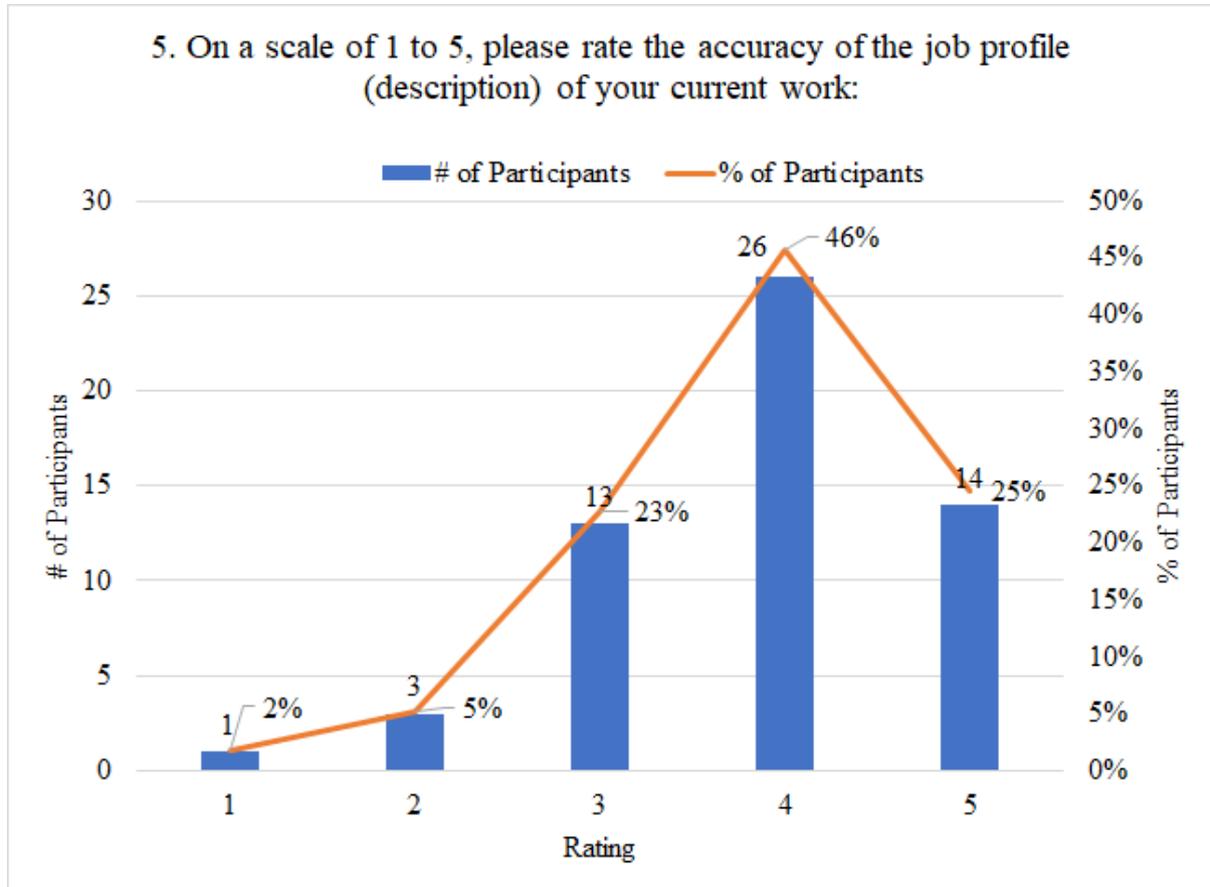
Figure 18: Accuracy of Job Profile

According to Figure 19, there is a weak but positive correlation ($R_s = 0.31$) indicating that the level of informativeness of the job profile correlates with the level of accuracy of the job profile.
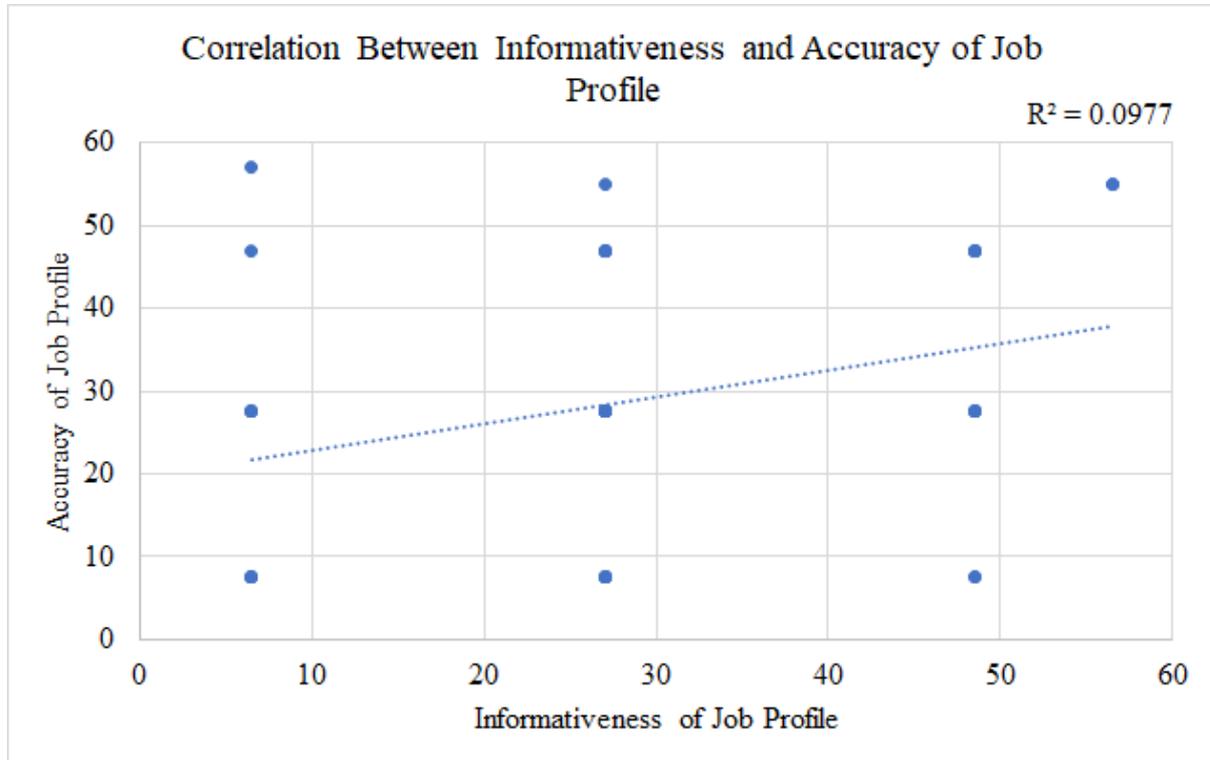
Figure 19: Correlation between Accuracy and Informativeness of Job Profile

Hiring processes and job profiling are primarily directed by business strategies that result from customer needs. Hence, flexibility in terms of employee skills and work is required. This is congruent with Guest's strategic model (Marsden, 2002) that shows a pure relationship between HRM processes and business strategy, leading to highly qualified employees positively impacting long-term competitive advantage. Evaluation and development process of current employees, such as evaluation of KPIs, mentoring, and training focused on soft and hard skills, result from future demand for human resources needed to meet customer needs. Evaluation and development processes of current employees built upon future workforce demand lead to the selection of future talented employees. Such an approach is congruent with

Human Resource Planning (Dimitrievska, 2017). It is considered a fundamental tool for identifying company needs in terms of future employees and their skills and knowledge vital for meeting business needs and gaining and sustaining competitive advantage.

According to Figure 20, respondents who have undergone the job profiling process (25 respondents {58%}), 92% consider the job profiling process useful for evaluating their job responsibilities and potential professional promotion. Moreover, 72% of respondents claim that their job satisfaction increased after undergoing the job profiling process. However, 28% of respondents' job satisfaction did not increase as those respondents, in general, do not see added value in the job profiling process.
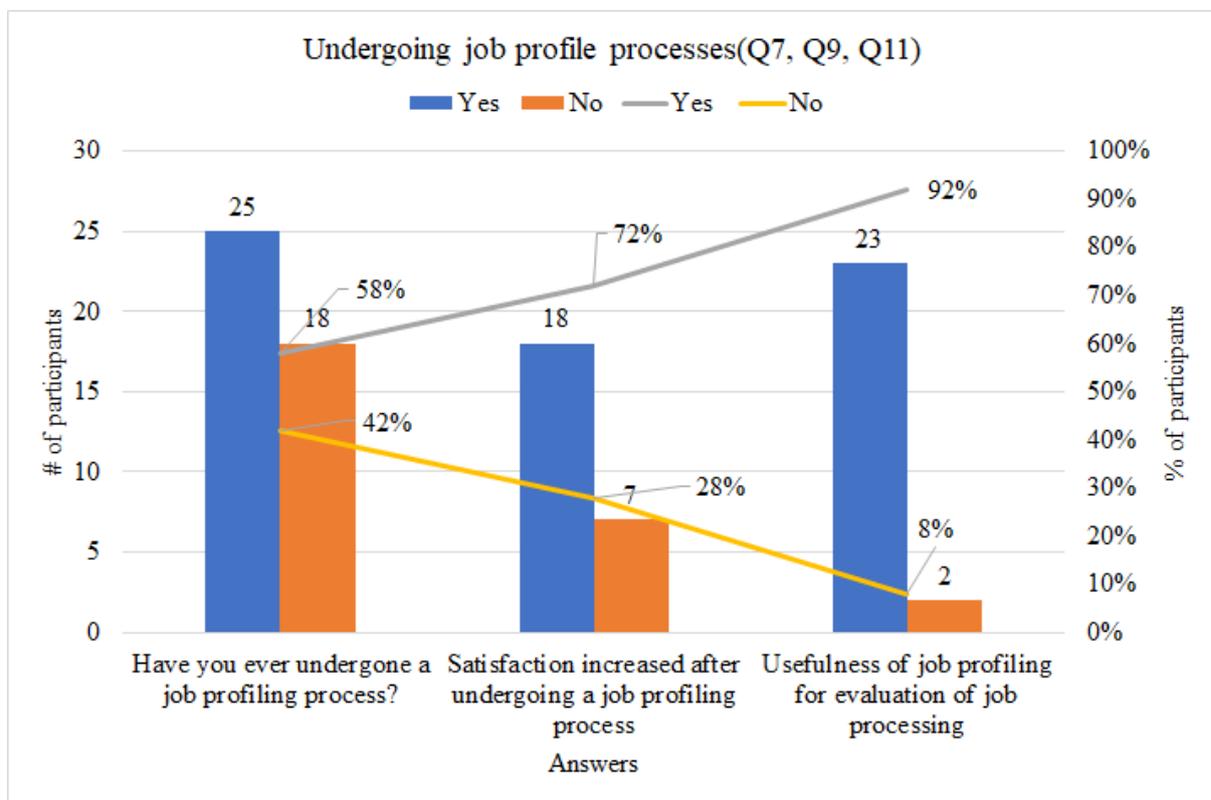
Figure 20: Undergoing Job Profile Process

According to Figure 21, there is a weak however positive correlation ($R_s = 0.32$) indicates a positive correlation between increased job satisfaction resulting from the job profile process and employees' perception of the job profile's usefulness for job evaluation.
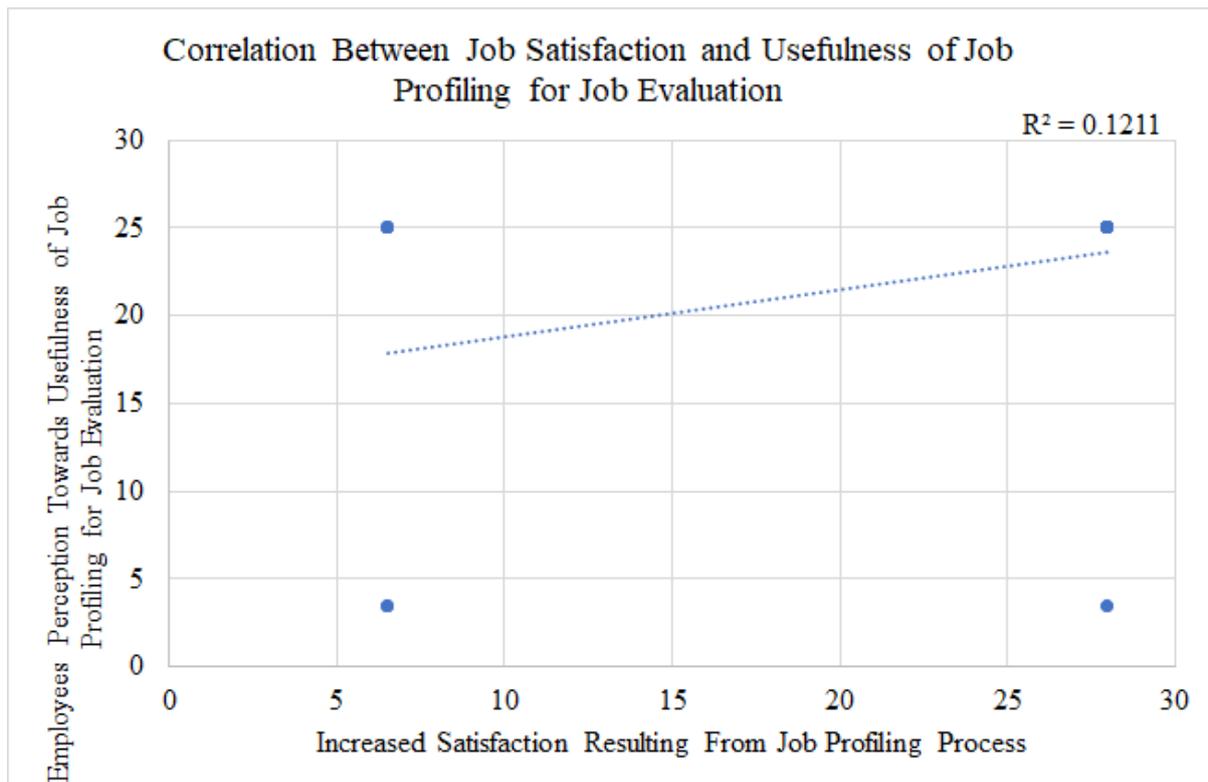
Figure 21: Correlation between Job Satisfaction and Usefulness of Job Profiling for Job

Evaluation

Company A considers using job rotation processes as a part development process of current employees in the future. Therefore the company is asking their employees about their opinion toward such a process. According to Figure 22, 25% of respondents claim that their work motivation would slightly increase when undergoing job rotation, 19% of respondents claim that due to job rotation their work motivation would visibly increase, and 16% of respondents claim that job rotation would have a significantly positive impact on their motivation towards work. However, up to 28% of respondents claim that job rotation would have at least a small impact on their job motivation.
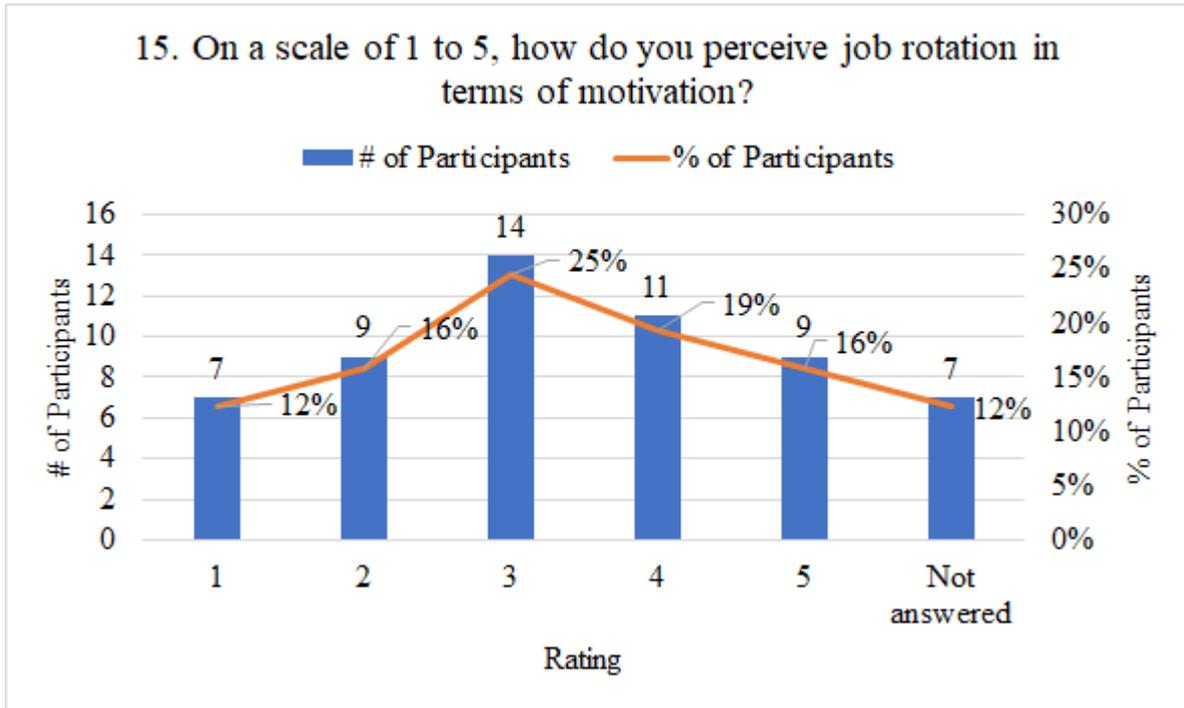
Figure 22: Perception of Job Rotation on Motivation

According to Figure 23, 39% of the respondents claim that undergoing job rotation would positively impact their skills and knowledge. Up to 23% of respondents claim that such a process would significantly impact their skills and knowledge.
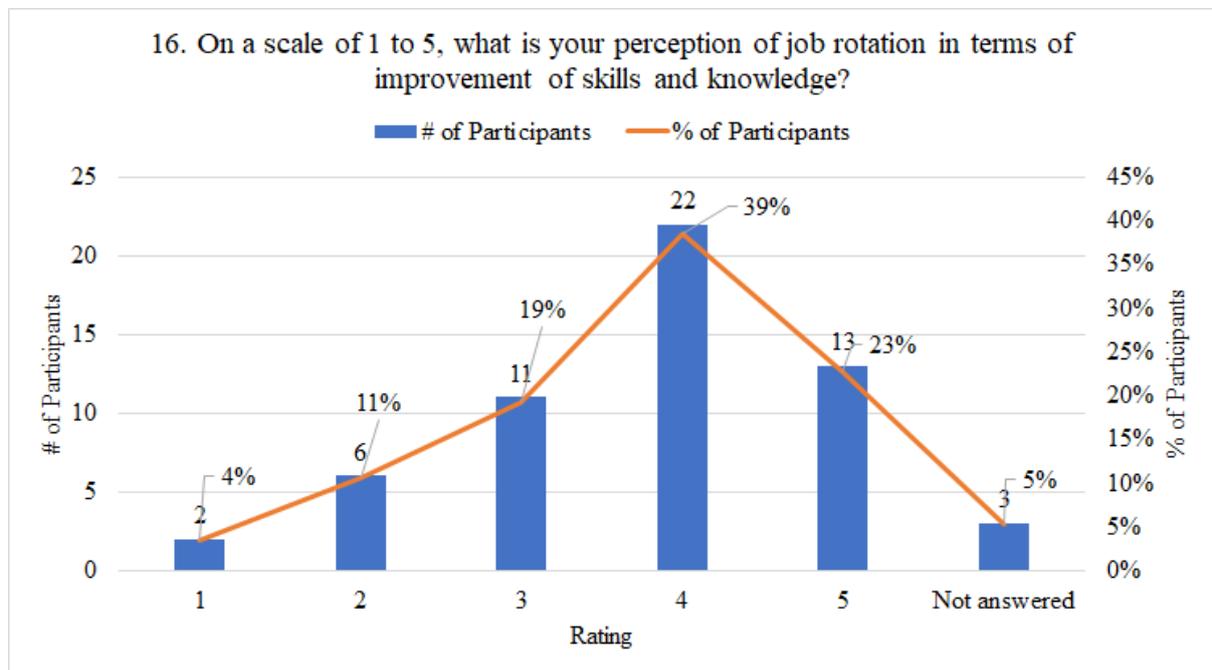
Figure 23: Perception of Job Rotation on Improvement Skills and Knowledge

According to Figure 24, there is a strong and positive correlation ($R_s = 0.71$) between job rotation's impact on motivation and job rotation on improving skills and knowledge.
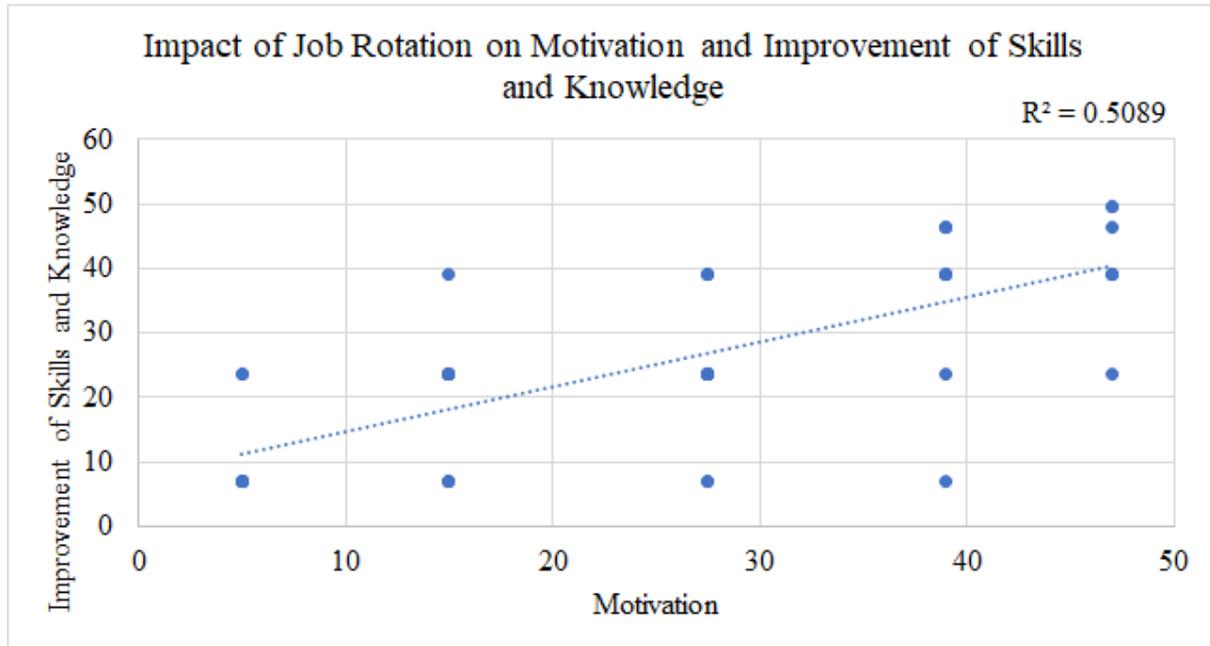
Figure 24: Correlation between Improvement of Skills and Knowledge and Motivation

Resulting from Job Rotation

Company A does not practice forecasting future employees because flexibility is required to accomplish customers' needs. Only annual training is forecasted. Those training are focused on improving the hard and soft skills of current employees. According to Figure 25, 86% of respondents claim that they are provided with training focused on improving their hard or soft skills.
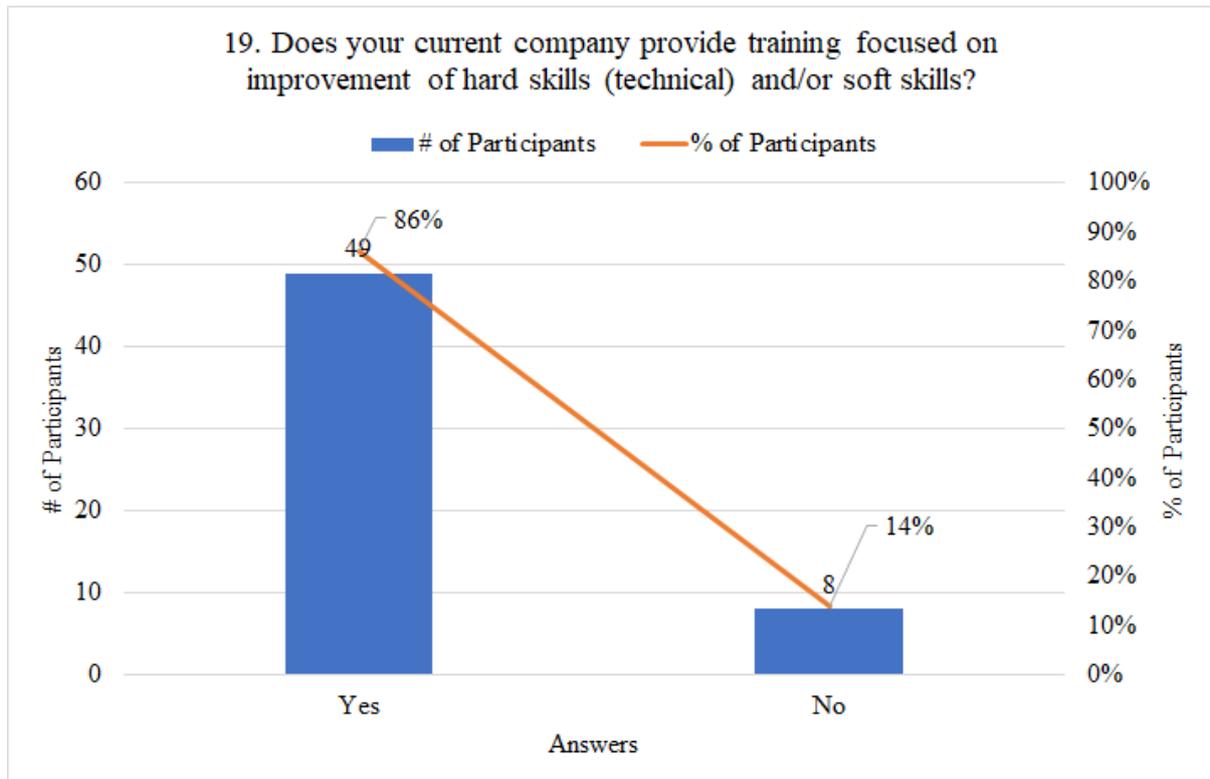
Figure 25: Providing of Training

It is assumed by the HR manager of Company A that employees are willing to attend those training sessions. According to Figure 26, 98% of respondents are willing to attend training focused on improving their skills. This is supported by Mello (2001), who argues that providing employees with enough training to improve their hard and soft skills positively impacts employees' productivity, leading to increased business productivity.
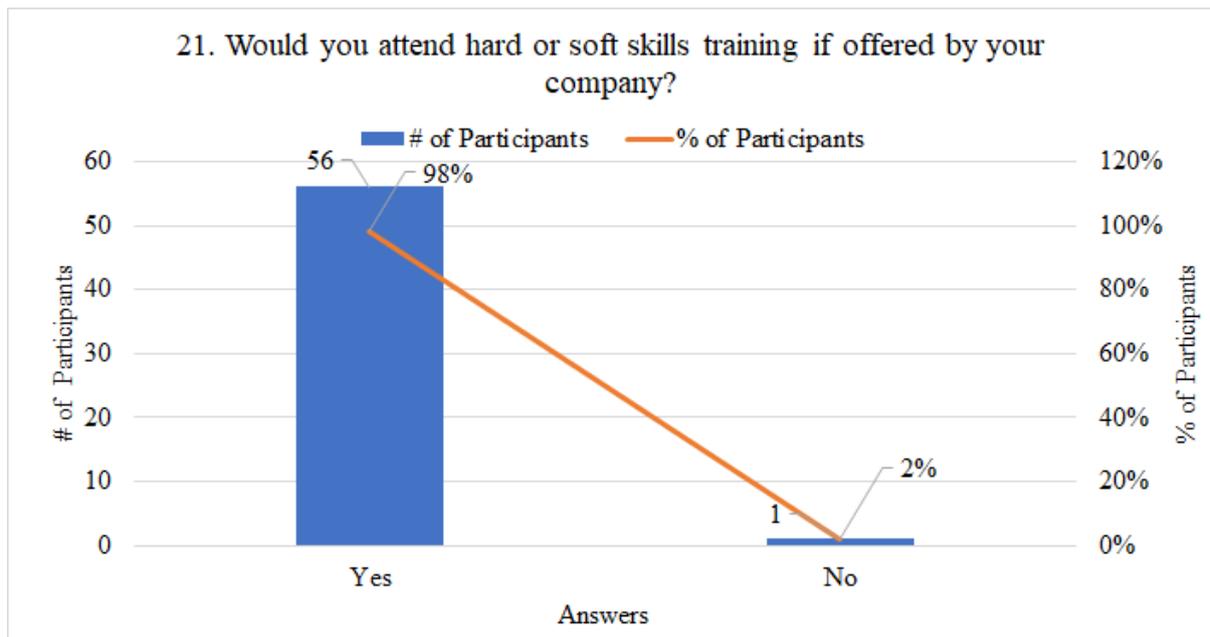

Figure 26: Willingness to Attend Training

According to Figure 27, 24% of respondents consider these training mediocre and meeting their expectations to some extent. An even higher percentage, 37% of respondents consider this training to be well provided, meeting most of their expectations. The training was considered to be perfectly provided and met all expectations of 29% of respondents.
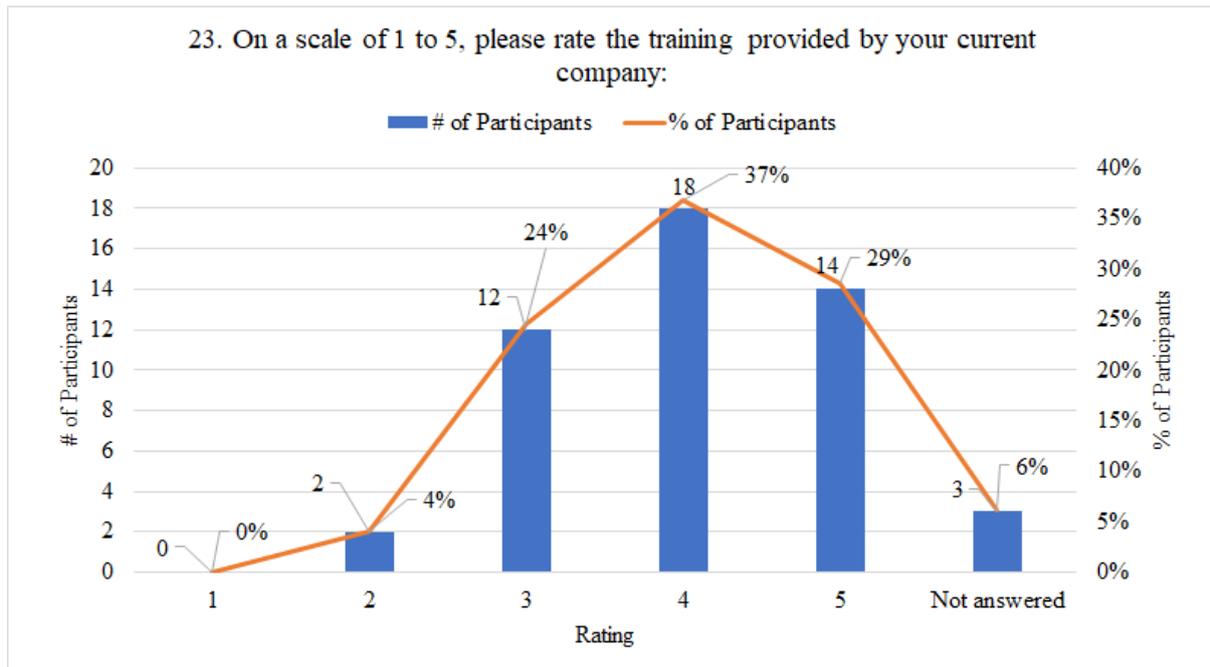

Figure 27: Rating of the Training Provided

Selection of future employees is performed by a specialised HR team that uses different methods such as social media, referrals, job fairs, and conferences to find new talent with various skills in the Czech labour market. The search for future talent is extended to the foreign labour market (Kučera, 2018) due to a shortage of talent in the Czech labour market. Those HRM processes are performed to fulfil Company A's needs and limit the impact of talent shortage in the Czech labour market. According to Figure 28, due to the shortage of talent, 44% of respondents claim that their company is concerned about improving their set of skills once in 6 months and therefore 56% of respondents (Figure 29) claim that their company has a significant amount of talented people however few are needed in order to meet all company goals adequately.
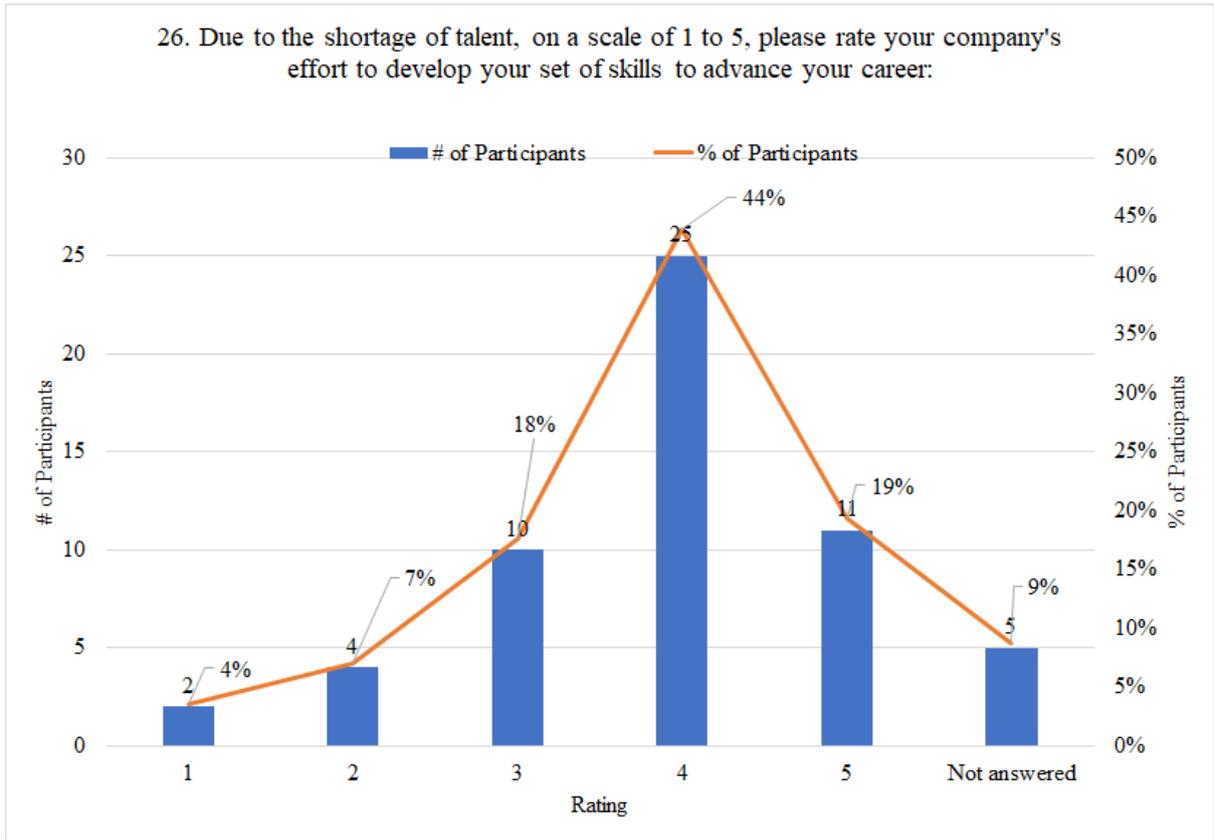
Figure 28: Company Effort to Improve Employees' Set of Skills
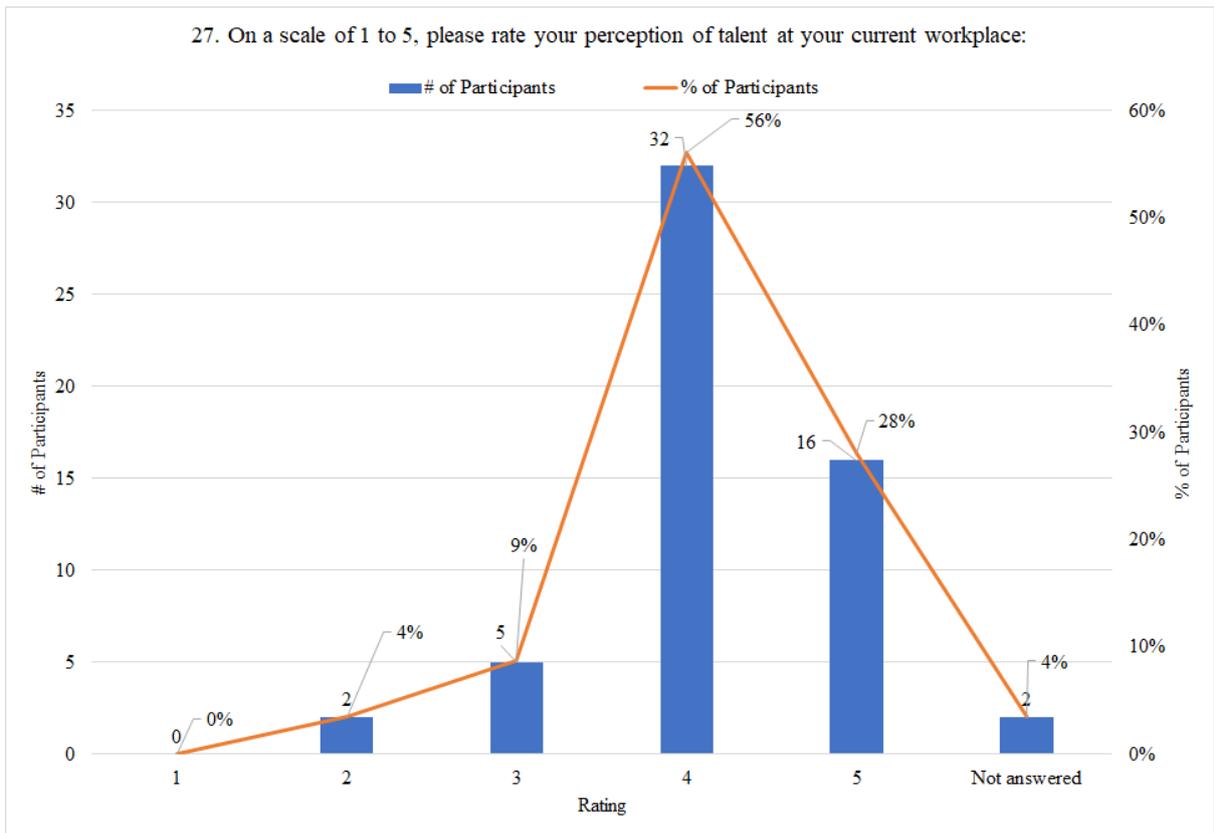
Figure 29: Talented Workforce in the Current Job
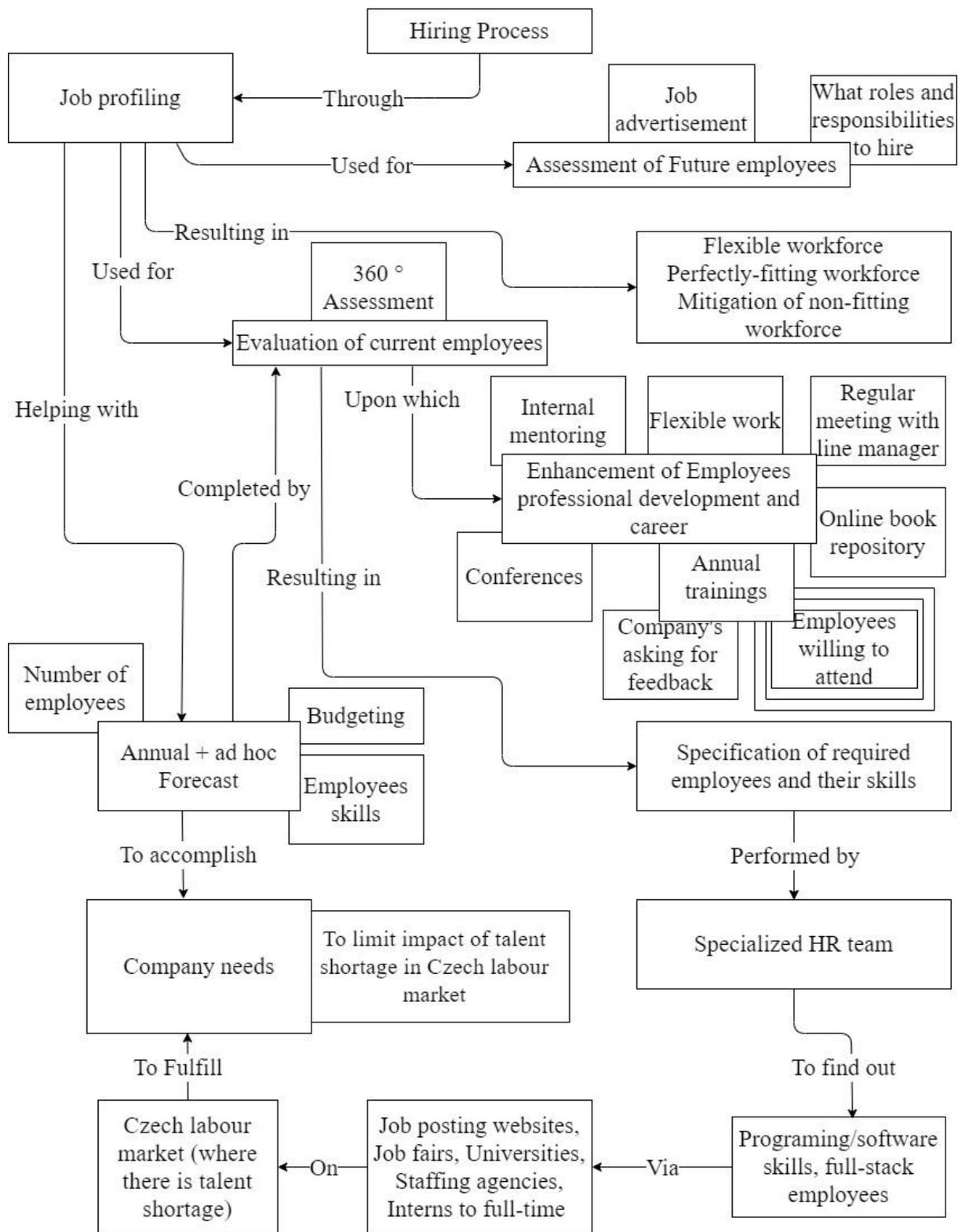
Figure 30: Interview 2; Conceptual Model 2

Conceptual model 2 (Figure 30), has been created from interview 2 conducted with the Chief Information Security Officer of Company B, who selects employees for his team. Company B is a middle-sized business with 240 employees in the Czech Republic. Company B is a leading analytics and business intelligence company based in Prague operating in the IT sector. The conceptual model 2 indicates that the hiring process is done through a job profiling process used to assess future employees as an outline for the job posting and identify what roles are responsibilities to hire to accomplish business needs. This is congruent with the strategic model developed by David Guest (1990) that explains the crucial relationship between workforce demand and business needs, leading to improved business effectiveness. According to Figure 31, more than 53% of respondents consider job profile very important. Respondents want to know what tasks they will perform and what skills and knowledge are required for the future job position they are applying for. However, 46% of those respondents claim job descriptions may vary slightly from the actual job to be performed.
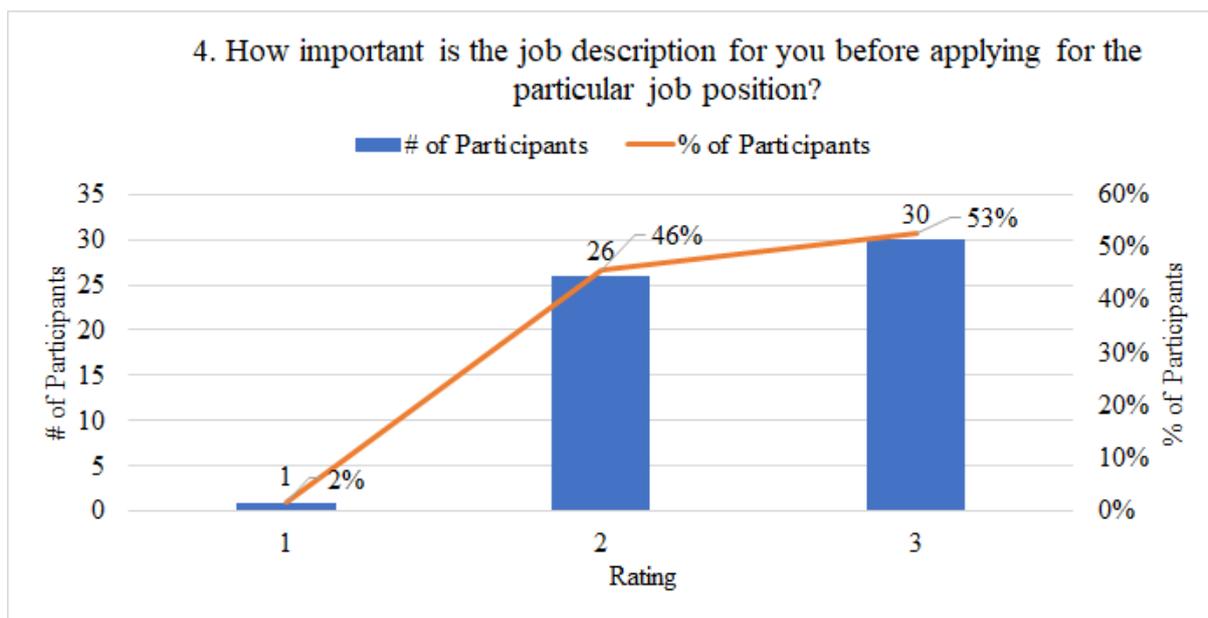

Figure 31: Importance of Job Description / Job Profile

Furthermore, according to Figure 32, for 47% of respondents, it is essential to meet more than half of the job profile criteria, and 19% of respondents want to meet all the criteria of the job profile when applying for an open IT position.
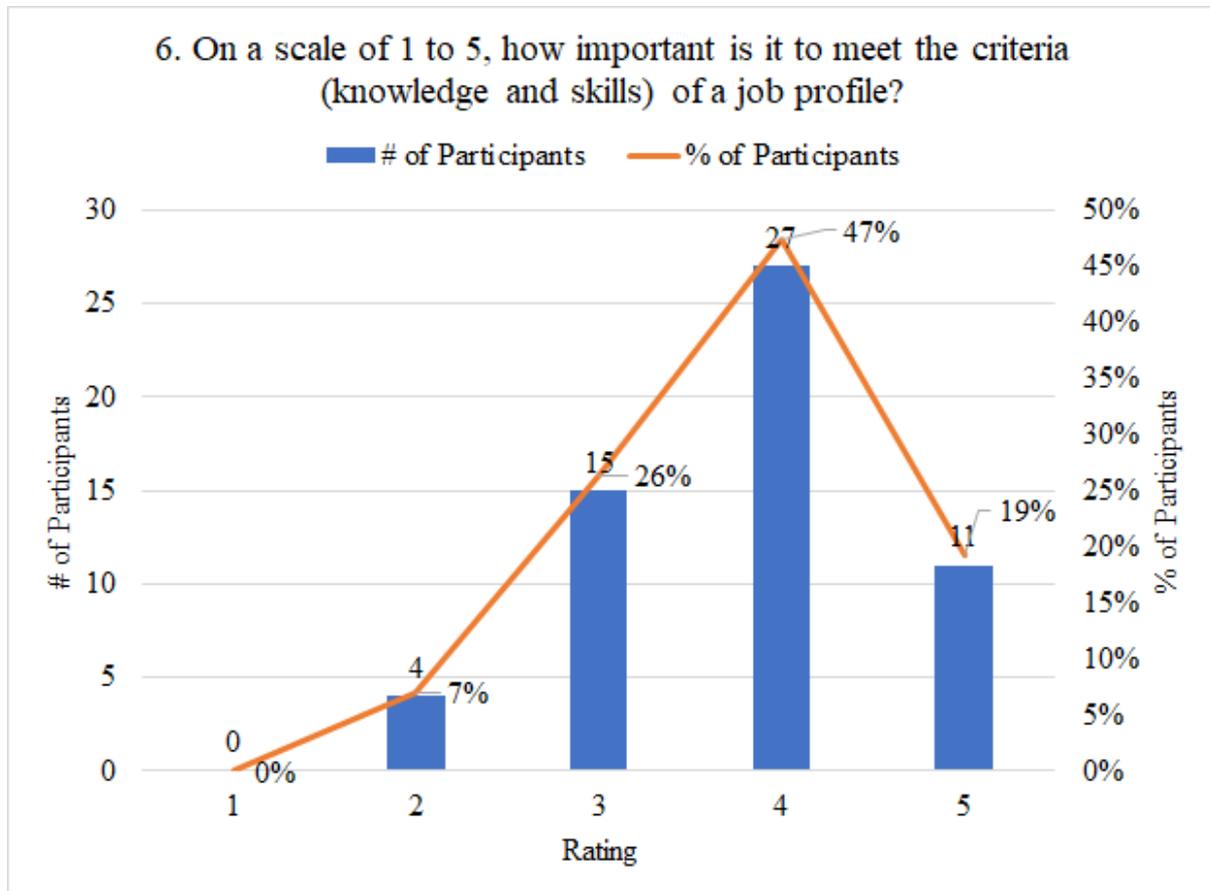

Figure 32: Importance of Meeting the Criteria of Job Profile

Job profiling is also used to evaluate current employees upon which employee development is enhanced through mentoring, flexible work, conferences, regular meetings, and a variety of training. Company B asks for feedback related to the training, and it is assumed by the Chief Information Security Officer of Company B that employees are willing to attend those training. According to Figure 33, 58% of respondents would like to attend training focused on hard skills, and 42% of respondents would like to attend training focused on soft skills to advance their professional career.
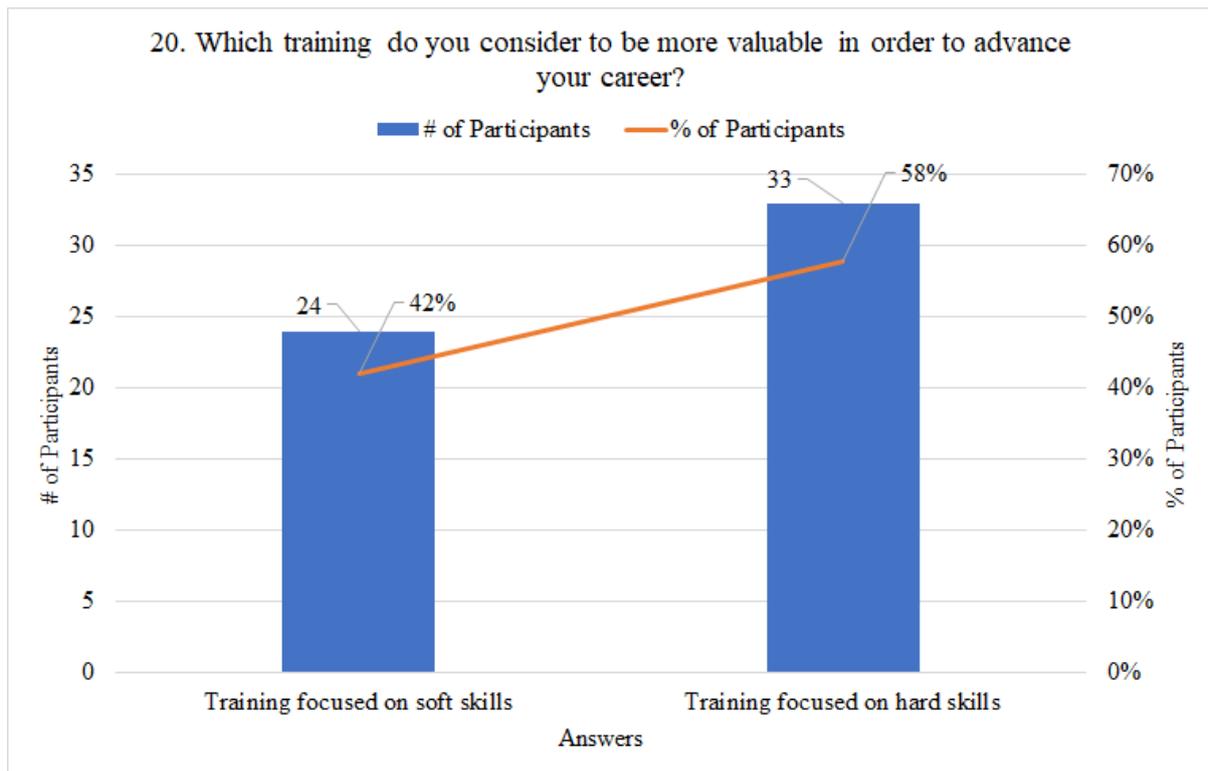
Figure 33: Preference in Type of Training

Primarily, job profiling helps company B to employ a flexible and perfectly-fitting workforce and mitigate non-fitting candidates. This is congruent with personal specification frameworks, Rodger's Seven-Point Plan and Fraser Five-Fold Grading System (Marsden, 2002) that helps identify perfectly fitting candidates for open positions. According to Figure 34, 35% of respondents are very satisfied with their current job position and do not want to change it. 19% of respondents are satisfied; however, they are open to new job offers as well. 25% of respondents look for new open job positions even though they are satisfied with their current job. There are also respondents (14%) that plan to change their current job and respondents (7%) that would be happy to change their current position inside the current company.
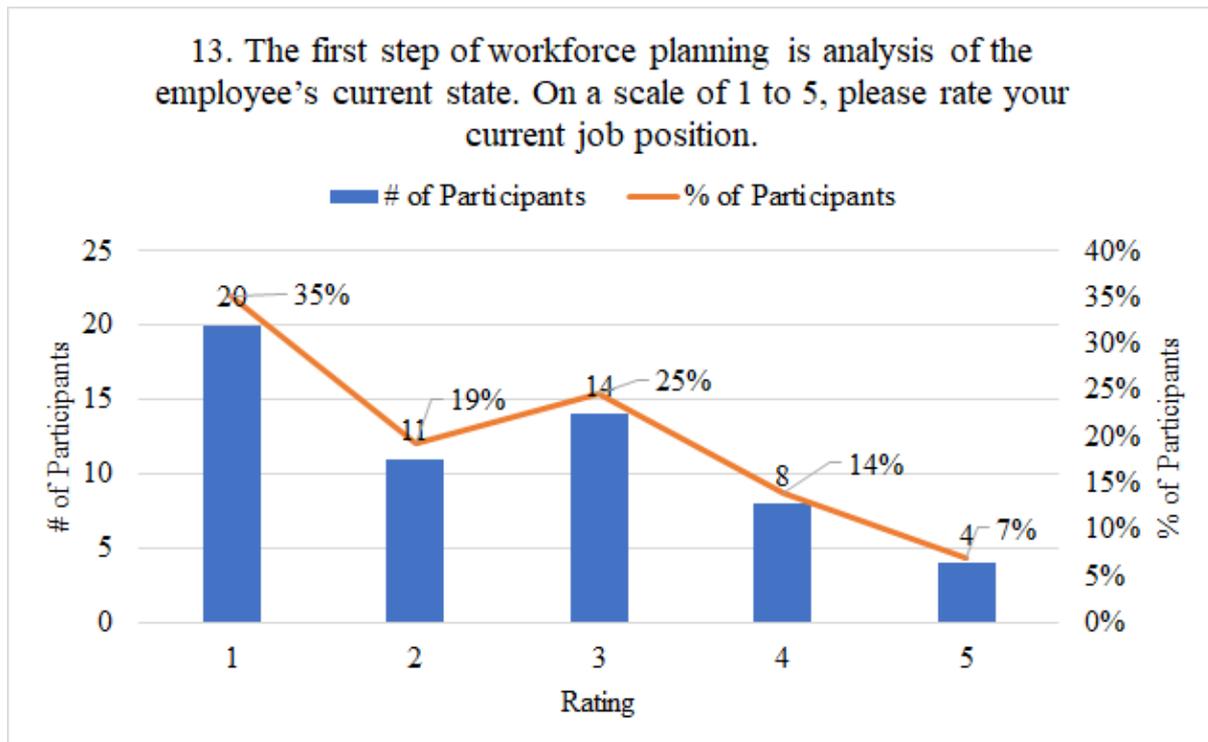
Figure 34: Satisfaction with Current Job Position

Furthermore, job profiling helps with annual and ad-hoc forecasting of budgets and the number of employees and their skills. Forecasting of employees is completed by evaluating current employees such as 360-degree assessment and leading to the specification of future talented employees and their skills. This is congruent with Mello (2001), who argues current employees' evaluation and development processes should result from strategic workforce planning to properly analyse human resource demand required for accomplishing company objectives. A specialised HR team selects future employees to find out full-stack employees with programming/software skills. The HR team of Company B, search for future talented employees with required skills mainly via job posting websites, at job fairs and universities. Company B also uses staffing agencies and offers their interns to transfer to full-time employment to have employees with skills needed to accomplish business goals.

Company B's HR team searched for future talented employees in the Czech labour market to accomplish company needs and limit the impact of talent shortage in the Czech labour market

(Kučera, 2018). According to Figure 35, due to the shortage of talent in the Czech labour market (Kučera, 2018), 86% of respondents have been contacted by phone or via social media, such as LinkedIn, regarding open IT job positions, as their skills and knowledge seemed to be valuable for the company.
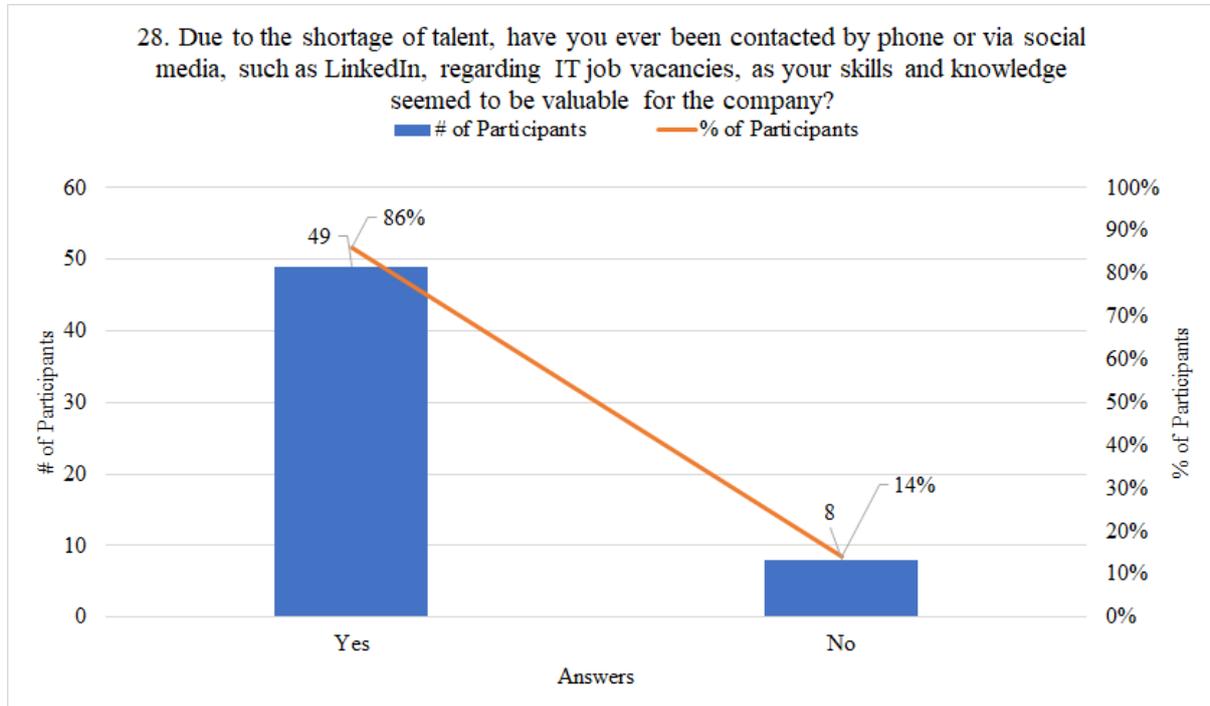

Figure 35: Shortage of Talent and New IT Job Position

From those respondents who have been contacted phone or via social media, 41% of them would accept new job position due to company culture and industry where it operates, 35% would accept the job offer due to salary and benefits; and 24 % of respondents would accept the job offer due to opportunity to gain new experiences, knowledge and skills (Figure 36).
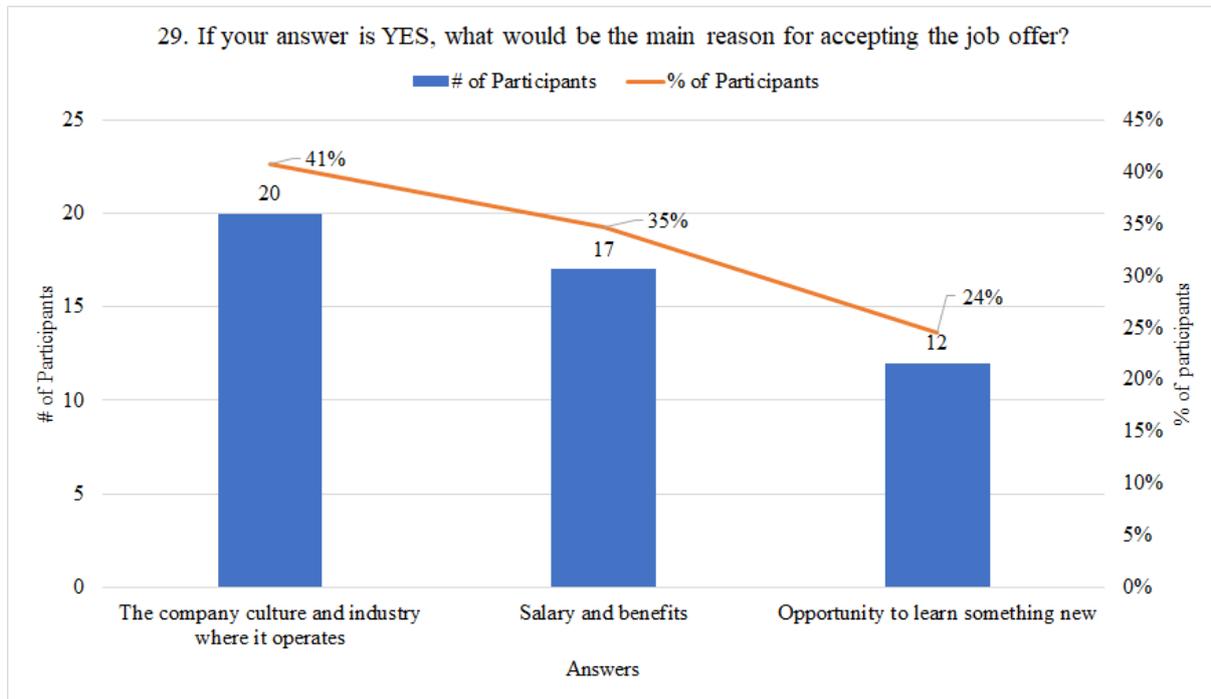

Figure 36: Reason to Accept New Job Position
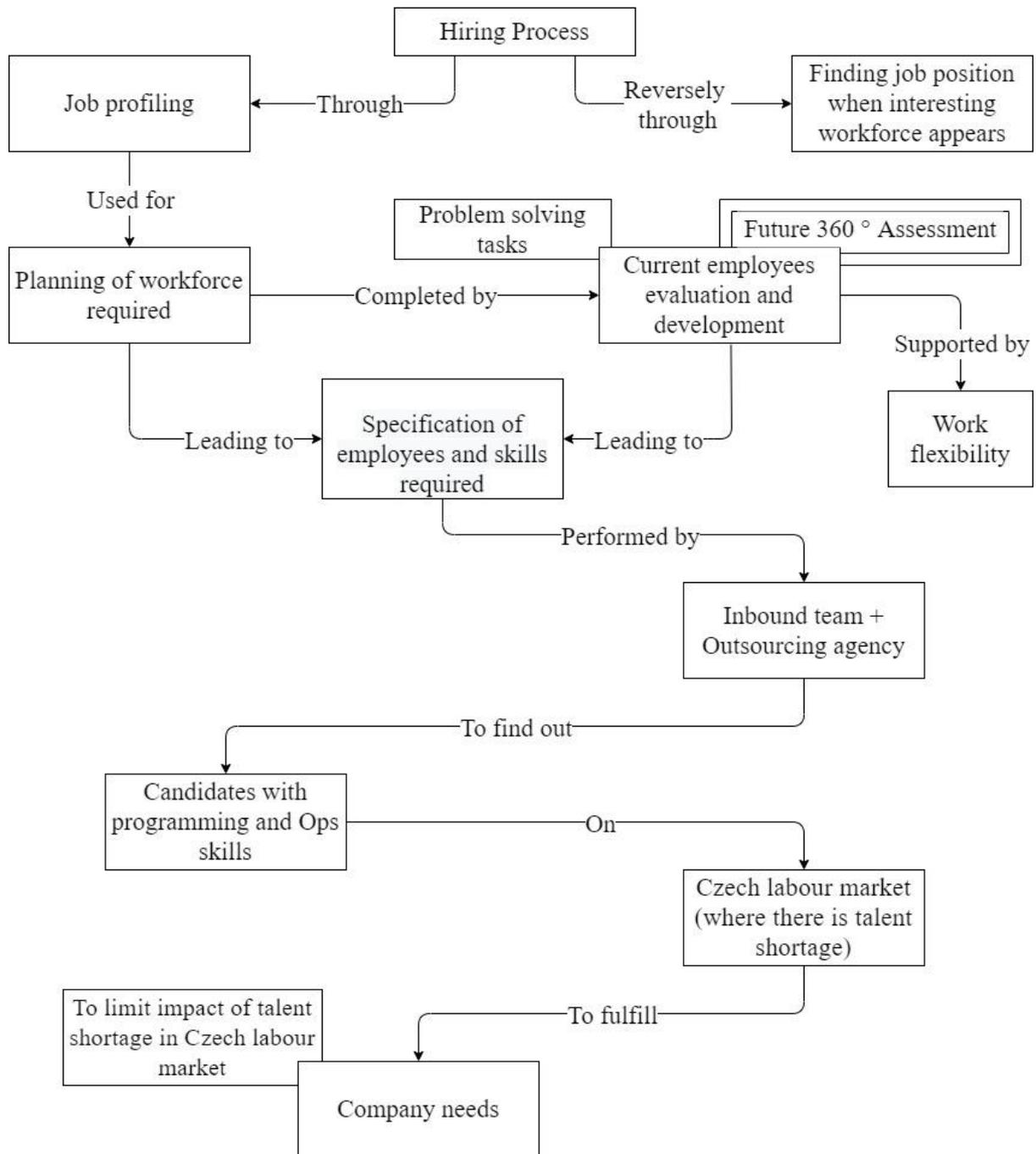
Figure 37: Interview 3; Conceptual Model 3

Conceptual model 3 (Figure 37), has been created from interview 3 conducted with the General Manager of Company C, who selects employees into his company. Company C is a small-sized business with 60 employees based in Prague and operating in the IT sector, specialised independent video and music analytics and rights management services. The conceptual model 3 indicates that the hiring process is done through two distinctive ways. The hiring process is primarily done through the job profiling process when the Company allows department executives to plan what people they require to meet business needs. Based on those requirements, job profiles are prepared. This is congruent with a strategic model developed by David Guest (1990) that explains the importance of the relationship between the specification of future workforce demand and the specification of business strategy established for business goals. In addition, a reverse hiring process is performed, meaning finding a job position when an attractive workforce appears.

According to Figure 38, 18% of respondents claim a long-term interest in them due to their skills and knowledge, even though no specific job position was open at that time. Most of the respondents, 39%, claim they were hired because their skills and knowledge were suitable for their current workplace's open vacancies.
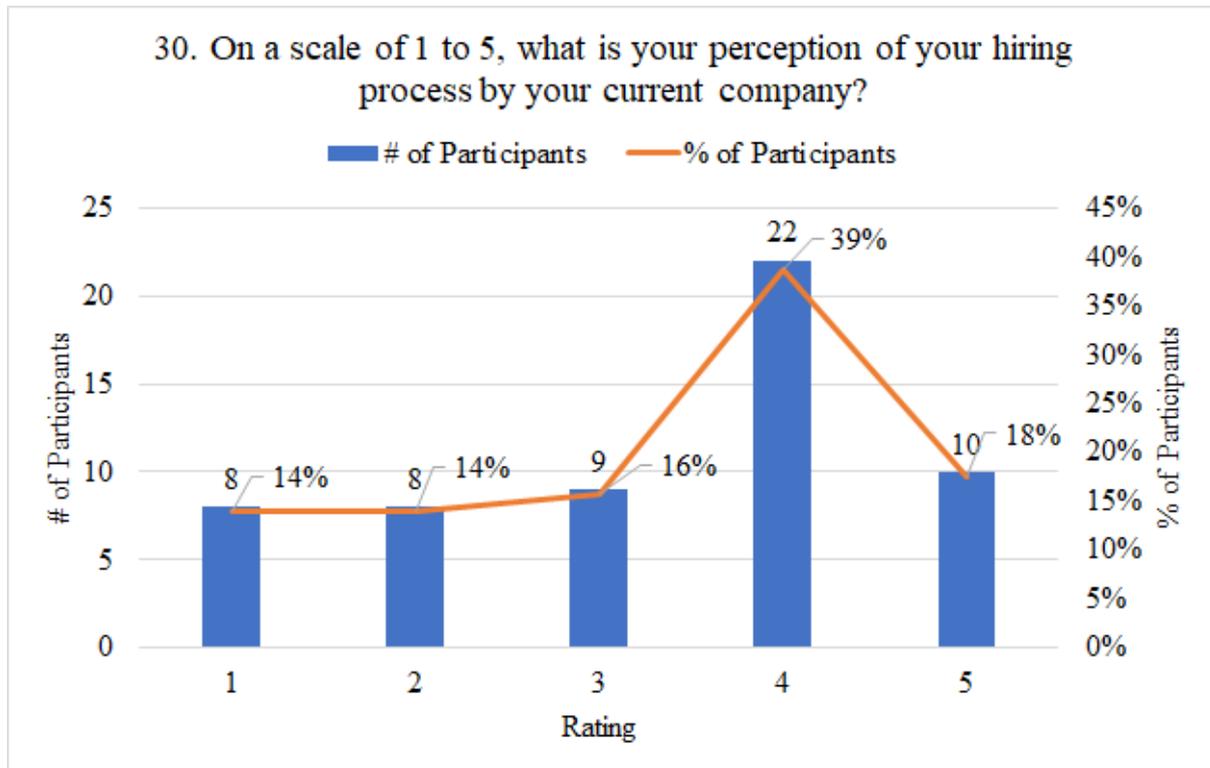

Figure 38: Perception of Employees's Own Hiring Process

Job profiling is used for workforce planning and is completed by the employee's development process that is exclusively performed by giving employees problem-solving tasks to support employees' professional development and career growth. According to Figure 39, up to 60%, respondents claim that even though there is a significant shortage of talent in the Czech labour market (Kučera, 2018), their company has not offered specific training or workshops to improve their skills.
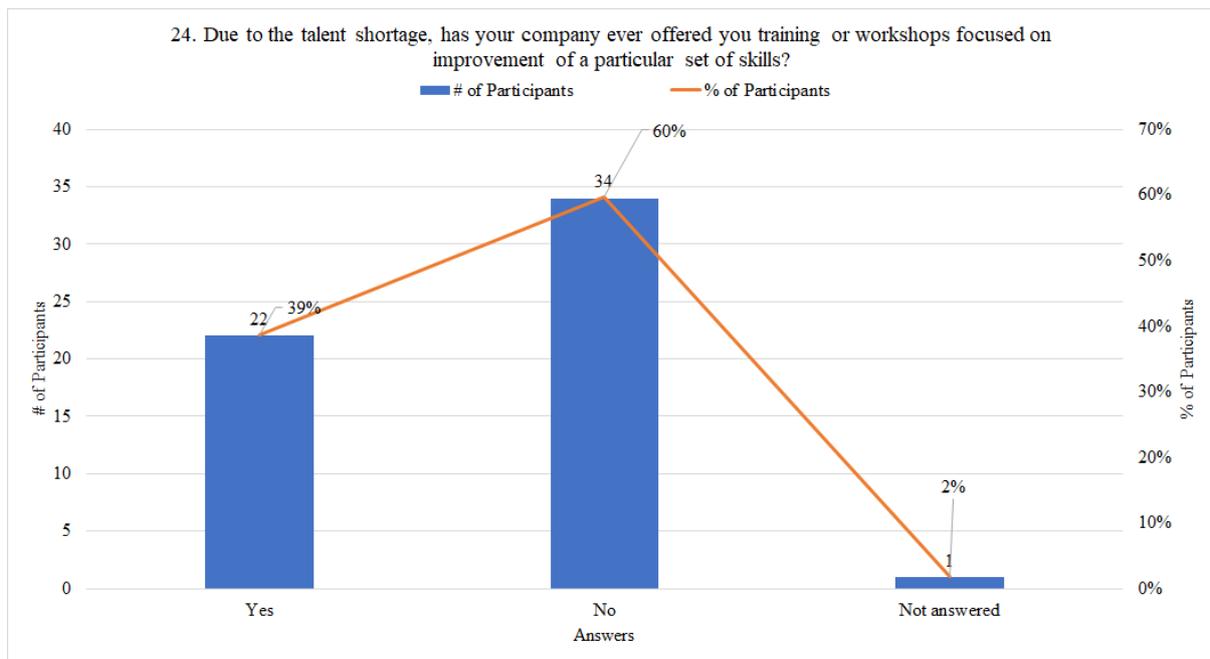

Figure 39: Training or Workshop Focused on Improvement of Particular Set of Skills

Company C does not provide perioral job rotation to its employees. However, work flexibility is provided in a way that employees have the opportunity to transfer themselves between backend and frontend departments. However, according to Figure 40, 74% of respondents would be willing to undergo job rotation if offered by their company.
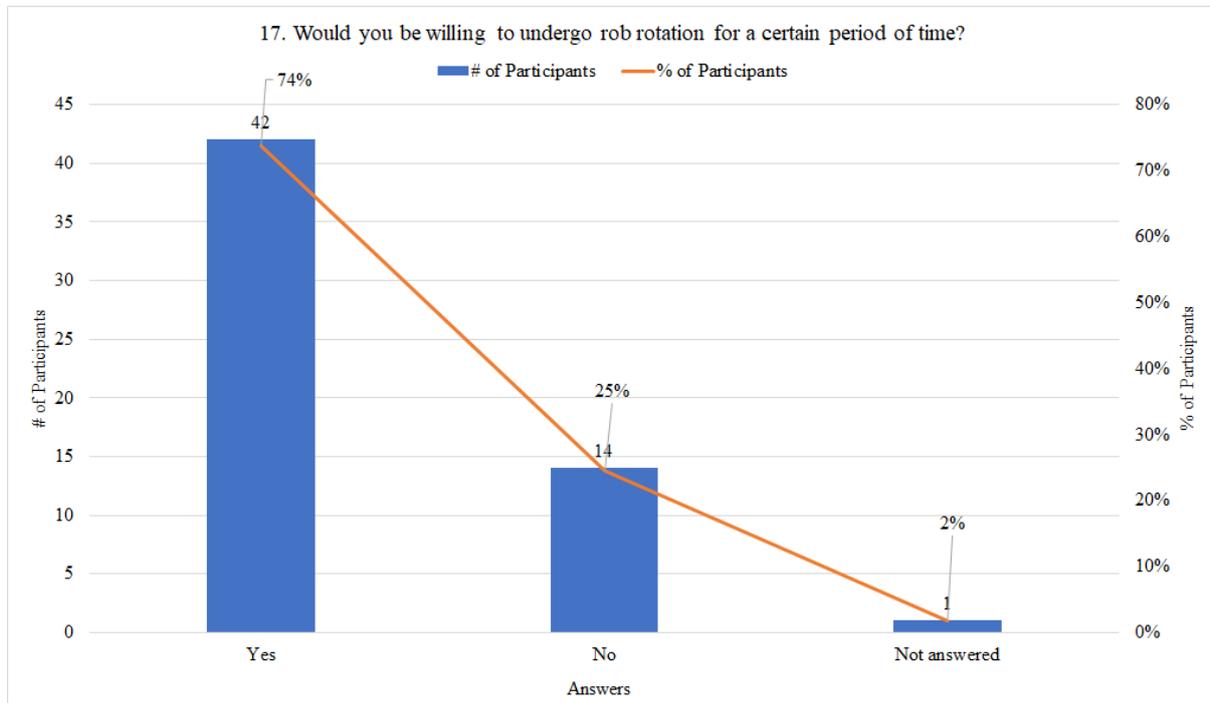

Figure 40: Willingness to Undergo Job Rotation

Company C does not have any processes for evaluation of their current employees. However, the company plans to do a 360-degree assessment in the future. Workforce planning process based upon job profiling process and HRM process-focused development of current employees lead to the specification of future talented employees to accomplish company goals. This approach is in congruence with Human Resource Planning (Dimitrievska, 2017) that is considered to be an essential tool for identifying company needs in terms of human resources as without properly established human resource planning the company might find that many of its employees do not have sufficient skills for meeting business goals. Inbound teams mainly

perform human resource demand specifications. However, company C also uses outsourcing agencies to find candidates with programming and Ops skills. Company C searches for future talented employees in the Czech labour market to fulfil company needs and limit talent shortage in the Czech labour market (Kučera, 2018).

Figure 41: Interview 1+2+3; Conceptual Model 4

The conceptual model 4 (Figure 41) is the primary conceptual model that combines all three interviews. In general, all three companies interview and perform the hiring process primarily through the job profiling process; however, reversed hiring is performed. Interviewed companies consider the job profiling process to be useful for current employees evaluation and development when companies use a variety of methods such as KPIs, internal mentoring, training in order to find out what skills and knowledge are missing by their current employees that need to be improved or brought by new talented employees. According to Figure 42, 39% of respondents claim that their company provides training or workshops focused on improving particular skills, such as training focused on soft skills such as conflict management, assertive negotiation, and cross-cultural training. Additionally, respondents claim that the company offered them hard skills training, such as IT security training, project management, business analysis, SQL, and User Experience training.
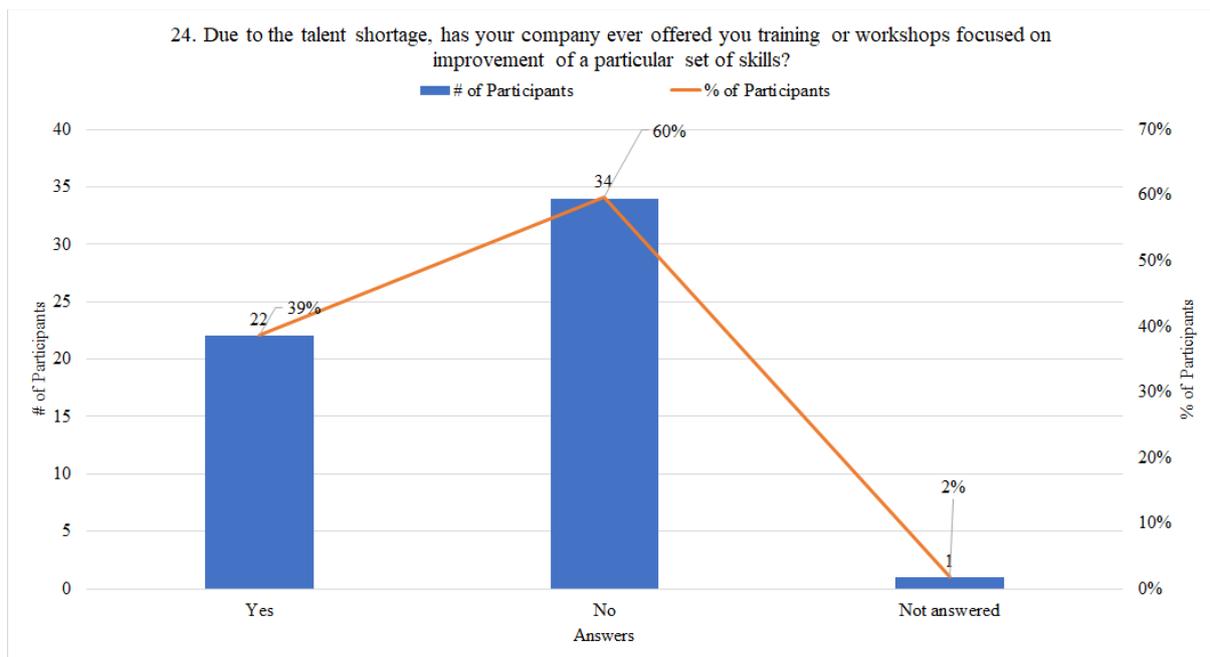

Figure 42: Training and Workshop Focused on Improvement of Specific Set of Skills

According to Figure 43, 30% of respondents who undergo a job profile process claim that they are mostly evaluated by a 360-degree evaluation process. Up to 22% of respondents claim that their company performs semi-annual job position evaluation.
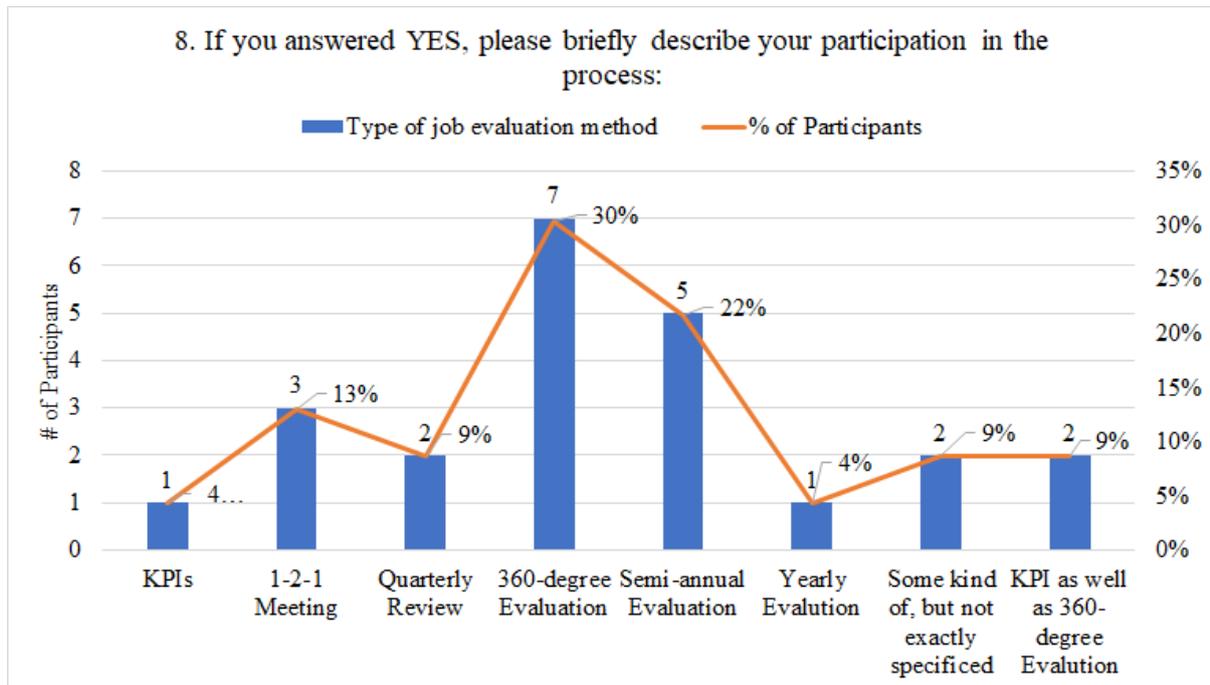

Figure 43: Type of Job Evaluation Method

Interviewed IT companies do not perform job rotation as a method of development of current employees. This is also claimed by respondents, as the vast majority of them, 77%, claim that they have never undergone periodical job rotation (Figure 44).
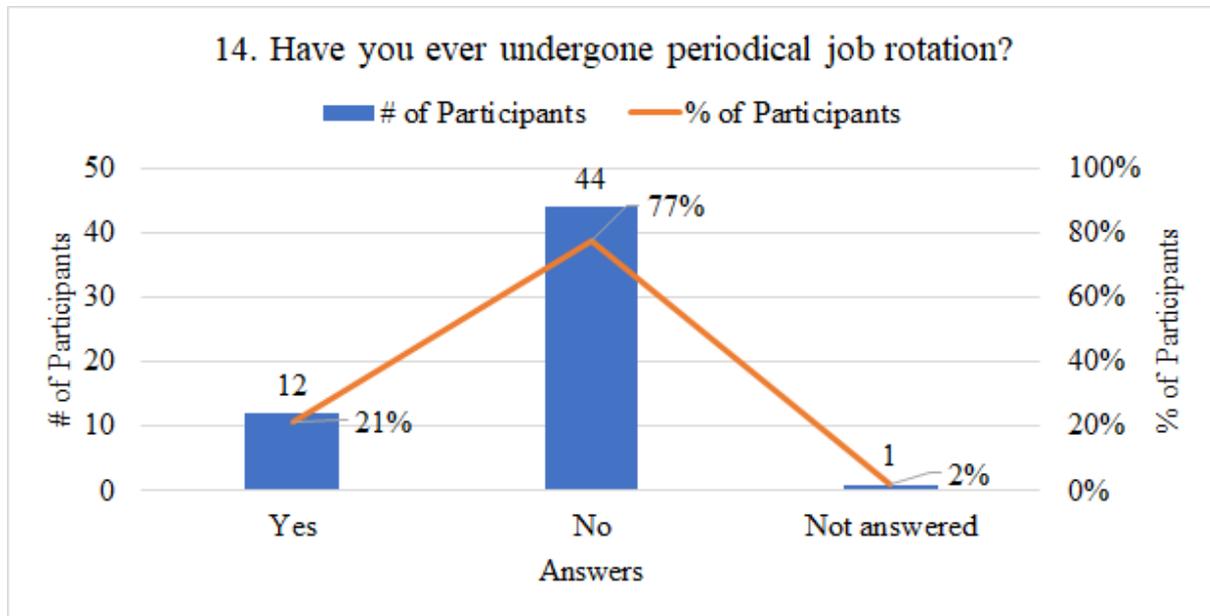

Figure 44: Undergoing Job Rotation

According to Figure 45, most of the respondents, 74%, would be willing to undergo job rotation. However, 25% of those respondents would not like to rotate for several reasons, such as being sufficiently challenged and satisfied at their current job where there is still much room for learning. Respondents also claim that they do not want to rotate due to their personal life, or it does not make sense. Additionally, respondents claim that job rotation would be more useful in junior positions, but not in senior positions where the employees are already sufficiently challenged.
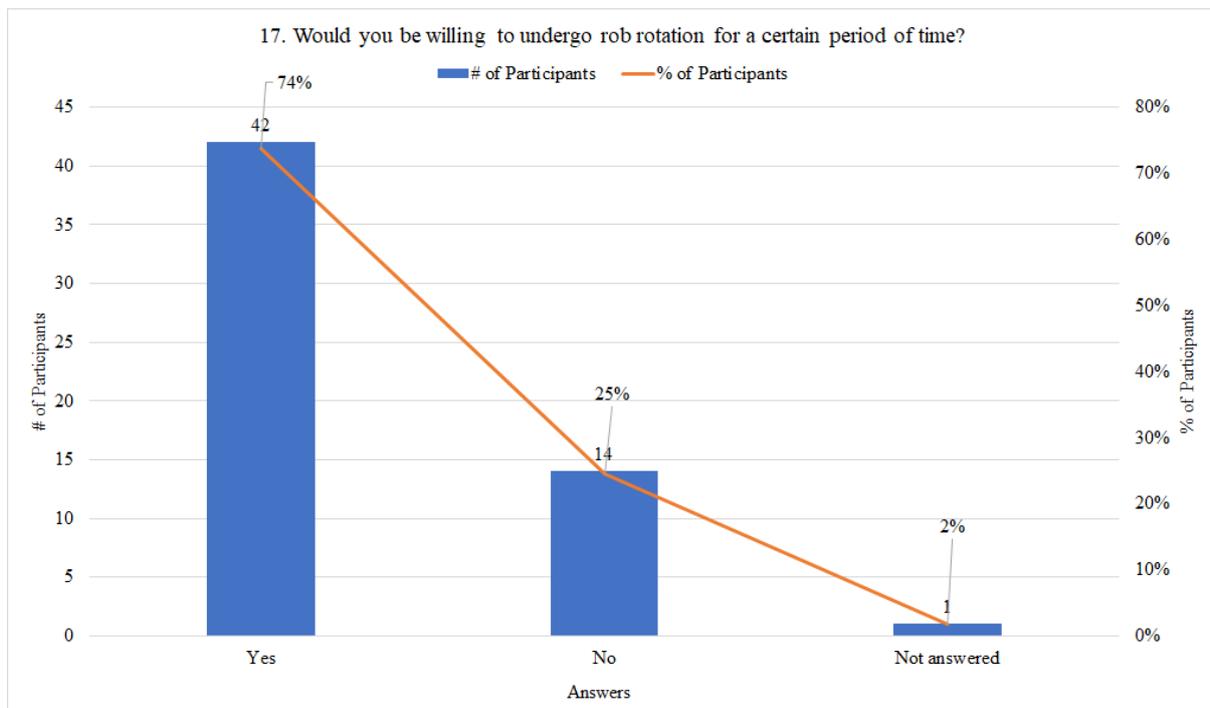
Figure 45: Willingness to Undergo Job Rotation

Companies also use the job profiling process to forecast talented employees that would bring missing skills from their current employees. Moreover, job profiling is used for assessment of future employees. This approach helps to mitigate the non-fitting workforce and hire perfectly fitting and flexible employees to meet company and customers' needs. Subsequently, evaluating current employees and assessing future employees leads to selecting future

employees internally by a specialised HR team, or externally by the recruitment agency. Internal HR team and recruitment agency search for various skills such as software skills or those required by customer needs through social media or job posting websites. Additionally, companies try to find future talented employees on job fairs, conferences or universities or offer their current part-time employees to become full-time employees. Search for future talented employees is primarily focused on the Czech labour market. However, searching for future talented employees is also extended to the foreign labour market due to the shortage of talent in the Czech labour market (Kučera, 2018). The hiring process of interviewed companies uses the process mentioned above to fulfil company needs and limit the impact of talent shortage in the Czech labour market (Kučera, 2018).

Conclusion

Subject of conclusions

The research findings of the proposed research might serve the following research stakeholders: HR department of IT companies, Recruitment agencies, current and future employees of IT companies.

The hiring process of interview companies is primarily done through job profiling to meet company and customer needs if required. This approach allows companies to connect human resources needs with overall company needs. This is supported by the Strategic model developed by David Guest (1990), which emphasises the alignment of HRM practices with business strategy to achieve business needs. 53% of Prague IT employees who participated in the research (Figure 31), consider it very important to know the details of the job position for which they are applying. Additionally, 47% of respondents also claim that the essential part of their hiring process is to meet more than half of the job profile criteria (Figure 32). 51% of respondents consider the job profile to be quite well informative (Figure 17). According to 46% of respondents, the job profile is also considered accurate and well provided (Figure 18). There is a positive correlation that indicates ($R_s = 0.31$) when the job profile is well informative; the information provided is also accurate and related to the job position to be performed (Figure 19).

Therefore, to find perfectly fitting employees and mitigate non-fitting candidates, IT companies should have their job profiles for open job positions well detailed and accurate, including all the information related to the open position and skills and knowledge required for performing specific positions. This is supported by Rodger's Seven-Point Plan and its alternative, Fraser Five-Fold Grading System (Prospero, 2020) that claims a well-structured job profile including criteria that future talented candidates should possess contributes to successful hires of

candidates for open job positions. Furthermore, as job profiles are also used to evaluate current employees, 92% of respondents consider the job profiling process useful for evaluating their job responsibilities and potential professional promotion, and 72% of respondents claim that their job satisfaction increased after undergoing the job profiling process (Figure 20). There is a positive correlation ($R_s = 0.32$) indicating IT employees who perceive the job profiling process to be useful for evaluating their job responsibilities also claim that their job satisfaction increased after undergoing such a process (Figure 21).

From the employee's development process perspective, 98% of respondents are willing to attend training focused on improving their skills (Figure 26). 58% of respondents are interested in hard skills training, and 42% of respondents are interested in soft skills training to advance their professional career (Figure 33). Therefore, companies should place great emphasis on evaluation and development processes as their employees positively perceive them. Moreover, employees are willing to participate in the development processes that positively affect employees' job satisfaction. This is supported by Mello (2001), who argues that providing employees with enough training to improve their hard and soft skills will satisfy employees' needs and increase employees' productivity, hence business productivity. Interviewed companies do not perform a job rotation process. However, the vast majority of respondents 74% would like to undergo job rotation (Figure 40). Moreover, 25% of IT employees claim that their work motivation would slightly increase when undergoing job rotation (Figure 22). 39% of IT employees believe that there would be a visible impact on improving their skills and knowledge when undergoing job rotation (Figure 23).

There is a strong and positive correlation ($R_s = 0.71$) indicating employees believe that job rotation would improve their current skills and knowledge and increase their motivation towards their job (Figure 24). Therefore, IT companies in Prague should think about providing their employees with opportunities to undergo job rotation in the future as their employees

positively perceive such a process. Due to the shortage of talent, 86% of IT employees claimed they had been contacted by phone or via social media as their skills and knowledge seemed to be valuable for another company (Figure 35). Moreover, up to 60% of respondents (Figure 39) claim their company has not offered them to undergo specific training or workshops to improve their specific set of skills due to the shortage of talent in the Czech labour market (Kučera, 2018). Consequently, 41% of employees claim that if they were offered a new position, the main reason for accepting a new job position would be company culture and industry (Figure 36).

Therefore, companies should emphasise their current employees' development processes and provide them more training to improve their knowledge and skills, decrease turnover of their employees, and limit the impact of talent shortage in the Czech labour market (Kučera, 2018). This is explained by Mello (2001), who argues that retention of current employees and employee turnover reduction might be strengthened by proper human resource planning built upon current employees' evaluation and development process. As mentioned above, for most employees (53%), it is imperative to know the details of the job position for which they are applying (Figure 31). Therefore, recruiting agencies that help companies find best-fitting and flexible employees should always create job profiles to be the most accurate and informative, so the specified criteria are related to the open job position. IT Companies require flexibility in a workforce with various programming, software, or operations skills to meet business needs and customer requirements.

Therefore, recruitment agencies should also be flexible and ready that companies' needs in terms of future employees' skills may vary depending on their business goals and customer requirements. Recruitment agencies should also be aware that companies are open to reversed hiring. Hence, recruitment agencies may actively search for candidates with exciting skills and offer them to companies that may create a workplace for them if they perceive them attractive.

Additionally, recruitment agencies should be aware that forecasting and selecting future employees is done upon current employee evaluation when considering customer needs as required. Therefore, recruitment agencies might help companies evaluate particular companies' current employees to provide them with specialised training to improve their skills and knowledge required for meeting business needs. Furthermore, recruitment agencies may help companies select future employees by searching for talented candidates on social media or by contacting them by phone/email to recruit candidates that meet the company needs in terms of required skills and knowledge.

Current and future employees of IT companies need to be aware that nowadays, companies are interested in flexible candidates and have a variety of skills such as software skills, programming skills, and ops skills. Companies are also interested in full-stuck employees in order to accomplish their business needs. Furthermore, the hiring process might also be done reversely. Therefore current as well as future employees of IT companies might be hired by IT companies in case their skills and knowledge seemed to be valuable for that company even though there is currently no open job position. Future IT company employees may expect their employer to perform various processes towards evaluating their job responsibilities and development processes to improve their set of skills and knowledge.

Value of the research

There are certain limitations related to the proposed research. First of all, the proposed research has a specific deadline; therefore, the researcher was time-bound, impacting the amount of research performed. The time constraint also impacted the number of semi-structured interviews the researcher was able to conduct and the number of responses collected by questionnaire. Furthermore, the limitations of the research are also reflected in the interview and questionnaire questions. After starting the research data analyses, the researcher realised

that questions asked during semi-structured interviews could be created to be more relevant to models used in the literature section of the proposed research. Additionally, even though questionnaire questions were tested during piloting research, the researcher realised that the questionnaire questions could be asked differently to collect more precise data. Another limitation of the proposed research is that two interviews were not conducted with the HR department; however, other employees are responsible for selecting employees into their teams and companies.

Due to the current situation caused by the COVID-19 pandemic, semi-structured interviews were conducted by email communication. The researcher did not get responses to all interview questions that have been asked. During the process of collecting data via semi-structured interviews, the researcher also asked a few additional questions. However, answers were not provided, and due to time constraints, the researcher needed to proceed to data analysis to complete the proposed research in time. Therefore, next time, the researcher would choose to conduct semi-structured interviews, either face-to-face, via video chat or telephone call, to collect more detailed data. Another limitation of the proposed research is that questionnaire respondents did not answer all the questions (Appendix D). Hence those responses could not be included in calculations of Spearman's correlation (Appendix F). Therefore, the researcher would change the online questionnaire settings next time, so the respondents are obligated to answer each question. In addition to that, the sample size might not completely represent the whole target population - employees of IT companies in Prague, as the researcher was able to collect only 57 responses.

Despite the mentioned limitations related to the proposed research, the researcher placed a significant amount of effort and time to properly conduct the proposed research and complete it in time. The researcher spent several weeks on each section of the proposed research to analyse the given topic properly. The researcher collected data via three semi-structured

interviews (Appendix B) and online questionnaires (Appendix D) that brought interesting research findings on if and how IT companies in Prague use job profiling and workforce forecasting in order to hire future talented employees with skills and knowledge required for accomplishing company needs as well as to limit the impact of talent shortage in the Czech labour market (Kučera, 2018). Research findings resulting from online questionnaires' data show different perceptions of selected IT companies' employees towards HRM practices related to job profiling and workforce forecasting. Those researcher findings serve various research stakeholders and primarily might help IT companies and recruitment agencies in Prague perform job profiling and workforce forecasting more efficiently and more effectively to find the flexible and perfectly fitting employees with skills and knowledge required for meeting business objectives.

Future direction of the research

If the researcher could have another opportunity to conduct the proposed research again, the researcher would have started the research much earlier to have more time to perform an even more in-depth analysis of the given topic. The researcher would have structured the interview questions better to have it more related to literature models. The researcher would have conducted even more semi-structured and face-to-face interviews if the situation allowed to collect more detailed and precise data from HR managers. Additionally, the researcher would change the type of some of the questionnaire questions that have been distributed among employees of selected IT companies in order to perform different statistical calculations. The researcher would have contacted even more IT companies to get a bigger sample size to represent the targeted population more accurately. If the research were conducted again, the researcher would expand the research to other large Czech cities such as Brno, Ostrava, or