HRM digitalization in emerging economies

A qualitative study on the factors influencing the implementation of digital HR tools in Russian SMEs

MASTER THESIS WITHIN: Business Administration
NUMBER OF CREDITS: 30
PROGRAMME OF STUDY: Digital Business
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JÖNKÖPING May, 2021
Master Thesis in Business Administration

Title: HRM digitalization in emerging economies: a qualitative study on the factors influencing the implementation of digital HR tools in Russian SMEs

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Date: 2021-05-24

Key terms: HRM digitalization; digital HR tools implementation; SME; emerging economies; DMC; RBV; Institutional theory

Abstract

Background: Digital technologies have been revolutionizing the corporate world during the last few decades. Companies that want to keep their competitive positions are forced to adapt. The digitalization of the corporate Human Resource function is of special importance in this regard due to the increasing role of digitalized HRM for business success. The existing research on the digital HRM implementation environment and the factors that shape it is limited to bigger companies operating in developed economies, with nascent research available for small and medium-sized firms operating in emerging economies.

Purpose: The purpose of this study is to explore how individual-, firm-level and environmental context-specific factors shape HRM digitalization in SMEs in emerging economies context with Russia as an example.

Method: To achieve an in-depth understanding of the research phenomenon, a qualitative study with an exploratory design was conducted. Empirical data was gathered through semi-structured interviews with ten professionals with extensive experience in HRM digitalization in SMEs, chosen by purposive sampling method. An abductive research approach enabled establishing the connection between obtained empirical insights and existing knowledge from the literature on HRM digitalization.

Conclusion: As a result, the following factors were identified as the most influential for the implementation of digital HR tools in Russian SMEs. At the individual level, it is top executives digital awareness and innovativeness that facilitate implementation. At the firm level, it is SME’s resource munificence, innovation-friendly corporate culture, low hierarchical structure and developed IT infrastructure that enables implementation. Finally, among context-specific factors, the following appeared to shape the implementation: declining national economy, unpredictable business environment, highly competitive business environment, IT vendors’ market specificity, governmental policy in terms of digitalization, labour market specificity. Most of the contextual factors contributed to the disabling environment for HRM digitalization, with a few exceptions.
Acknowledgements

First of all, I would like to express my greatest gratitude to my supervisor Timur Uman for his kind assistance during this research. Not only he provided valuable feedback and meaningful insights but also contributed a lot to developing a supportive and positive atmosphere during the whole project execution. Timur’s contribution cannot be underestimated.

Secondly, I want to thank all the research participants for their time, efforts, willingness and openness in sharing experience and insights with the author.

Thirdly, I would like to extend thanks to all colleagues and workshop lecturers, whose assistance contributed to this study a lot.

Finally, many thanks to my family for always being there.

Mariia Churilina

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May, 2021
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Definitions

The following list provides the reader with an overview of relevant abbreviations that will be encountered throughout the text.

- DMC - Dynamic Managerial Capabilities
- HR - Human Resources
- HRIS - Human Resources Information System
- HRM - Human Resource Management
- IS – Information System
- IT - Information technology
- RBV- Resource-based view
- SME – Small and Medium-sized enterprise
1. Introduction

The introductory chapter presents the background of the research as well as the problem discussion followed by the research purpose and question.

1.1 Background

Rapid and ubiquitous developments of the Intranet and Internet-based technologies, artificial intelligence, big data analytics and social media over the past few decades have led to an unprecedented wave of digitalization. Digitalization could be defined as “the changes associated with the application of digital technology in all aspects of human society” (Stolterman & Fors, 2004). These changes are revolutionizing the corporate world, the ways companies are operated and managed. Today companies are forced to deal with the complexity of new technologies and increasing flows of information, as well as new employment forms, a shift in employees’ skills demand according to the technological developments and the upcoming entry of so-called generation Z or ‘digital natives’ to the labour market. In this situation, the role of Human Resource Management (HRM) in coping with the challenges brought by the digital era grows at a rapid pace.

Digital technologies are transforming traditional ways of delivering HRM services within organizations (Bondarouk & Ruël, 2009). They affect the whole personnel management domain including such areas as selection and recruitment, adaptation, training and development, assessment, motivation, and administration to various extents. One of the examples is the continuously changing approach to recruitment via using social media platforms for job advertising, chatbots for the initial selection of candidates, digital platforms and artificial intelligence for job interviewing. Another example is an ongoing shift to online learning (so-called ‘e-learning’) with the use of digital platforms, which enables more personalized and effective learning.
Surveys of HR professionals demonstrate that the number of organizations implementing digital tools in their HR practices is constantly growing (Deloitte, Global Human Capital Trends, 2019). Digitalized HR function aims at automating different HR processes and subfunctions for improving its productivity (Stephan et al., 2016), employees’ training and skills development, searching for talents (Galgali, 2017), streamlining overall HRM processes and solutions. A high potential of HRM digitalization for improving HR services (Marler, 2009; Ruël et al., 2004) as well as enhancing overall business success (Greif et al., 2016) has led to the increased academic and professional interest in the phenomenon (Ball, 2001; Bondarouk et al., 2017; Long, 2009; Ruël et al., 2011; Stanton & Coovert, 2004; Strohmeier, 2007; Townsend & Bennett, 2003). Considering the relative novelty of the phenomenon, the constantly increasing variety of available digital HR technologies as well as its positive effect of digitalization on business performance, HRM digitalization is an important topic for further investigation.

Existing research on digital HR can be characterized as having a national focus on developed economies (Bondarouk & Ruël, 2009), with nascent research available in the context of developing ones. One of the reasons for that is the long-existing dominance of Western management practices. However, as mentioned by Bondarouk & Ruël (2009), the balance of business power is shifting towards emerging economies; ‘traditional’ developed economies are losing their dominance and management practices from ‘the East’ are rapidly growing. Currently, twenty-six countries are identified as emerging economies (Morgan Stanley Capital International Emerging Market Index, 2020), which are also called developing or economies in transition (Roztocki & Weistroffer, 2011). Among them, so-called BRICS countries play a significant role in the worldwide economy, encompassing more than 40% of the world’s population (Lowe, 2016) and 33% of global GDP in 2019 (Role of BRICS in the Global Economy, 2020).

Among the BRICS, the Russian Federation (Russia) has the highest per capita income (Lowe, 2016). Having lost its superpower after the collapse of the Soviet Union, the country has been actively increasing its political and economic influence in the world. Despite various challenges, mainly dependency of its economy on raw materials’ export, weak democracy, high level of corruption, Russia has been experiencing an accelerating economic growth during 2000-2014 (Lowe, 2016). The role of small and medium-sized
businesses (with a headcount of 16-250 employees) in this growth is to be emphasized. SMEs there constitute an important part of business activity in the country. Even though the role of state-owned companies is still significant in the Russian economy and the share of SMEs is still lagging behind western countries, the number of small and medium-sized businesses there is growing every year. In 2019, around six million SMEs were operating in the Russian Federation with more than 15 million employees which remain around 25% of the total workforce of the country. According to the governmental targets, the impact of SMEs on the annual GDP of the country should be increased up to 32.5% within the coming three years. In general, there is an agreement in the literature about SMEs being an important driver of national economic growth both in terms of contribution to GDP and employment opportunities created in developing countries (Kachembere, 2011; Tambunan, 2008).

Emerging economies are currently at the stage of the transition from the industrial economy of the past century to the knowledge-based economy of the 21st century, catching up with the developed countries. Among key enablers of the successful transition are innovations and technologies, and successful digitalization is vital in this regard. Those SMEs which successfully adopt digital technologies will be more competitive in comparison with those lagging in terms of digitalization. The competition among smaller companies in the knowledge-based economy is often a competition of its human resources. In this regard, digitalized HR function which enables to attract better talents and to train and motivate them more efficiently contributes significantly to SMEs’ competitiveness and success.

To sum up, digital tools are important instruments for enhancing competitive advantage and business performance for SMEs mainly via attracting better talents and improved HR services. The role of SMEs in the Russian economy is consistently growing. Their sustainable performance makes an important contribution to a national economy. Thus, HR digitalization in this specific context requires attention. However, how HR digital tools are implemented into the HR domain and what are the key factors affecting their successful implementation is in this context remain underexamined.
1.2 Problematization

In the increasingly digitalized world of today, business is to utilize opportunities brought by digital technologies in order to maintain its competitiveness and sustainable performance (Greif et al., 2016). There is an agreement in the literature regarding the special importance of HRM as a driver and facilitator of the overall business digitalization process (Bondarouk, et al., 2009; Thomas, 2020). The role of HR departments is described as twofold in the context of digitalization: not only it has to facilitate the overall digitalization of a company (Ulrich, 1998) but also pushed for being the task for digital transformation itself (Jäger et al., 2018). The former is realized through attracting new employees with the necessary digital knowledge and skills to a company, developing relevant skills within a company, and creating an innovation fostering corporate culture (Thomas, 2020). The latter – through the implementation of various digital technologies into HR subfunctions and processes.

A broad scope of digital tools for the HRM domain is defined in the literature as e-HRM, web-based (e.g. Ruël et al., 2004), virtual- (Lepak & Snell, 1998), and digital HR (Pantelidis, 2019; Thite, 2019), among which ‘e-HRM’ is the most widely-used term in the research, while ‘digital HR’ is more common for the general public. Bondarouk and Ruël (2009, p.507) offered an integrated definition of e-HRM as ‘an umbrella term covering all possible integration mechanisms and contents between HRM and Information Technologies (IT), aiming at creating value within and across organizations for targeted employees and management’. The definition emphasizes the multifacetedness and ubiquity of the phenomenon: it applies to any type of HR practice that can be supported by IT.

Indeed, digitalization affects various HR processes and subfunctions. Generally, technological advancement is changing the way human resources interact with data and information. Integration of social, mobile, analytic and cloud technologies transform employer branding, staff recruitment and selection, training and development, motivation etc. (Stephan et al., 2016). The most common application of digital technologies in HRM is currently online recruitment (e-recruitment), which implies the use of various tools at different stages of the recruitment process (Holm, 2012; Melanthiou et al., 2015; Singh & Finn, 2003). For instance, self-service applications which allow a candidate to fill in
job application hundred per cent online; virtual robotic assistants which provide candidates’ CVs preselection and the first contact with potential candidates; digital platforms for holding remote interviews. Digital recruitment provides up to 30% timesaving for a recruiter (Melanthiou et al., 2015) as well as have a positive impact on the HR brand of a company (Balabanova & Balabanov, 2020). Digitalization of recruitment is currently one of the most well-researched topics; and there is an agreement in the literature about the higher efficiency of e-recruitment in comparison with traditional one, based on large numbers of empirical evidence (Greengard, 2012; Williams and Klau, 1997, Galanaki, 2002).

The potential and benefits of HRM digitalization for a business is widely discussed in the literature (Ball, 2001; Bondarouk et al., 2017; Ruta, 2009; Stohmeier, 2009). Among the key benefits are cost reduction, automatization of routine tasks, generating HR data that supports strategic decision making, shifting HR role to more strategic (Bondarouk et al., 2009; Lepak and Snell, 1998; Petry & Jäger, 2018). These, in its turn, have a positive impact on employees’ satisfaction and the company’s performance (Chen et al., 2016). Overall, HRM digitization is associated with increased corporate success (Greif et al., 2016).

A growing number of companies implement various digital tools in their HR domain (Deloitte, Global Human Capital Trends, 2019). e-HRM implementation is defined as ‘a strategy and transfer process between an old (or non-existing) and a targeted e-HRM system’ (Bondarouk et al., 2016, p.104). The implementation process is known for its complexity and dynamism (Akrich, 1992; Ciborra, 1999; Orlikowski, 2000) and is influenced by various factors from the internal and external environment. In the existing research, the implementation of HR digital tools is analyzed predominantly in the context of larger companies (Bondarouk et al., 2017; Burbach & Royle, 2014; Strohmeier & Kabst, 2009), while studies in the context of small and medium-sized enterprises are still limited (Hooi, 2006, Huselid, 2003; Li et al, 2017). At the same time, recent technological advancements such as software-as-a-service, non-proprietary technologies and open-access platforms (Morgan-Thomas, 2016) changes the situation (Kavanagh et al., 2015) and provides SMEs with unprecedented opportunities to develop their technology.
infrastructure (Eller et al., 2020), making HRM digital tools implementation more affordable without capital investments.

Beyond the limitations of current research in terms of company size, it demonstrates a strong national focus on the developed countries disregarding factors that might be of relevance for developing countries context. At the same time, Hoskisson et al. (2000) suggested that the implementation of digital tools may differ for the emerging economies due to its specificity. For instance, due to missing institutional features such as poorly functioning labour markets, capital markets, infrastructure problems, and lack of legal frameworks. Overall, there is a lack of research on how SMEs in developing countries implement HR digital technologies, and which factors influence such implementation most.

The existing research framework in the field of e-HRM distinguishes two levels of analysis for the factors shaping e-HRM implementation (Strohmeier, 2009). Microlevel refers to the role of individuals involved in the implementation process, while macro-meso level incorporates collective actors such as organizational units, groups, whole organizations and governmental bodies.

At a micro level, the most influential individuals in the context of HR digitalization of SMEs are a company’ owner-managers and an HR responsible if a company’s structure implies this position. A number of authors emphasize the role of individual characteristics of the owner-managers in the context of overall business digitalization in SMEs (Li et al., 2017; Thomas, 2020). It is explained by the pivotal role of owner-managers in strategic decision-making in smaller companies (Jones et al., 2018). Indeed, due to the tendency to centralise from a structural perspective, strategic decisions in SME are highly dependent on the owner-managers (Nguyen & Waring, 2013; Rahayu & Day, 2015), and decisions related to digitalization is not an exception. They are considered as key responsible for their company digitalization push (Li et al., 2017). The most relevant characteristics in this regard include owner-managers general ability and awareness in terms of IT and digitalization (Rahayu & Day, 2015) and owner-managers innovativeness (Qirim, 2008). The abovementioned is relevant to the digitalization of HR function. In case a company has an HR executive, which is more relevant for medium-sized
companies, his/her characteristics similar to owner-managers are also of importance for HRM digitalization.

Digitalization is more about strategy and management than about technology (Bondarouk et al., 2017). Managers in SMEs of developing countries operate and make strategic decisions in a highly turbulent environment. The capability of an organization to adapt to the changing environment depends on dynamic managerial capabilities (Bogodistov, 2015). More specifically, the capabilities of a manager to identify and seize the opportunities in a dynamic environment as well as to transform the resource base of a firm to maintain its performance and competitive advantage play an essential role in the context of digitalization. Thus, the dynamic capability view (Teece et al., 1997; Teece, 2007A) and especially, the dynamic managerial capabilities aspect provides a useful lens through which the special importance of managers’ characteristics in the HR-digitalization in SME can be explained.

Macro-meso level implies various firm-level and environmental context-specific factors which are reflected in the process of HR digitalization. Among the factors from a firm-level identified in the existing research are a company’s size (Ball, 2001); sector/industry (Greif et al., 2016; Thomas; 2020); availability of resources, primarily those financial and human (Shah Alam et al., 2016; Belardo and Kavanagh, 2012; Stone, 2012; Thomas; 2020); technology readiness of a firm (Zhu & Kraemer; 2005 Zhu et al, 2006); organizational culture (Lippert and Swiercz, 2005; Sheu et al., 2004); organizational structure and processes, including the structure and configuration of HR-department (Alam et al., 2016; Cao et al., 2014); managerial support (Alam et al., 2016; Rogers, 2003); compatibility and organizational fit and readiness (Zhu et al., 2010).

The aforementioned can be viewed from the resource-based view of the firm (RBV) (Barney, 1991, 1992; Barney & Wright, 1998; Lado & Wilson, 1994; Snell et al., 1996; Wright, et al., 1994). According to the theory, a firm’s resource(s) that fulfill defined criteria (including resource heterogeneity and immobility, value, rareness, imperfect imitability, non-substantivity) can be a source of sustained competitive advantage. Properly selected, well-trained and motivated personnel is highly important especially for SMEs. Digitalized HRM, and its sub-functions like e-recruiting, e-learning etc., then can
be explained as contributing activities that provide the firm with human resources that fit these characteristics. Thus, from a strategic perspective, a digitalized HR function may be considered by a company as a source of competitive advantage.

Finally, environmental context-specific factors refer to other parties surrounding the firm such as clients, competitors, suppliers, governmental bodies (Zhu et al., 2002). These include pressure from clients and competitors, various legal regulations, and control from governmental agencies which may facilitate or constrain digital tools implementation. Competitive pressure may motivate if it has been already done by competitors to maintain its competitive advantage (Sadowski et al. 2002). One example may be when a company’s rivals actively apply online tools for employer branding and talent sourcing which improves its image and helps to attract better talents. As for government policy and legal regulations, governmental promotion (e.g., financial incentives) may facilitate the digitalization of a business sector, while legislation barriers that are typical for developing countries may hinder it. Another influential factor is the background of a national culture which affects organizational culture, which in its turn may influence the implementation process (Ruta, 2005). Consequently, this study draws on institutional theory to consider the broader environmental factors that influence the HR digitalization process.

Overall, the implementation of digital HR tools is shaped by various factors from the abovementioned dimensions, and these factors may facilitate or constrain the implementation process. However, despite the existence of a number of recent reviews of e-HRM research (Strohmeier, 2007; Bondarouk et al., 2016), a comprehensive understanding of the factors affecting the implementation of e-HRM in smaller companies within emerging economies is still lacking.

The case of Russian SMEs may be interesting in this regard. SMEs in the Russian Federation have some specificities that distinguish them from those in developed countries. First of all, SMEs there have emerged only after the collapse of the communist system in 1991, and, thus, are relatively young in comparison with those from the countries with long-existing capitalism. Thus, management practices there differ significantly from developed countries as well as overall management culture and are still at the stage of its formation. These practices are influenced by western traditions from
one side, and national culture and environmental constraints from another side. Secondly, SMEs there are operating in a rather turbulent environment with highly unpredictable business reality (Roztocki & Weistroffer, 2011). That, in its turn, affects all business processes including personnel management, which is highly interconnected with other functions and departments. Finally, in terms of personnel management, Russian SMEs are challenged by a high demand for qualified employees, high staff turnover, low labour productivity, lack of necessary digital skills of employees, high bureaucracy regarding compliance procedures of labour relations etc.

In terms of digitalization, Russia shows strong potential for the usage of IT innovations, including e-HRM (Dutta & Mia, 2011). Moreover, Russia has a high level of Internet penetration among developing countries: the share of Internet users in Russia constitutes 81% of citizens including 65% of people connecting to the web daily (Kutsuri et al., 2019). At the same time, considering relatively young management practices and the specificity of the business environment of the post-communist economies in transition, a digitalization process in Russian SMEs may be characterized as rather iterative at the current stage, with a lack of strategic planning internally and governmental support externally.

To sum up, bringing together a high potential of business digitalization in Russia constrained by missing institutional features; a specificity of personnel management practices and related challenges, Russia may be an interesting context for studying HRM digitization and, more specifically, identifying the factors which shape a digitalization process in this context. Given the specificity of the Russian context, one can assume that apart from those westernized research findings, there other important factors affecting the implementation of digital tools in HR function in SMEs of developing economies might be discovered. Overall, this research is motivated by the increasing importance of SMEs in the Russian economy, at one hand, but our limited understanding of HR digitalization in SME’s, at another hand, and more precisely the factors which shape the implementation in this context.
1.3 Purpose of the study

The purpose of this paper is to explore how individual-, firm-level and environmental context-specific factors shape HRM digitalization in SMEs in emerging economies context with Russia as an example.

1.4 Research Question

Thus, the research question is formulated as:

Which individual-, firm-level, and context-specific factors and how do they shape digital HR tools implementation in SMEs in economies in transition presented by Russia as an example?
2. Literature Review

The literature review provides a deeper understanding of the subject by introducing a wide range of literature within the research field. The purpose of the chapter is to provide a frame of references and theoretical foundations on which the study based. The integrated research model is finalizing the chapter.

Digitalization may be considered as a general organizational phenomenon (Strohmeier, 2020), which is relevant for different organizational domains (Gebayew et al., 2018; Hanelt et al., 2018). According to Amladi (2017) and Bondarouk et al. (2017), HRM digitalization and overall business digitalization are highly interdependent. In this regard, Strohmeier (2020) proposed to conceptualize HRM digitalization in accordance with general business digitalization. Following this logic, the literature review starts with conceptualizing business digitalization with narrowing further specifically towards HRM digitalization.

2.1 Digitalizing business environment and SMEs

“There will be no sustainable digital transformation without SMEs!” (OECD, 2019a)

During the last few decades, digital technologies have deeply penetrated various dimensions of our life. Stolterman & Fors (2004) define digitalization as ‘the changes associated with the application of digital technology in all aspects of human society’. Autio et al. (2018) classified digitalization as a socio-technical process.

Digitalization in terms of business is often located in the continuum from digitization to digital transformation (Verhoef et al., 2021). While there is consensus regarding the definition of digitization as the initial conversion of analogue data into digital format (Unruh & Kiron, 2017), there is less agreement on the term ‘digitalization’. Overall, digitalization is an umbrella term that can be defined as ‘the application of any digital technologies to any human activities, such as personal life, social, economic and political
activities’ (Gbadegenish, 2019, p.55). Digital transformation is seen as a company-level transformation via the establishment of new technologies based on the internet (Schallmo et al., 2017), aimed to recreate the value chain and tap into the enormous potential of future markets (Adlmaier-Herbst & Schildhauer, 2017), which has a fundamental impact on society as a whole (Schallmo et al., 2017). Verhoef et al. (2019) view digitalization as a prerequisite for digital transformation. At the same time, some authors consider the abovementioned concepts interchangeable and thus, do not distinguish between them (e.g. Henriette et al., 2015; Morakanyane et al., 2017). In this paper, I refer to the term ‘digitalization’ as the term is more relevant to the reality of digitalization of SMEs, where basically some parts of the business are digitally altered.

SMEs are known to differ from larger companies in terms of the implementation, use and management of IT (Raymond, 1984). Smaller companies usually do not have long-term strategies for digital transformation (Eller et al., 2020). Overall, the rate at which SMEs embrace digital technologies is mixed (Li et al., 2018). Apart from some innovative startups and SMEs from the tech sector, there is a large ‘missing middle’ of more traditional SMEs that lags (Kergroach, 2020). Digitalization of SMEs is constrained mainly by its limited awareness about the potential benefits of digital technologies implementation (Kergroach, 2020); resource limitations, including financial, human and IT resources; lack of digital skills and capabilities among its managers and employees (Rahayu & Day, 2015).

Overall, digitalization offers number of benefits to smaller companies, including cost reduction, time and resources saving (Kergroach, 2020), which have a positive effect on their performance and competitive advantage (e.g. Eller et al., 2020; Li et al., 2018). However, the implementation of digital technologies in SMEs is constrained mainly by limited resources and a lack of competencies in the field of IT (Kergroach, 2020).

### 2.2 Digitalizing HRM

In the context of overall business digitalization, the role and the impact of HRM is recognized in the literature (Jäger&Petry, 2018). More specifically, the role of HR departments is described as double in the digitalization process (Thomas, 2020). From the one side, it is a core function of a firm that facilitates digitalization by providing
skilled employees, organizing necessary learning for personnel, and contributing to innovation fostering corporate culture. In other words, it drives digitalization as a change agent (Ulrich, 1998). At the same time, an HR function is a subject of digitalization by itself. The latter became possible due to the rapid Internet development during the last four decades and overall business digitalization: organizations have increasingly adopted various digital technologies into their HR domain (Marler & Parry, 2015; Strohmeier, 2009). The scientific interest in the topic has been growing accordingly (e.g. Ruël et al., 2004; Bondarouk et al., 2009, 2011, 2014, 2016, 2017; Marler, 2009; Marler & Parry, 2016). ‘e-HRM’ is the most widely-used term in existing research to define a broad scope of digital tools applied in HRM domain (Bondarouk, et al., 2016; Strohmeier, 2007). Bondarouk & Ruël (2009) offered an integrated definition of e-HRM as ‘an umbrella term covering all possible integration mechanisms and contents between HRM and IT, aiming at creating value within and across organizations for targeted employees and management’ (p. 507).

Indeed, digitalization affects different HR functions and processes. Although there is no consensus in existing research about the general framework that shows how technologies can be used to take full advantage of HR (Bondarouk, 2011), professional surveys (e.g. CedarCrestone, 2014) distinguish several most commonly used e-HRM application. Administrative and Workforce Management applications are widely implemented in payroll, record-keeping systems and time management. Service Delivery applications are used for self-service transactional services. Strategic HR applications mainly applied in talent acquisitions, e-learning, performance management, succession planning and workforce planning (Bondarouk, 2011).

An implementation of the abovementioned and other relevant e-HRM applications is motivated by administrative and strategic benefits expected from such implementation which are recognized in the literature (e.g. Bondarouk, 2011; Strohmeier, 2009). e-HRM promises to provide cost reduction, service improvements, and creating additional value to an organization (Ruël et al., 2007). Overall, there is an agreement in the literature regarding the potential benefits of HRM digitalization, however, some of them are still disputable. One of the examples is ongoing debates on the shift of HR role to more strategic as a consequence of digitalization (Marler & Fisher, 2013; Parry, 2011). Some
authors argue that instead of focusing on more meaningful tasks for the business and being empowered to provide more value to the organization (Gardner et al., 2003), HR professionals are forced to spend more time on IT-related activities and on developing related competencies (Bondarouk et al., 2017). Moreover, some studies argue for less efficiency of e-HR tools in comparison with conventional ones. For instance, Feldman & Klaas (2002), McManus & Ferguson (2003) demonstrated that the Internet is less effective than personal networking in yielding appropriate applicants. However, overall, e-recruitment has demonstrated a higher efficiency in comparison with conventional methods (e.g. Poorangi et al., 2011). To sum up, current research predominantly considered e-HRM as more preferred to conventional HRM (Strohmeier, 2009).

2.2.1. Digital-HRM implementation environment for SME

The term ‘implementation’ in the context of digital technologies and specifically e-HRM has received a wide range of definitions in the literature (Gottschalk, 1999). Most broadly defined, ‘the use of a new IT is the result of an implementation process’ (Bondarouk, 2011, p.5). Previously perceived more as a linear process (Currie & Galliers, 1999), it later gained recognition for its dynamism and complexity (Ciborra, 1999; Orlikowski, 2000). For this study, I appropriate the definition of e-HRM implementation offered by Bondarouk et al. (2016, p.104) as ‘a strategy and transfer process between an old (or non-existing) and a targeted e-HRM system’.

The implementation of HR digital tools in SMEs is shaped by the interplay of a complex set of factors (Burbach & Royle, 2014), which are discussed in the management literature (e.g. Bondarouk et al., 2017; Strohmeier, 2007) at two aggregative levels: the micro and the macro-meso. For the further literature review, I group factors in the three following categories: referring to the individual-, firm-level, and environmental context-specific factors. The latter is motivated by the findings of the studies of e-HRM implementation in developing economies, stating that the implementation in this context is challenged by the complexity of the legal, political and economic system (Bondarouk et al., 2016) as well highly influenced by national culture (Panayotopoulou et al., 2010). Strohmeier (2009) stated that theoretical groundings are a central condition of any progress in a field of e-HRM. Thus, before reviewing each group of factors that shape HRM digitalization...
in SMEs, a theoretical foundation will be placed aiming at explaining the underlying mechanisms.

2.3 Dynamic managerial capabilities theory

The role of managers in organizations has long been of interest within strategic management research field (Johnson et al., 2007; Mintzberg, 1978). This role has been of primary interest to researchers in dynamic capabilities over recent years (Johnson et al., 2007). The dynamic capability view (Teece et al., 1997; Teece, 2007A) originated from the resource-based view of a firm (RBV) and describes how companies can sustain and increase their competitive advantage in a rapidly changing environment (Ambrosini & Altinas, 2019). In a relatively static environment, the flexibility of organizational routines might be sufficient to provide better outputs and assure a competitive advantage (Zollo & Winter, 2002). However, in case of more significant environmental changes, restructuring the resource base may be necessary (Eisenhardt & Martin, 2000; Teece, 2007). SMEs in developing economies are operating in a fast changing and turbulent business environment due to the rapidly changing regulations, the transformation of human resources and other contextual factors (Roztocki & Weistroffer, 2011). Moreover, nowadays companies are facing rapidly transforming technological environment and are forced to cooperate with it.

The capability of an organization to adapt to the changing environment depends on both, existing routine dynamics and dynamic managerial capabilities (Bogodistov, 2015). The latter is of interest regarding the factors from individual levels which shape HRM digitalization in SMEs in emerging economies. Dynamic managerial capabilities are a particular type of dynamic capabilities (Martin & Clore, 2001). The capability may be defined as a set of decision options (Winter, 2003), but the role of managers might be broader than just a choice between provided options. Managers might be able to change routines: implement new patterns of action, acquire new resources, shift old resources, and change how resources should be used. Thus, managers are considered to be the pillars of dynamic capabilities (Teece, 2016).

Overall, dynamic managerial capabilities are defined as ‘the capabilities with which managers build, integrate and reconfigure organizational resources and competencies’
(Adner & Helfat, 2003, p. 1012). Latter involve three categories, namely, sensing, seizing opportunities and transforming the resource base (Teece, 2007A). Managers’ role is identified as twofold in this regard: an entrepreneurial role which refers to the ability to sense, seize opportunities and orchestrate resources, and a leadership role which related to promoting a new vision and values of the transforming organization. Sensing and seizing opportunities are associated with scanning, creating, learning, and interpreting activities and further making strategic decisions under the threat of uncertainty (Teece, 2007). In a rapidly changing environment companies are forced to look constantly for changes in market conditions as well as for new technological advancements (Nelson & Winter, 1982). New technologies may enable firm to create a new service or to improve existing ones, or to improve internal processes which lead to increased business performance and competitive advantage (Barney, 1991), which is relevant for digital HR technologies associated with increased firm’s performance (Chen et al., 2016).

Transforming the resource base refers to identifying opportunities, technology choices, and the firm's financial commitment to seize opportunities for growth and profitability (Teece, 2007A). Digital transformation of a firm and HRM transformation as its part cannot be executed without the transformation of a firm’s resource base: company’s executives need to reconfigure primarily the financial, human and technological resources of their firm to implement digital transformation strategies.

Among the main psychological and sociological underpinning foundations of DMC are managerial cognition, managerial social capital and managerial human capital.

Managerial cognition refers to managers' personal beliefs and mental models for decision-making (Adner & Helfat, 2003). It includes managers' knowledge and understanding of current events and predictions of future developments, which underlie their decision-making (March & Simon, 1958). It is also the framework that guides managers' acquisition of new information and knowledge (Cook & Brown, 1999). Thus, managerial cognition affects managers' sense of market changes and their subsequent adaptations to these changes. Managers with inert managerial cognition will fail to recognize the changes and update their managerial cognition, which could, in turn, obstruct their organizations' efforts to transform (Helfat & Martin, 2015). Another DMC foundation, managerial social capital, results from a manager’s network that allow to get access to the information and resources from external environments and thus, facilitate opportunities
sensing. Finally, managerial human capital refers to a manager’s skills and knowledge shaped by previous experience (Kor & Mesko, 2013), which may enable sensing the opportunities. Different managers have these capabilities to varying degrees, thus, some managers will be better in sensing new opportunities; some will establish more effective business models (Teece, 2018) and make smarter strategic decisions; some will be more successful in implementing and promoting strategic changes. This is of particular relevance concerning the role of individuals from the executive level in strategic decision making in SMEs, including decisions on HRM digitalization. Due to high centralization of the power in SMEs, owner-managers play an essential role in strategic decision-making there, including the decision on HRM digitalization as a part of overall business digitalization.

Regarding HRM digitalization, owner-managers with developed managerial cognition are more open to the implementation of new technologies and more likely would initiate or support them. Managerial social capital helps managers to obtain diverse information (Tsai & Ghoshal, 1998), which allows them to better sense market opportunities (Adler & Kwon, 2002). In this regard, managerial social capital may facilitate digitalization. A manager with diversified human capital, including knowledge, experience, skills will be more aware and more open to innovation and, thus, to HR digitalization. In its turn, managers with a shortage in these skills and resource areas are not able to drive digitalization in their companies (Li et al., 2017). Additionally, SMEs’ owner-managers are more ready to implement digital tools when they are aware of the benefits it provides to their business. In order to get such awareness, well-developed managerial cognition, managerial social capital and human capital which underpins dynamic managerial capabilities are necessary. Moreover, a manager has to create and facilitate an identity within the organization related to digitalization and promote innovative culture (Bouncken et al., 2019) which correlates with the previously identified leadership role. Thus, DMC theory provides a useful lens to view individual factors that shape the implementation of HR digital tools in SMEs.

2.4 Individual-level factors

Those assumptions of the dynamic managerial capabilities’ theory apply on the individual level and explain how individual factors influence the implementation of digital HR tools
in SMEs. Whereas capabilities can be analyzed at different levels, the managerial capabilities of SME entrepreneurs are particularly relevant for this study.

The leading role of owner-managers in a strategic decision-making process in smaller companies is recognized in the literature (Jones et al., 2018; Rahayu & Day, 2015). This is explained mainly by the tendency for SMEs to centralize from the perspectives of a structure (Nguyen & Waring, 2013). Digital HR tools implementation is defined as ‘a strategy for transferring between an old (or non-existing) and a targeted e-HRM system’ (Bondarouk et al., 2016, p.104). Hence, decisions on such implementation refer to strategic ones and, therefore, highly depend on owner-managers in the context of SMEs. According to Simmons et al. (2008) owner-managers primary motivation for these decisions, in its turn, is based on their awareness of the potential benefits of HRM digitalization for the business performance. The most relevant characteristics emphasized in the literature in this regard are owner-managers general ability and awareness in terms of IT and digitalization (Rahayu & Day, 2015), owner-managers innovativeness (Qirim, 2008), overcoming resistance to change (Stone, 2012), strategic vision (Stone, 2012); IT experience (Rahayu & Day, 2015).

In a situation where a company allocate HR function to a separate department, the characteristics of HR professionals also influence the HRM digitalization process. Indeed, the importance of the role of HR executive in HRM innovations is recognized in the literature (Marler, 2009). More specifically, the more former is aware of the potential opportunities of HR digitalization and views it favourably, the bigger chance for digitalization push from this side. Hence, similar characteristics of HR executives as those described for owners-managers are to be emphasized.

To sum up, digitalization is more about management than about technology (Bondarouk et al., 2017). The positive attitude towards HRM digitalization by owners-managers and/or HR executives as main strategic-decision makers in SME in this regard is one of the most important factors from the individual level that shapes the digitalization of the HR domain. It determines to a great extent how and whether e-HRM will be used (Bondarouk & Brewster, 2016). This, in its turn, mainly depend on top executives general
awareness and abilities in terms of IT and digitalization (Rahayu & Day, 2015) which is underpinned mainly by their managerial social and human capital.

2.5 The resource-based view of the firm

The resource-based view (RBV) from the strategic management theories domain provides a useful lens through which to view SME digitalization and specifically HR digitalization at the organizational level. It has been widely used in information system research in SMEs to identify connections and capabilities (Lonial & Carter, 2015; Welsh et al., 2015). In general, the RBV is applicable for understanding how companies achieve a sustainable competitive advantage (Barney, 1991). The theory posits that a firm derives competitive advantage through the combination of valuable, rare, imperfectly imitable, and non-substitutable (VRIN) resources and their exploitation is supported by the corresponding organization (Barney, 1991; Barney et al., 2001). It emphasizes the role of internal resources of the firm as sources of competitive advantage.

Both humans and digital technologies may be viewed as the resources of an organization with the potential for a competitive advantage (Eller et al., 2020). As for human resources, properly selected, well-trained, and motivated personnel or the so-called ‘human capital pool’ (Wright et al., 1994) is highly important especially for SMEs and may constitute a source of competitive advantage. IT improves business performance when it is combined with other resources (Neirotti et al., 2017). Thus, digitalized HRM, and its sub-functions like e-recruiting, e-learning etc., then can be explained as contributing activities that provide the firm with human resources that fit VRIN characteristics. For instance, automated and digitalized recruitment allows to increase the speed, decrease the cost and improve the quality or recruitment process for a company e.g. (Strohmeier, 2007), which contributes to enhances firms’ performance and competitive advantage. Moreover, RBV considers the strategic reorientation of HR professionals: digital technologies allow to free HRs from routine tasks and to use the freed-up time on more strategic tasks, which, in its turn, are more valuable for business in terms of creating sustainable performance and creating competitive advantage (Strohmeier, 2007).

Managers can create an economic rent for their firm by being more efficient than their competitors in the selection of human- and IT resources, or by using these resources more
efficiently (Makadok, 2001). For example, Poorangi, et al. (2011) demonstrated that SMEs which applied e-HRM recruited more high-skilled workers and had lower recruitment costs in comparison with those which did not. Moreover, a firm may apply the combination of various e-HRM practices (e.g. e-recruitment, e-learning etc.), each of which contributes to its increased competitiveness. This combination may be difficult or nearly impossible to imitate for its competitors and, thus, provides this firm with a sustainable competitive advantage (Lado & Wilson, 1994). Thus, the latter may be reached rather by creating unique IT resources and skills (Mata et al., 1995). Bharadwaj’s (2000) classified IT resources and skills as comprising mainly of physical IT (e.g. infrastructure computers, communication technologies etc.), human IT resources (managerial and technical IT skills), intangible IT-enabled resources (e.g. functionality, information, and customer orientation). While physical IT resources may be easily replicated by competitors, human- and intangible IT resources are more difficult to imitate (Chen et al., 2016) and thus, the latter may constitute a source of sustainable competitive advantage.

Overall, SMEs differ in their ability to develop these resources appropriately (Nevo & Wade, 2011) as well as to use these resources in a consistent manner (L’Écuyer & Raymond, 2020). Digitalized HR function may be considered by a company as a source of sustainable competitive advantage.

2.6 Firm-level factors

Those assumptions of the resource-based view of the firm theory applied to the firm-level and explain how firm-level factors influence the implementation of digital HR tools in SMEs. Firm or organizational level refers to the nature of a firm and its resources or characteristics of the firm that might influence the implementation of digital technology. Various factors from this level are identified in the literature in the context of HR digitalization (Bondarouk et al., 2009; Hussain et al., 2007; Strohmeier and Kabst, 2009). To start, several studies identify resources availability or sufficient resources as one of the keys for digitalization in general and HR digitalization in particular (Stone, 2012; Thomas; 2020). The most important in this regard are time, money, and personnel available for the implementation (Alam et al., 2016; Thomas; 2020). This is especially relevant for SMEs which are known as being limited in their resources. Hooi (2006) identified a lack of financial resources as the main constraints on the implementation for
SMEs. Bondarouk et al. (2016) in their study of e-HRM adoption in developing economies context found that the availability of resources played a crucial role in e-HRM implementation.

Another factor is the organization’s size (Ball, 2001; Stohmeier & Kabst, 2009). For instance, Ball (2001) demonstrated that organizational size was a clear determinant of whether an organization implements a Human Resources Information System (HRIS) and in which configuration. According to Ball (2001), smaller companies are less likely to implement HRIS due to high implementation cost, which correlates with a lack of available financial resources. Indeed, firm size is related to the ability of a business to provide certain resources and, thus, the larger the company, the greater its ability to provide certain resources, and the more likely the adoption of new digital technology (Zhu et al, 2006).

Then, organizational or corporate culture plays an important role in the implementation (Lippert and Swiercz, 2005; Sheu et al., 2004). The more open and tolerant organizational members towards innovation, the easier the implementation of HR digital tools. In other words, the introduction of e-HRM is likely to meet less opposition if the existing culture emphasizes innovation. Power distribution is mentioned as important in this regard (Bondarouk, 2011). In its turn, an organization’s culture is affected by the national culture in which business operates to a high extent (Dasgupta, et al.,1999).

Furthermore, the role of organizational structure and processes, including a variety of control systems, centralization of decision making, standardization of policies and procedures, the level of formalization (Rahayu & Day, 2015) as well as the structure and configuration of an HR department are emphasized as shaping the implementation process (Strohmeier & Kabst, 2009).

The next group of factors from a firm-level that determine HRM digitalization refers to the current IT infrastructure and technological readiness of a firm which can be defined as the extent to which the technology infrastructure, relevant systems and technical skills in business can support e-HRM implementation (Hooi, 2006; Ruel, 2004). Overall, a robust IT infrastructure and well-developed digital skills are identified as highly
important for the successful digitalization of a business. Additionally, cooperation between IT and HR departments is also of importance (Panayotopoulou et al., 2010). To be mentioned, IT infrastructure is less advanced in most companies of developing countries (Hooi, 2006).

Among other influential factors which are mentioned in the literature on e-HRM implementation are sector/industry (Panayotopoulou et al., 2010; Strohmeier & Kabst): the most digitized companies are from the IT and telecommunication industry (Thomas; 2020); top management support, their change management and overcoming/avoiding resistance to change (Stone, 2012); effective communication and stakeholder involvement (Stone, 2012); and even firm performance (Kossek, 1987). However, Bondarouk & Brewster (2009) called for improving e-HRM research in terms of its interaction with firm-level factors.

2.7 Institutional theory

SMEs are faced with a range of institutional, competitive as well as internal pressures. Institutions related to the social, legal, political and economic systems of society (Burbach & Royle, 2014). These systems are socially constructed by social actors over long periods and, thus, are institutionalized (Scott, 2014). Institutional theory helps to conceptualize how SMEs respond to these conflicting forces and how they implement business practices (including those of e-HRM) across diverse institutional settings (Burbach & Royle, 2014). Institutional theory is of particular benefit in assessing the effect of IS projects in multiple institutional settings (Weerakkody et al., 2009).

An institutional theory emphasizes that organizations are not purely rational systems for producing goods and services that adapt to an environment of consumers, suppliers, and competitors (Burbach & Royle, 2014). For most organizations, the crucial context is that of the organizational field, and critical actors within the field include regulators, professional associations and the media. For most organizations, the critical context is the organizational area and the ‘institutional infrastructure’ which include important actors in this area such as regulators and professional associations. The latter interprets and monitors compliance with, the socio-cultural rules of the game (Hinings et al., 2017).
From an institutional perspective, organizations cannot be understood without taking account of the influence of this institutional context. Organizational decisions are not driven purely by rational goals of efficiency but also by social and cultural factors and concerns for legitimacy (Kakeshita et al., 2005). Institutions are transported by cultures, structures and routines and operate at multiple levels. The theory posits that firms become more similar due to isomorphic pressures and pressures for legitimacy (DiMaggio & Powell, 1983). This means that firms in the same field tend to look similar over time, because pressure from competitors and customers encourages them to copy industry leaders. For example, rather than making a purely internally driven decision to adopt e-HRM tools, firms are likely to be induced to adopt and use e-HRM by external isomorphic pressures from competitors and the government. Moreover, companies are forced to tailor their HRM and, thus, e-HRM policies and practices to suit the cultural, societal and legislative environment of the country where they operate in order to achieve business success and efficiency (Farndale et al., 2009). Hence, this study draws on institutional theory to account for broader factors of environment and policy that play a role in the scope of e-HRM tools implementation.

2.8 Content-specific environmental factors

SMEs are influenced by a range of institutional, competitive and internal pressures. More specifically, external factors such as regulations or competitive pressure within an industry, the country where the company is based, the culture as well as legal requirements influence the adoption of IT (Low et al., 2011; Olivas-Lujan et al., 2007; Panayotopoulou et al., 2010). Overall, it relates to social, legal, political and economic systems of society and national culture (Burbach & Royle, 2014). The emerging economies environment has the specificities that influence the business operating in it.

One strand of literature considers the opportunities that emerging economies potentially generate for business operating in this context. For instance, Roztocki & Weistroffer (2011) emphasized that developing economies’ environment potentially generate more new opportunities for business in comparison with developed ones. Among key enablers of that is rapid economic growth which results in increasing wealth of the population and, thus, growing consumption rate. At the same time, another strand of existing research focuses on the challenges that business faces in developing economies, such as high
turbulence, poor financial infrastructure, lack of governmental support, shortage of qualified labour resources, etc. (e.g. Rahayu & Day, 2015). Thus, it can be assumed that the environment in which companies operate differ significantly for developing countries in comparison with developed ones.

National differences are explained by institutional differences (Bondarouk & Brewster, 2016) and cultural differences (Aycan et al., 2000). Institutions and culture, in its turn, have an impact on e-HRM (Bondarouk & Brewster, 2016). Thus, content-specific factors may be viewed from two dimensions, namely regulations and culture. Regulations are one instrument for governments to reach their goals. Some scholars include information sharing, promoting, taxing and controlling in the list of ‘soft’ regulation (Edelman & Suchman, 1997; Mellahi, 2007). The regulations can also be initiated or developed by other parties than the government, like the social partners through, for example, collective agreements (Bondarouk & Brewster, 2016). In developing countries regulations are changing fast and unpredictable (Roztocki & Weistroffer, 2011). The role of regulations and, more specifically, legal contexts and their restraining or encouraging influence on e-HRM implementation should be considered (Looise, 2015; Strohmeier, 2009).

The cultural lens helps to clarify how the cultural background of factors involved in e-HRM projects play a role in shaping e-HRM. The national culture in which a company operates appears to have a major impact on an organization’s culture (Dasgupta et al., 1999; Rao, 2009; Thatcher et al., 2006). For example, Ruta (2005) in her study of HR portal implementation, emphasized that one should be aware of national culture and underscores the necessity of culture congruent, local implementation plans. Cultural values and shared beliefs and norms as key attributes of corporate culture, in its turn, influence organizational members’ attitude towards innovation. In this regard, if the cultural values are contrary to the e-HRM implementation, cultural changes may be required to adopt new shared beliefs (Claver et al., 2001). And opposite, innovative organizational culture facilitates digitalization. Agourram & Ingham (2007) found that people from cultures with differences in power distance and uncertainty avoidance define IS differently, and Straub (1994) linked the need to avoid uncertainty with the use of expressively rich technologies. Overall, culture should not be ignored in the
implementation of e-HRM and therefore, many conditions need to be met (Claver et al., 2001).

2.9 Integrated research model

The section is finalized with the holistic research model for the identification of factors that shape digital HRM implementation in SMEs in developing countries. The model is developed based on the synthesis of the relevant literature in the field discussed above. The model combines the western perspective with the factors specific to the context of developing economies. The proposed model is based on the integration of theoretical perspectives, including the resource-based approach, dynamic managerial capabilities theory and institutional theory.

Since institutional factors are multifaced and have their national specificities, they may, in its turn, be reflected on how factors from the individual- and firm-level shape HR digitalization in the context of the specific country. To start with governmental regulations, the governmental regulatory environment in Russia may be overall characterized as fast-changing (Roztocki & Weistroffer, 2011) and, inheriting the Soviet past, also highly bureaucratic. Thus, labour legislative pressure and fluctuating governmental reporting requirements may make the digitalization of some HRM dimensions challenging. Moreover, the lack of support from the state in terms of digitalization makes SMEs rely solely on their resources which are limited in the case of smaller companies, and thus, hinder HR digitalization which requires financial investments and IT knowledge.

To continue with, Russia is experiencing unprecedented political and economic turbulence since 2014 which has been mainly caused by the consequences of the military conflict between Russia and Ukraine initiated by the Russian government as well as the significant drop of the oil prices at the world market. The annexation of Krym, a Ukrainian territory at the Black Sea coast, executed by Russia was widely criticized by European Union and the USA and has resulted in significant deterioration of the trade and political relations with these countries. Further sanctions limiting Russian goods import to the listed countries as well as retaliatory sanctions harmed the Russian economy as well as have forced many Russian companies to cease or to refocus their activities.
Along with the losses from the decline in oil export earnings it has resulted for Russian in the shortfall of up to 10% of annual GDP during 2014-2017 (Bloomberg, 2018). All these accompanied with the corruption and racketeering which dates back to the criminal past of the Russian 1990s, contributes to an inherent turbulent environment with highly unpredictable business reality (Roztocki & Weistroffer, 2011). This, in its turn, negatively affects strategic decision making, forcing managers to focus on solving immediate problems rather than implementing long-term strategies. Successful HR digitalization requires strategic planning which is lacking in the context of Russian SMEs. Considering the abovementioned and linking it with the individual level, even top executives with high digital awareness and relevant IT skills are constrained by Russian-specific institutional features in terms of HR digitalization. Moreover, obtaining relevant IT skills is more challenging in Russia due to the overall lower level of education in comparison with those in developed countries.

Another institutional issue for Russia is a poor functioning labour market. HR professionals complain about the shortage of qualified labour force with the necessary digital skills. This is mainly caused by a poor educational system that does not catch the relevant business needs, including the needs of the market in terms of digitalization. This is especially challenging for SMEs which are competing with bigger companies for the best talents. To add, high staff turnover typical for emerging economies as well as nepotism (‘blat’) may negatively affect firms’ resource base, especially, financial and human resources, (Adizes, 2017) and thus, hinder HR innovation.

Furthermore, the national culture in which a company operates has a major impact on a firm’s corporate culture and thus, need to be considered when implementing e-HRM (Dasgupta et al., 1999; Hofstede et al., 2011). Uncertainty avoidance (Shane et al., 1995) and performance orientation (Jackson and Harris, 2003) are defined as important cultural elements which influence people’s attitude towards new IT implementation (Agourram&Ingham, 2007). The combination of high uncertainty avoidance with a low-performance orientation that modern Russian culture has inherited from its totalitarian past results in overall lower acceptance of changes and innovations, including the implementation of new technologies. Thus, the Russian national culture specificity which has a strong impact on the corporate culture of the firms operating in this context may be
characterized rather as constraining for the HR digitalization process. The Table with the detailed description of content-specific factors and their influence on HR digitalization on both the individual- and firm-levels may be found in Appendix 1.

Figure 1 Research Model

<table>
<thead>
<tr>
<th>Individual-level factors</th>
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<tbody>
<tr>
<td>• Top-executives’ awareness and abilities in terms of IT and digitalization</td>
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<table>
<thead>
<tr>
<th>Firm-level factors</th>
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<tbody>
<tr>
<td>• Financial and human resources availability</td>
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<tr>
<td>• Organization’s size</td>
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<tr>
<td>• Corporate culture</td>
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<tr>
<td>• Organizational structure and processes</td>
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<tr>
<td>• IT infrastructure</td>
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<table>
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<tr>
<th>Environmental context-specific factors</th>
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<tbody>
<tr>
<td>• Bureaucracy and overregulation from the government</td>
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<tr>
<td>• Lack of governmental support in terms of digitalization</td>
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<tr>
<td>• Poor functioning labor market</td>
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<tr>
<td>• Nepotism, corruption</td>
</tr>
<tr>
<td>• Resistance to change as a part of national culture</td>
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Source: Own creation
3. Methodology and Empirical Method

This section provides an overview of the methodological foundations for this thesis and the motivation behind it. It covers the choices made for the research philosophy, approach, strategy, design, data collection and data analysis. Furthermore, research credibility and ethics will be discussed and justified.

The methodology of the research could be defined as grouped combinations of techniques, including methods and procedures in preparing to conduct the study, collecting data, and organizing and analyzing the data (Easterby-Smith et al., 2018). A choice of methodology for concretely study should be reasoned and explain why it would be the most beneficial for achieving the main objectives of the study.

3.1. Research philosophy

Research philosophy is an important part of the research methodology that enables a researcher to decide which approach is to be adopted and why, which, in its turn, is derived from research questions (Saunders et al., 2009). There are two important concepts within research philosophy, namely ontology and epistemology.

An ontology may be defined as a basic assumption the researcher makes about the nature of reality. Among various existing classifications, Easterby-Smith et al. (2018) identified four main approaches within social studies which are realism, internal realism, relativism and nominalism (Easterby-Smith et al., 2018, p. 66). The key difference between these approaches refers to the attitude of a scientist towards truth and facts: while realism presumes one single truth, relativism considers many ‘truths’, and nominalism propose that there is no truth at all. In this study, I am looking at HR-digital tools implementation in SMEs: a continuous and changing process that passes through the aspects of sensemaking by involved organizational members. Thus, my understanding of reality depends on the realities which are constructed by these individual members of an organization. This understanding derives from a relativistic view, which assumes that the facts depend on the viewpoint of an observer (Easterby-Smith et al., 2018, p. 67).
In terms of epistemology, which is defined as the assumptions about the best ways of inquiring into the nature of the world (Easterby-Smith et al., 2018, p.64), relativists ontology refers to social constructionism. From a constructionist position, the researcher aims to gather multiple perspectives and to understand the meanings that are socially constructed by people (Arnbor & Bjerke, 1996). In general, among various existing classifications in terms of epistemology (e.g. Creswell, 2013; Gray, 2018), Easterby-Smith et al. (2018) identified four epistemological foundations, namely positivism and social constructionism with the weak and strong versions of each. While positivism proposes an existing social world in which properties could be measured by objective methods, social constructionism, in contrast, suggests that reality is socially constructed and determined by people rather than by objective factors, which is relevant for this research. Indeed, for this study I consider every organization member’s perspective as relevant, and, thus, view the reality as socially constructed by people. Moreover, from the social constructivists’ perspective, the rationale of the research is ‘what perspective have been covered and what are missing?’ (Easterby-Smith et al., 2018, p. 135). As stated in the Background section, there is explicit research about digital HR tools implementation and the factors which shape it in the context of larger companies in developed countries, however, the perspective of smaller companies in emerging economies is missing.

3.2. Research purpose and design

The proposed research design should be appropriate for achieving the aims of the research and answering formulated research questions (Easterby-Smith et al., 2018). The most important in this regard is to make decisions about what will be researched and how. The purpose of this research was formulated as ‘to explore how individual-, firm-level and environmental context-specific factors shape HRM digitalization in SMEs in emerging economies context with Russia as an example.’ And the research question as follows: Which individual-, firm-level, and context-specific factors and how do they shape digital HR tools implementation in SMEs in economies in transition presented by Russia as an example?

Overall, when classifying research by its purpose, it may be explanatory, descriptive, exploratory or may combine several purposes simultaneously (Saunders et al., 2009). The exploratory research design is widely used when limited information on the research
phenomenon is available and a researcher aims to obtain insights about the researched topic and gain a deeper understanding of it, which is relevant for this study. As mentioned before, this study is conducted within the area with nascent previous research specifically for the context of SME in developing economies. Moreover, the research questions of this study, ‘which’ and ‘how’, mainly aims to explore the phenomenon in the new context and to get a deeper understanding of it. Therefore, an exploratory research design has been applied for this study.

A qualitative study has been conducted as the most relevant for fulfilling the research purpose due to the following reasoning. First of all, in terms of ontology, qualitative study design corresponds with the relativist perception of the nature of reality, which underpins this research (Easterby-Smith et al., 2018). As well as it corresponds with the social constructionists’ epistemology perspective which aims to get a comprehensive understanding of the phenomenon. Secondly, qualitative research allows us to explore how things work and why context matters (Patton, 2015). As stated before, the main focus of this study is a contextual analysis of the factors shaping HRM digitalization in Russian SMEs within a multilevel framework and thus, exploring the context specificity is very important here. Moreover, exploring the cultural aspect of importance for this study, and the qualitative research is known as particularly useful for obtaining culture-specific information about the values, opinions and behaviour of the groups (Gentles et al., 2015). A qualitative study supposes non-numeric data collection and generation. Therefore, in-depth interviews were conducted with HR professionals and owners/managers of 10 Russian SMEs to explore their perception of e-HRM tools implementation in their companies, and, specifically, the factors from various levels which shape this process. This will be discussed in details in the related chapter.

It is to be mentioned that qualitative studies have their limitations, which should be considered by a researcher. First of all, research findings may not be generalized. However, the findings from a qualitative study may provide a fruitful starting point for further quantitative investigation. Thus, further quantitative study on the phenomenon may be suggested for future research, however, it is important to consider the limitation of the context related to the low level of trust in Russian society. Inheriting the Soviet autocratic system with its high level of surveillance and control from the state, people are
still sensitive about sharing information about their companies in a written way (e.g., responding to questionnaires), being uncertain to whether the data is being collected by a researcher or by governmental supervisory authorities. Thus, a low response rate may be expected as well as low veracity of the answers. In order to cope with it, it may be suggested that a researcher visits respondents and hand in a questionnaire in person instead of doing it by email. Personal communication provides more trust and motivates respondents to be more willing to share their experience openly.

Another limitation of the chosen research design is that a researcher plays an important role in data interpretation and, thus, the results are influenced by the researcher's personal biases. The steps I have taken as a researcher to address these limitations will be discussed in the details in the ‘Research quality’ section of this study. Finally, data collection and its further analysis may be time-consuming, and thus, well-planned timing was crucial for me to perform this type of research.

### 3.3. Research approach

There are several approaches to qualitative research to be considered by a researcher, namely a deductive, an inductive and an abductive approach (Alvesson & Skoldberg, 2018; Saunders et al., 2016). A deductive approach seeks to obtain information from the existing literature for subsequent testing and confirmation during the research. In an inductive approach, a new theory is generated from study findings. The combination of these two approaches which is bridging the gap between them is known as an abductive approach.

An abductive approach enables a researcher to move back and forth between theory and empirics and provides the connection between obtained empirical insights and existing knowledge from the literature (Alvesson & Skoldberg, 2018). This study follows an abductive approach which was considered as the most relevant for reaching the research aim. Accordingly, at the first stage of this study, the research framework was developed based on the synthesis of the relevant literature in the field. At the second stage, empirical data was gathered through in-depth interviews and further analyzed, using a general inductive approach. Finally, the initial research framework was modified based on empirical data supported by already existing knowledge, which resulted in the new model.
of relevant factors from various levels which shape digital HR tools implementation in the context of Russian SMEs. Overall, it provided the connection between obtained empirical insights and existing knowledge on HRM digitalization.

3.4. Data Collection

3.4.1. Sampling Technique

A sampling technique is an integral part of the data collection. A sample itself could be defined as a subset of the population from which inferences are drawn based on evidence (Easterby-Smith et al., 2018). Sampling is a process in which a predetermined number of observations are taken from a larger population. From the data collection perspective, the population includes individuals who have the information that the researcher aims to obtain to answer the formulated research question. Overall, sampling techniques may be classified into two categories which are probability sampling and non-probability sampling. While the former considers that it is possible to state the probability of any member of the population being sampled (Easterby-Smith et al., 2018), the latter supposes a non-random selection of individuals from the population which is determined by the researcher.

The purpose of this study was to gain insights into the digital-HR tools implementation process in Russian SMEs and the factors from various levels which shape it. In this case, it was reasonable to interact with individuals who had extensive experience and knowledge about this topic. More specifically, it should have been people with experience in digital HR tools implementation in the context of Russian small and medium-sized companies. Considering the structure and the specificity of SME, key people who are involved in the strategic decision making for the HR function, including digital strategies implementation, are HR professionals and owner-managers. Therefore, to explore both perspectives according to constructionism research philosophy, it was important to include both of them in the sample. Moreover, as discussed in the Literature review section, previous research has demonstrated that top executives characteristics may play a significant role in the implementation. Therefore, it has been decided to apply a purposive or judgmental sampling method to acquire participants for the data collection (Saunders et al., 2009). Purposive sampling refers to a non-probability sampling approach
and suggests that participants are selected based on their knowledge about the researched phenomenon (van Manen, 2014).

The purposive sampling method had been widely applied within the qualitative studies in the field of digital HRM. For instance, Burbach & Royle (2014) applied this technique in their study on the institutional determinants of e-HRM diffusion success in the context of subsidiaries of a multinational corporation. The interviewees were selected based on their information potential: 15 key stakeholders from various levels of positions in the German and Irish subsidiaries of a single US-based corporation, each with extensive experience with electronic HRM. Another example is the exploratory study in a governmental organization on the strategic value of electronic human resource management by Bondarouk & Ruel (2013). Thirteen interviewees were selected based on the extensive experience in digital HRM along with their involvement in strategic HR. The participants represented both HR IT departments. Njoku et al. (2019) applied purposive sampling in their study on the contribution of digital tools into sustaining competitive advantage for a business. Fourteen interviewees were chosen including both HR professionals and Line managers within a Public Sector organization in the UK which had implemented an HR software system before. The key idea behind the data collection was to get both HR and non-HR perspective from the organization’s employees who had extensive experience with the system adoption.

The purposive sampling technique is especially useful in such situations when a researcher uses a small sample with more informative individuals (Saunders et al., 2009). Within the framework of this research, limited in time and resources, the choice of a small sample with informative individuals was considered optimal. Thus, ten participants with relevant experience were finally selected. All of them were working at a Russian small and medium-sized business with 30-200 employees and had experience with the implementation of digital HR tools in this context. Geographically, they are located in several Russian cities: Moscow, which is the capital, Saint-Petersburg, the second-largest city in the north-western part of Russian close to the Finnish border, and Kaliningrad, the Russian enclave between Poland and Lithuania. The companies are operating in various sectors, namely IT, B2B trade, logistics, beauty services, engineering. The study does not focus on a specific industry. The sample consisted of both men and women between the
age of 28 and 42: two owners-managers and eight HR professionals who are responsible for either all HR processes within the company (in smaller companies) or specific HR processes (in medium-sized companies). The participants’ information is summarized in Table 2.

The applied sampling method is not without limitations. First of all, judgmental sampling may be characterized as lacking objectivity. As a non-probability sampling method, it cannot be viewed as representative of the entire population (Saunders et al., 2009). However, as the aim of the study was to gather various perspectives of individuals involved in HR digitalization strategic decisions, the sample may be considered as representative of the population of interest, which are Russian SME’s owner-managers and HR professionals. Secondly, purposive sampling proposes the use of a researcher’s judgement to select informative individuals. Thus, a researcher’s awareness and extensive knowledge are required to fulfil the sample quality. In this regard, before selecting participants for the interviews, I have contacted the network of HR professionals in Russia in order to collect information about SMEs which have introduced digital HR tools and ready to share this experience. This information was possible to get from a personal network of the author rather than from secondary sources (e.g. Internet) as information on internal HR digitalization of smaller companies is not widely placed at public sources (e.g. not placed on a company website).

3.4.2. Data collection technique

Among available methods of qualitative research, in-depth interviews were chosen as an effective tool to discover the attitudes and opinions about digital HR tools implementation in SMEs. Interviews are defined as a reliable method to gather research data (Kahn and Cannell, 1957) which can provide deep insights into research phenomenon (Easterby-Smith et al., 2018). From the level of formality, interviews may be structured, semi-structured and unstructured. The semi-structured format of the interviews for this study has been chosen due to the following reasons. First of all, it provides reliable and comparable qualitative data about the research topic. Secondly, it allows developing an understanding of the research topic as well as leaves a space for getting additional insights into it. Most of the questions were open-ended which, in its turn, provides freedom for interviewees to express their opinion in their own words and, again, makes it possible for
the researcher to get additional insights about the research topic. The structure of the Interview guide will be discussed in the next section of the paper.

Overall 10 interviews were conducted, from 62 to 85 minutes each. As all the participants were Russians, all the interviews were held in Russian in order to enable interviewees to express their thoughts in a maximum clear and comprehensive manner. The interviews were transcribed and translated into English afterwards. All the interviews were taken remotely using Skype or Zoom due to the governmental recommendations about unnecessary travelling restrictions during the ongoing pandemic of Coronavirus. However, remote interviews have several advantages over conventional ones. They provide better flexibility both for the participant and the researcher from the perspectives of time and location, as well as reduces the cost and save time on travelling to the venue. Moreover, interviewees tend to demonstrate more openness and willingness to share information in cyberspace in comparison with offline interaction (Easterby-Smith et al., 2018). Thus, more insights may be extracted from online interviews. However, this format is not without limitations. One of the disadvantages of online interviews is the higher possibility for the interviewees’ potential destruction caused by external factors. Moreover, technical issues may occur such as poor internet connection or problems with the software. Finally, it may be challenging for the interviewer to establish a rapport and to build trust with the interviewee without the use of physical clues and nonverbal communication.

As for ethical considerations, all the participants were asked for permission to record the audio and were informed about the further transcription of the recordings as well as about the anonymity provided for their names as well as for companies’ names. Moreover, at the beginning of the conversation, the main purpose of the research was disclosed to the participants and the format of the interview was explained.

Finally, common limitations of interviewing as a method of data collection are to be mentioned. First of all, holding interviews, transcription and translating them and further analysis may be highly time-consuming for the researcher. In this case, online formats of interviewing are helpful due to time savings on the researcher’s travelling to the interview venue. Secondly, due to the time and resources constraints, in-depth interviews can be
conducted only with a small sample of participants. Therefore, obtained findings cannot be generalized. However, the results may provide useful insights for further quantitative studies. Additionally, the interpretation of the findings may be influenced by the researcher’s personal opinion and background and thus, bias. In order to avoid it, a researcher is to go through the data many times and try to stay objective.

3.4.3. Interview guide

In semi-structured interviews which have been chosen for this study, a list of preliminary composed questions is used by the interviewer in order to guide an interview, however, these questions can be addressed in a rather flexible manner (Easterby-Smith et al., 2018). The detailed interview guide for this research may be found in Appendix 2. Overall, the list of questions consists of three main parts. The first part includes several opening questions aimed at getting familiar with the interviewee’s professional and educational background. The key aim of the opening part is to establish a rapport with the participants which contributes to making the further interview process smoother and more comfortable for the interviewees. The second part of the guide contains the number of questions focused on the research topic. Following the research framework, these questions are divided into three categories, each related to individual-, firm-level and content-specific factors, indicated in the framework. This part aimed at in-depth exploring of participants’ experience and perception of various factors which shape the HR digitalization process. In the final – concluding part - interviewees have an opportunity to share additional information about the research topic (Easterby-Smith et al., 2018).

3.4.4. Operationalisation

Topic № 1 dealt with the general questions about HR digitalization. This specific topic was aimed at gaining a better understanding of the HR digital aspect of the company as well as the details on how they deal with these matters. The examples of the questions are the following:

-Which digital tools/technologies in the field of personnel management are currently used in the Company? Describe your experience and impressions of these tools. How and
who made the decision to implement these tools/technologies? What was your role in the described implementation process?

*Topic № 2* dealt with the individual factors which affect HR digitalization in the Company and was focused on revealing such factors. The examples of the questions are the following:

- Please describe your overall experience in IT / digitalization. How would you characterize your attitude towards digital technologies and digitalization in general? Which benefits, in your opinion, does HR digitalization provides to business? Which of the benefits and why were important to you when making decisions about the implementation of digital technologies in HR in the company? What in terms of knowledge/skills/experience/connections has been useful to you in the implementation of these tools? How would you characterize your attitude to the introduction of changes/innovations in the Company as a whole?

*Topic № 3* dealt with the firm-level factors that influence the process of HR digital tools implementation and aimed at discovering such participants’ perception about this group of factors. Below are the examples of the included questions:

- What type of solutions (strategic or operational) would you consider the implementation of digital technologies in HR in the Company and why? How would you characterize the attitude of employees to changes and innovations? Which resources were required to implement digital technologies in HR (for example, financial, human, technical)? How would you rate the availability and quality of the above resources in the implementation process? Have digital technologies been developed/implemented in-house or with the involvement of contractors? Why was this method chosen, in your opinion?

*Topic № 4* dealt with the content-specific factors that shape HR digitalization. The aim of this section was to get insights into the influence of a wide range of factors from economical, political, legal areas, competitive environment, labour market, governmental relations, IT-vendor market etc. This section of the interview guide was inspired by the one developed by Ponomareva & Umans (2014) for their study «An integrative view on
managerial discretion: A study of a Russian firm in transition». However, it was adopted for the specific purpose of this study related to HR digitalization.

Some of the questions from this part are the following:

How, in your opinion, does the current legal regulation in the country affect the digitalization of HR? How does the economic situation in the country influence decision-making regarding HR digitalization in the Company? How would you assess the role of the state in the digitalization of small and medium-sized businesses and specifically in HR digitalization? How difficult is it to find employees in the Company with the required level of skills and competencies? How does the political situation in the country have any influence on decision-making regarding HR digitalization in the Company? How do key competitors influence decision-making on HR digitalization in the Company? How would you assess the market of providers of solutions for business digitalization in general and specifically HR digitalization?

The full list of interview’ questions related to each topic may be found in the Interview guide in Appendix 2.

3.5. Data Analysis

To proceed with the data analysis, all the interviews recordings were firstly transcribed. In general, several qualitative techniques are applicable to analyze textual transcripts of interview data. All the techniques aim at identifying and analyzing specific patterns within the text (King & Brooks, 2019). Among various existing methods of textual narratives analysis, thematic analysis was chosen for this study. According to Riessman (2005), the method emphasizes the content of the text and ‘what’ was said instead of ‘how’ it was said. Thematic analysis is a flexible form of data analysis and is particularly useful for exploring questions regarding participants experience and perspectives, and the factors that shape a particular phenomenon (Braun & Clarke, 2013). This is of relevance for this study considering its main aim at exploring the participants’ view of the factors shaping HR digitalization in a specific context.
More specifically, the general inductive approach described by Thomas (2006) has been applied for data analysis as a widely used approach in social science research. This type of analysis is guided by the evaluation object and research questions, however, the findings are derived from the raw data analysis rather than from the prior theoretical research model. In line with Thomas (2006), the analytical process was performed through five stages. At the first stage, the initial reading of the transcribed interviews was done. Specific text segments related to the research objectives were identified at the second stage. At the third stage, these segments were labelled with a shortcode or phrase in order to capture content and, create categories. Overlaps and redundancy among the categories were reduced and related labels were grouped into subthemes at the fourth stage. Finally, overlaps and redundancy among the subthemes were reduced and the subthemes were grouped into themes (Thomas, 2006). Thus, the key outcome of the analysis is the themes that are identified as the most relevant for the research purpose.

The method is not without limitations. The key limitation is that findings are shaped by the assumptions of the researchers who perform the data analysis (Thomas, 2006), which may lead to the lack of objectivity. In order to minimize it, I went carefully through the raw data several times to make sure that no meaningful information has been left aside. The subthemes and categories were reformulated and reconfigured several times. Clear links between the research objectives and the summary findings derived from the raw data were established and ensured to be transparent and defensible (Thomas, 2006).

3.6. Research Quality

A researcher needs to conduct valid and reliable research. To ensure the research quality, I referred to the following criteria offered by Lincoln & Guba (1985) to provide the trustworthiness of the research, namely credibility, transferability, dependability and confirmability, which will be discussed in the details further on.

3.6.1. Credibility

Credibility refers to the data representativeness from the view of both researchers and participants (Guba & Lincoln, 1994). To maximize the honesty of the data from my interviewees, all the efforts were put to create a comfortable and safe atmosphere for them. The purposes and frames of the research were communicated to them in advance.
clearly and straightforwardly. All the interviews were conducted according to the ethical standards described in more detail in the following section of this paper. Moreover, at the stage of the data analysis, I was going back and forth through the interviews’ transcripts to ensure that none of the relevant information was left out and included in the final template.

3.6.2. Transferability

Transferability refers to the extent to which the study can be applied to other contexts (Guba, 1985). For that researcher needs to provide an in-depth description of the data collection method applied for the study. Hence, I tried to provide sufficient information on the research strategy and, specifically, on how the data were collected. Transferability is not necessarily related to seeking generalization for any situation and context, which is rather challenging for qualitative studies with small samples, but about providing transferability to a specific context that matches the studied one. In this regard, the context for this study, namely Russian SMEs, was clearly defined in the beginning. The transferability of the results can be carried out in a context that is consistent with the context of this thesis.

3.6.3. Dependability

Dependability refers to the replicability of empirical data collection and analysis. For that, the research strategy and full description of the research methods were provided in the details in the related sections to ensure that the research may be repeated by other researchers in the future. However, as a researcher, I am aware of the limitations of qualitative research dependability. The research is dedicated to the rather novel and fast-evolving phenomenon of HRM digitalization in a rather dynamic context of an emerging economy. Moreover, the participants from interviewed companies were asked questions about their perception and experience with this phenomenon. Therefore, the results of the studies conducted based on the same methods described for this one may be different.

3.6.4. Confirmability

Confirmability refers to the degree of neutrality of the researcher during data collection, analysis, and interpretation. I understand that it is difficult, if not impossible, to remain completely objective in qualitative research. However, I make every effort to eliminate

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bias in the research process. For that, I made sure to ask open-ended and follow up questions during the interviews in order to dive deeper into each interviewee’s experience and perception of the topic. Moreover, I went back and forth through the audio and transcripts of each interview before starting to analyze the data in order to double-check that none of the important pieces of information has been missed.

3.7. Research Ethics

Ethical considerations are an important aspect of research and have to be considered by a researcher. In order to ensure ethical behaviour during the whole research process, I followed ten key principles of research ethics suggested by Easterby-Smith et al. (2018, p.157). The first six principles aim to protect the interests of the research participants, while the last four are focused on protecting the integrity of the research community (Easterby-Smith et al., 2018, p.157). These principles and measures are taken from my side as a researcher are discussed below.

1) Ensuring that no harm comes to the participants. It may refer to a physical or psychological negative influence on the participants. Thus, I ensured that participants do not face, for instance, stress or pain. For that, I aimed to create a positive atmosphere, demonstrating openness and establishing rapport with the participants both verbally and non-verbally during the interviews. Moreover, for the comfortability of participants, all the interviews were held in Russian.

2) Respecting the dignity of the research participants. All the participants were treated with maximum respect during the initial contact before the interviews and during the interviews themselves. I used the most correct and polite verbal expressions, aimed at making the participants feel respectful towards themselves in the process of our communication. Personal or sensitive questions were avoided.

3) Ensuring the fully informed consent of the research participants. During initial contact as well as at the beginning of each interview, the interviewees were provided with information about the purpose of the research, its format, the interview process and necessary information about myself as a researcher. Furthermore, in compliance with the requirements of the European Union General Data Protection Regulation 2016/679, fully
informed GDPR consent of research interviewees was provided before the interviews start. The template of the GDPR consent for personal data applied for this study may be found in Appendix 3 along with the template of the Participant Information Sheet in Appendix 4.

4) Protecting the privacy of the research participants. All the participants are guaranteed anonymity of their names and the names of their companies. This was extremely important in the research context due to the high sensitivity of the research participants which were commented on before.

5) Ensuring the confidentiality of the research data. Access to all the data gathered during the interviews will be provided only to the supervisors of this thesis and to the research community. No one else will be provided with access to this data.

6) Protecting the anonymity of individuals or organizations. In this research, the names of the companies, as well as the individuals who were interviewed, remain anonymous to protect privacy.

7) Avoiding deception about the nature or aims of the research. The defined purpose of the research was clearly and openly communicated to all the participants.

8) Declaration of affiliations, funding sources and conflicts of interest. None of mentioned was discovered and the participants were informed about that accordingly.

9) Honesty and transparency in communicating about the research. I ensured that all the sources used in this study were correctly referenced.

10) Avoidance of any misleading or false reporting of research findings. All the reported findings are based on the data gathered during the interviews.
3.8. Summary section

The table below (Table 1) represents the overview of the framework that was applied for this study and was described in the details in the aforementioned sections.

Table 1  Research Framework Overview

<table>
<thead>
<tr>
<th>Methodology section</th>
<th>Approach</th>
</tr>
</thead>
</table>
| Research philosophy | Ontology: Relativism  
                       | Epistemology: Constructionism |
| Research purpose    | Exploratory |
| Research Strategy   | Qualitative Research |
| Research approach   | Abductive |
| Research design     | In-depth interviews |
| Data collection     | Semi-structured interviews  
                       | Sampling: purposive |
| Data analysis       | Thematic analysis: general inductive approach |

Source: Own creation
4. Empirical Analysis

This section provides the empirical findings from the conducted interviews. It starts with presenting the information regarding conducted interviews. Further, obtained data are presented by themes and sub-themes followed by a summary of the key findings and linkage to the relevant research. Finally, an updated research model is presented and discussed.

4.1. Interviews’ summary

Ten interviews with a duration from 62 to 80 minutes each were performed, which amounted to a total of approximately 11.5 hours of conversation. The interviews’ information is summarized in the table below (Table 2).

Table 2  Interviews summary

<table>
<thead>
<tr>
<th>Name</th>
<th>Role</th>
<th>Industry</th>
<th>Date</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participant 1</td>
<td>HR lead</td>
<td>IT</td>
<td>19.03.2021</td>
<td>80 min</td>
</tr>
<tr>
<td>Participant 2</td>
<td>HR lead</td>
<td>B2B sales</td>
<td>22.03.2021</td>
<td>70 min</td>
</tr>
<tr>
<td>Participant 3</td>
<td>CEO</td>
<td>B2B sales</td>
<td>25.03.2021</td>
<td>65 min</td>
</tr>
<tr>
<td>Participant 4</td>
<td>HR manager</td>
<td>Logistics</td>
<td>30.03.2021</td>
<td>65 min</td>
</tr>
<tr>
<td>Participant 5</td>
<td>Owner</td>
<td>Beauty services</td>
<td>01.04.2021</td>
<td>62 min</td>
</tr>
<tr>
<td>Participant 6</td>
<td>HR specialist</td>
<td>B2B sales</td>
<td>02.04.2021</td>
<td>73 min</td>
</tr>
<tr>
<td>Participant 7</td>
<td>HR manager</td>
<td>Engineering</td>
<td>05.04.2021</td>
<td>72 min</td>
</tr>
<tr>
<td>Participant 8</td>
<td>HR specialist</td>
<td>IT</td>
<td>07.04.2021</td>
<td>65 min</td>
</tr>
<tr>
<td>Participant 9</td>
<td>HR manager</td>
<td>B2B sales</td>
<td>07.04.2021</td>
<td>72 min</td>
</tr>
<tr>
<td>Participant 10</td>
<td>HR manager</td>
<td>B2B sales</td>
<td>19.04.2021</td>
<td>68 min</td>
</tr>
</tbody>
</table>

Source: Own creation

Further findings’ reporting is organized as the presentation of top-level categories – themes, which are used as main headings with specific sub-themes as subheadings (Thomas, 2006). Detailed descriptions and suitable quotations from the interviews are included to illustrate the meanings of each team and sub-theme (Thomas, 2006).

4.2. Introduction

To better understand the current status of HRM digitalization in Russian SMEs, it was investigated which digital HR tools were currently utilizing and how. As reported by the
participants, implemented e-HR tools were primarily used to provide support at an administrative level rather than for strategical tasks. As for the scope of applied e-tools, they were mostly used in such HR functions as recruitment and selection, adaptation, record-keeping and payroll administration as well as other administrative tasks. In terms of the complexity, they were characterized as rather simple with the dominance of e-recruitment software and HRIS with limited modules (such as ‘1C’, ‘Bitrix 24’).

4.3. Individual-level factors

The analysis revealed that several specific individual characteristics of the HR-professionals/owners-managers involved in the decision-making on digital HR-tools implementation played an important role in the process. The derived characteristics were grouped into two themes, namely Digital awareness and Innovativeness. These themes are presented in Table 3 with internal variations labelled as categories and will be discussed in the details below.

Table 3  Individual-level factors

<table>
<thead>
<tr>
<th>Theme</th>
<th>Sub-theme</th>
<th>Category</th>
<th>Enabler/ Disabler</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Providing broader thinking in terms of digitalization</td>
<td>Prior IT/digital experience</td>
<td>Enabler</td>
</tr>
<tr>
<td></td>
<td>Providing broader thinking in terms of digitalization</td>
<td>Personal interest in digital technologies</td>
<td>Enabler</td>
</tr>
<tr>
<td>Digital awareness</td>
<td>Enabling understanding the benefits and constraints of HR digitalization</td>
<td>Understanding benefits of HR digitalization in terms of business processes improvements and efficiency increase</td>
<td>Enabler</td>
</tr>
<tr>
<td></td>
<td>Enabling understanding the benefits and constraints of HR digitalization</td>
<td>Understanding benefits of HR digitalization as an instrument for attracting better talents</td>
<td>Enabler</td>
</tr>
<tr>
<td></td>
<td>Enabling understanding the benefits and constraints of HR digitalization</td>
<td>Understanding benefits of HR digitalization in terms of employees' motivation increase</td>
<td>Enabler</td>
</tr>
<tr>
<td></td>
<td>Enabling understanding the benefits and constraints of HR digitalization</td>
<td>Understanding of benefits of HR digitalization in terms of profitability</td>
<td>Enabler</td>
</tr>
<tr>
<td></td>
<td>Enabling understanding the benefits and constraints of HR digitalization</td>
<td>Understanding HR digitalization limitations</td>
<td>Disabler</td>
</tr>
<tr>
<td>Innovativeness</td>
<td>Activating searching for digitalization opportunities</td>
<td>Obtaining information about digitalization from various sources</td>
<td>Enabler</td>
</tr>
<tr>
<td></td>
<td>Enabling openness to the implementation of new technologies</td>
<td>Initiating digitalization push</td>
<td>Enabler</td>
</tr>
</tbody>
</table>

Source: Own creation
4.3.1. Digital Awareness

As was revealed during the interviews, the participants themselves and other employees involved in the implementation of digital HR tools shared high awareness about digital technologies. Digital awareness influenced implementation through several identified mechanisms, which are represented as sub-themes, namely via 1) providing broader thinking in terms of digitalization and 2) understanding of the benefits and constraints of HR digitalization.

Providing broader thinking in terms of digitalization

Participants reported broad thinking in terms of digitalization. For instance, an understanding of digitalization trend and their importance for business. It may be represented by the citations of HR professionals:

‘Our CEO understands that digitalization is a future anyway so it’s better for the business to start implementing useful digital tools as soon as possible.’ (Participant 2)

‘Increasing business digitalization is a reality already. We, as a company and humans, cannot just ignore it’ (Participant 9)

‘Digitalization is our reality. You cannot ignore it if you want your business to survive and to be modern. [.....] With all the digital tools I feel more control over the company when I am travelling and out of the office for a long time.’ (Participant 3)

It appeared that such broad thinking in terms of digitalization was enabled by the participants’ prior experience related to IT/digitalization and/or personal interest in digital technologies, which were discussed by the participants during the interviews. The digital background was related to the usage of digital tools either specifically in the HR area:

‘In the previous company, I made attempts to automize the recruitment process. I tried to use available free options for that as we did not have a budget for automation at that time. So I got an overall idea about recruitment automation there. I am also quite good at such tools as Excel, PowerPoint and other standard tools’. (Participant 6)
The implementation of the tool for e-recruitment was initiated by me personally as HR lead. I was working in recruitment agency before which used this tool, so I knew that it was useful for the purposes of recruitment automatization’. (Participant 2)

Or it was experience with digital tools in other business areas, not related specifically to HR digitalization, but more general:

‘When working as sales specialist before I was participating in the project on sales reporting automation. We introduced e-CRM for the sales department. Apart from that, I am overall quite familiar with digital technologies for personal use.’ (Participant 4)

‘I had, in fact, an intensive experience with IT tools before. I did not just get off the couch and implement digital tools in the company I am working for nowadays’. (Participant 1)

Some participants reported previous educational background related to IT/digital:

‘At the University we had some courses on basics of the tools for automation. I also had additional training about 1C, its configuration and options.’ (Participant 4)

Along with the previous digital experience, interest in digital technologies were reported by HR professionals:

‘I may say I am a fan of technologies in my private life, using it for tracking my health, organizing smart home and things like that. […] Of course, I bring it to my work and am always looking for digitalization opportunities there.’ (Participant 8)

Overall, data revealed that participants’ digital awareness and related digital/IT background facilitated their broader thinking in terms of digitalization and specifically, HR digitalization. It resonates well with the findings of previous research which demonstrated that SMEs that had employees with higher IT awareness and skills are more likely to implement new technologies than those whose employees have lower IT skills (Premkumar & Roberts, 1999; Rahayu & Day, 2015). Furthermore, smaller companies are highly dependant on the IT skills of their employees as they often possess rather
limited IT resources available for technologies implementation (Johnson & Diman, 2017).

**Understanding of the benefits and constraints of HR digitalization**

The second identified mechanism is an understanding of the benefits and constraints of HR digitalization. Most of the participants described their awareness of HR digitalization potential benefits as an important driver of implementation decision. A variety of benefits were described by participants during the interviews. For instance, some participants highlighted its link with business process improvements and efficiency increase:

‘The key benefit which the Company got from the [HR-]digitalization of onboarding is a higher retention rate after the probation period: more newcomers now stay in the Company after their probation period which is usually 3 months. Before it was worse due to stupid mistakes in fact: new employee did not have everything s/he needed during the first day in the Company, was not met by necessary people etc. After the integration, this process was improved for sure.’ (Participant 1)

‘[HR digitalization provides] more control over the processes from my side. HR-related tasks are better structured and organized. Time-saving on unnecessary communication regarding very routine tasks which need to be done. That was important when I made the related decision.’ (Participant 3)

Participant 7 explained viewed implemented digital HR tools as an instrument for attracting better talents:

‘….we keep an eye on which [digital HR] tools competitors are implementing and try not to lag behind. It is also important to be an attractive employer and to compete successfully for attracting better talents as the battle for talents in the IT field is very very taught now.’ (Participant 7)

Participant 2 and 7 were discussing its benefits in terms of employees and HR professionals motivation increase:
‘Also [HR digitalization] is about making HR professionals more motivated and happier at work. And employees are more satisfied as well: even they got used to filling in different papers manually, after some time they got used to the implemented tools and gave feedback that things are more convenient now’. (Participant 2)

‘...it helps to reduce HRs time spent on the routine tasks which do not provide a real value for the company and may be easily automated. That leads to the increase of HR specialists motivation and loyalty to the company, which means an increase in job performance. From employees’ perspective, it improves HR and admin servicing, which lead to the increase of employees’ satisfaction’. (Participant 7)

Participant 4 also added the profitability perspective:

‘...it (HR-digitalization) in its turn, indirectly leads to HR costs reduction, for instance, the company does not need to recruit more HR specialists for performing routine HR tasks. All these played the role when making decision on the new portal implementation.’

Moreover, interviewees reported that a final decision-maker should have been well-informed and convinced about the potential benefits that HR tools would provide to the business in order to approve the implementation.

‘The online[recruitment] portal introduction has been initiated by me and my HR colleague and supported by our IT specialist. Then it has been approved by the CEO after we fully motivated the reasons behind it and the benefits it brings for employees and the company’. (Participant 4)

‘If you can motivate to the owner and CEO that it [innovation] is useful and beneficial for the company and not very expensive, then it is not so difficult to get their approval’

(Participant 2)

‘Overall, I am opened to changes if it can be motivated why these changes are beneficial for the business and which specific benefits these changes will bring’. (Participant 7)
At the same time, the participants demonstrated awareness of the understanding of the limitations of digitalization in generally:

‘….of course you cannot digitalize everything. Offline communication is important for business. For example, offline negotiations. I also prefer having important discussions with key people in the company offline’. (Participant 3)

and digitalization of specifically HR function, primarily, in terms of its scope:

‘Not everything in HR can be digitalized’. (Participant 8)

‘….you cannot digitalize the whole record-keeping function, for example”.

(Participant 2)

Overall, it appeared that the awareness of HR digitalization’ benefits affected decision-making about HR digital tools implementation to a high extent. It correlates with the findings of the number of studies on technologies adoption which described a positive correlation between perceived benefits of technology and adoption intentions (Chau & Hui, 2001; Iacovou et al., 1995; Ifinedo, 2011; Thong, 1999). Furthermore, Simmons et al. (2008) identified the owner-managers awareness of the potential benefits of HRM digitalization for the business performance as the primary motivation for implementation decisions.

4.3.2. Innovativeness

Participants reported openness and a rather positive attitude to innovations. For instance,

‘I would call myself an ‘early adopter’ . I like changes and innovations. Of course, you cannot afford expensive innovations in such a small business but anyway you can make even small innovation which can improve employees’ life. I am more positive about innovations that have clear goals and targets rather than innovations that do not. It is important to understand for what you implement changes. It should be always some balance between keeping what has already demonstrated good results and new ideas that can be potentially beneficial for the business in the future. (Participant 6)
‘I am very open and positive towards innovation: I think they should be implemented wherever there is such an opportunity.’ (Participant 1)

‘You cannot do things in a way it has been done in the past and expect new results. If you want new results, you have to innovate. No matter which position you occupy in the company: there are always opportunities even for small improvements. Introduced [digital HR] tools have not changed my life as HR or employees’ life radically, but have definitely improved several processes’ (Participant 10).

Such openness to innovation influence implementation in several ways, united in sub-themes, namely 1) **activating searching for digitalization opportunities** and 2) **enabling openness to the implementation of new technologies.**

**Activating searching for digitalization opportunities**
Participants reported that they were actively searching for information related to HR digitalization and digitalization, in general, using various sources, namely social networks attributed to digital technologies, professional conferences, specialized literature, the community of HR professionals, from IT colleagues. For instance,

‘ [I am getting knowledge about HR-digitalization] from the Internet: mostly from the publics in Telegram or other social media which are attributed to digital technologies, and specifically digital technologies for business and HR processes. From HR conferences. From online HR communities. I did not have any specific additional training regarding digitalization.’ (Participant 6)

‘I try to be in touch with the professional community as it's really useful. However, I would not say I am 100% involved in it, rather from time to time I visit conferences, exchanging comments in HR publics. Normally I can get answers and recommendations for HR-related questions from colleagues who are more experienced in that. It is relevant for HR digitalization tasks as well. I consulted with HR colleagues about the HR portals before we implement them as well as about other useful digital tools that could be potentially implemented in the company. It is definitely useful, it is always better to have some recommendations from professionals.’ (Participant 4)
Enabling openness/readiness to the implementation of new technologies

The participants reported openness and a positive attitude towards introducing innovations and changes in their companies. For example, one HR-lead described it in the following way:

‘...the owner is a person who says: “All that can be digitalized should be digitalized”. [...] He is adept at technologies. He has a PhD in physics and mathematic, he is a tech-savvy person. He is opened as a person.’ (Participant 1)

One of the owners reported:

‘I am quite open to the changes: you cannot run the business for a long period without introducing some changes. In small business, of course, it may be very small changes which are not even evident for the clients, however, but I know that they exist.’ (Participant 5)

In the literature, an innovative manager is defined as someone who prefers to search for a solution that has never been tried before and therefore is riskier (Rahayu & Day, 2015). HR digitalization may be considered as innovation as new to the organization and people involved (e.g. McCabe, 2002; Van de Ven, 1986; West & Anderson, 1996). Such innovation as digital technology implementation in smaller companies especially in developing countries implies a risk. Therefore, the more innovative the SMEs owner/manager/HR is, the more likely they are to take this risk and have more intention to adopt an e-application (Ghobakhloo & Tang, 2013).

4.3.3. A summary of the factors from the individual level

A summary of the individual factors which appeared to be important for e-HRM implementation is presented below. It appeared that top executives with high digital awareness and innovativeness were more positive towards the implementation of HR digital tools and more likely to initiate such implementation or approve the implementation decisions. In general, the role of top management in IT-induced organizational changes is recognized in the literature (Jarvenpaa & Ives, 1991). This is
mainly because in smaller companies strategic decisions are highly dependent on owner-managers (Jones et al., 2018; Rahayu & Day, 2015), who becomes a ‘single threshold determining the nature of corporate strategy’ (Ponomareva & Umans, 2014, p. 57) due to the centralization in terms of firms’ structure (Nguyen & Waring, 2013). More specifically, innovative and visionary leaders with well-developed technology skills play an important role in e-HRM implementation (Bondarouk et al., 2017).

Digital awareness provides top executives with broader thinking in terms of digitalization and allows them to better sense the related opportunities. It facilitates an understanding of the overall digitalization trends and those in their industries, as well as an understanding of the importance of digitalization to maintain the competitive position of a company. The latter is especially important in the context of a developing economy with its highly competitive business environment. Moreover, technological awareness enables top executives to understand a variety of potential benefits that digitalization and specifically HR-digitalization may provide to their business. Perceived benefits, in its turn, refer to the primary motivation for e-HRM implementation decisions (Simmons et al., 2008): the more an owner-manager is aware of the potential of HR digitalization to improve business performance, the more positive s/he is towards seizing the implementation opportunity.

Another revealed characteristic which plays an important role in HR digitalization is top executives’ innovativeness. According to Rahayu & Day (2015), an innovative manager is the one who prefers to search for novel and, therefore, more risky solutions. As technology innovation, HR digitalization may be characterized as risk-bearing. Its risk even increases when e-HRM is applied in the context of resource-limited smaller companies (Eller et al., 2020) in emerging economies with its turbulent business environment (Roztocki & Weistroffer, 2011). Thus, owner-managers with more innovative mindsets are more risk-tolerate and have more intention for new technologies’ adoption (Rahayu & Day, 2015). Moreover, they are more active in searching for new opportunities, including those offered by digital technologies.

Overall, at the individual level, it appeared that top executives’ digital and innovative capabilities are the key factors facilitating the implementation of digital HR in SMEs.
Indeed, the responsibility for the digitalization push in smaller companies lays with the entrepreneur or top management itself (Li et al., 2017). This is due to the particular role of the latter in strategic reorientations in response to changing conditions in the external environment (Adner & Helfat, 2003), which is typical for economies in transition with its turbulence and unpredictability (Roztocki & Weistroffer, 2011). It resonates well with the literature that relies on the theory of dynamic managerial capabilities (e.g. Li et al., 2017; Thomas, 2020), which explains how a mindset of manager defines his/her response to changes in the external environment and specifically those related to technological developments. More specifically, it demonstrated that managers with well-developed managerial cognition, social and human capital are more open to the implementation and more likely to initiate or support it.

4.4. Firm-level factors

The analysis revealed several firm-level factors affecting digital HR-tools implementation. They are summarized in Table 4 with internal variations labelled as categories and will be discussed in the details below.

<table>
<thead>
<tr>
<th>Theme</th>
<th>Sub-theme</th>
<th>Category</th>
<th>Enabler/Disabler</th>
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<tbody>
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<td>Resources availability</td>
<td>Facilitating HR digitalization</td>
<td>Financial resources availability</td>
<td>Enabler</td>
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<td>Human resources availability</td>
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<tr>
<td>Corporate culture</td>
<td>Shaping employees' motivation to bring innovative ideas/ideas on digitalization</td>
<td>Top executives’ support of innovation/digitalization</td>
<td>Enabler</td>
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<td></td>
<td></td>
<td>Employees' positive attitude towards changes/innovation</td>
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<td>Performance orientation</td>
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<td></td>
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<td>Opportunities for employees' professional growth</td>
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<tr>
<td>Low-hierarchical organizational structure</td>
<td>Stimulating open communication</td>
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<td>IT infrastructure</td>
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Source: Own creation
4.4.1 Resources availability

Most of the participants emphasized the availability of resources, namely financial and human, as one of the key pre-requisites for HR digital tools implementation that facilitating HR digitalization. The interviews revealed that HR digitalization in SMEs was perceived as a separate project rather than a part of the overall digitalization strategy due to the absence or underdevelopment of the latter in their companies. As a separate project, it required additional investments, the approval of which appeared to be within the competence of the owner-manager. HR professionals reported that the financial aspect was of the top importance when getting the final approval for implementation from the owner-manager. It has demonstrated particular relevance in situations where more expensive tools were introduced, which required financial resources not only for the implementation itself but for further regular payments for the system’s maintenance and consulting from IT vendor.

‘Some [of implemented] solutions were not so expensive however the technical support for 1C costs a lot for the company each month.’ (Participant 2)

Moreover, lack of financial resources was indicated as a potential constrain for the implementation. For instance,

‘It was not so easy for the company to find financial resources for this project. [...] There was a lack of financial resources [...]. I guess the financial aspect was more challenging. (Participant 4)

‘I guess it [the price of the software for HR] was higher than the [CEO] expected based on his own ideas on how much the company can afford for such a project. (Participant 7)

‘The key obstacle [for the implementation] was the price. Apart from purchasing the software, you need to pay for further consultations’. (Participant 5)

To continue with the human resources with necessary skills, which were identified by the interviewees as playing an important role as the enablers of the implementation
process. Among the key, participants identified the following: an initiator of the implementation (normally, HR or owner/manager of a company), internal IT specialist/department who helps with IT tools selection and further support the implementation and the adoption (in case of medium-sized companies), company’s employees with necessary digital tools who act as the early adopters of implemented technologies promoting it among other employees.

‘Mainly human [resources were required for the implementation]: people who initiated the implementation, searched for available options, communicate with the vendors...’

(Participant 8)

‘Human resources were the most important [for the implementation]. Internal IT department with necessary skills. (Participant 1)

Lack of qualified resources with the necessary skills was identified as a potential constraint for the implementation. As Participant 2 reported:

‘The company is quite successful financially and have employees who initiate such implementation. However, sometimes we feel a lack of knowledge. For instance, for [the specific name of implemented HRIS] ‘1C’ we would prefer to have a person within the company who is more familiar with that so that we don’t need to use the technical support from the vendor every time. But it is quite difficult to find these people: people with good IT skills ask for higher salaries and more interesting tasks which we as a small company cannot really provide’. (Participant 2)

Overall, it appeared that amount of slack resources, primarily, those human and financial, acts as an important enabler of HR digitalization in SMEs. It resonates well with the findings of Boundarouk et al. (2016) that demonstrated that resource availability was one of the key factors of e-HRM adoption for companies operating in emerging countries. It is even more important in comparison with those in developed economies due to the lack of external support and access to external capital (Boundarouk et al., 2016). Moreover, Stone (2012) and Thomas (2020) identified sufficient resources as one of the key facilitators for business digitalization in general. That is mainly explained by the necessity
for investment into implementation and further support, for which sufficient budget and skilled employees are required. Consequently, a lack of financial resources was identified as one of the main constraints of the implementation of e-HRM in SMEs (Hooi, 2006) as well as for the overall business digital transformation (Fitzgerald et al., 2003). Rogers (2003) stated that SMEs are lagging behind bigger companies in terms of digitalization due to inadequate resources. At a more general level, sufficient financial resources (Tung & Aycan, 2008) and human resource factors (Castanias & Helfat, 1991) were identified in the literature as one of the major factors for SMEs success.

4.4.2. Corporate culture

The interrelation of the HR digitalization process and the corporate culture of the company was identified during the interviews. Below are the components of a corporate culture which were indicated by the participants as fostering the implementation and more specifically, shaping employees' motivation to bring innovative ideas.

4.4.2.1. Top executives' support of innovation

It appeared from the interviews that HR digital tools’ implementation is perceived as innovation as it is a way to improve the existing way of doing things. The role of an owner/manager in fostering innovation-friendly culture was identified by the participants as highly important. It appeared that when an owner/manager’ demonstrated to employees his/her positive attitude towards innovation and, specifically, digitalization, it motivated employees to think more innovative and bring innovative ideas.

‘His [owner’s] message in everyday communication with the employees is like: “Let's automate!” [....] He generally supports overall business digitalization so he supports this idea on HR digitalization as a part of overall digitalization which is beneficial for business.’ (Participant 1)

‘I would say that the overall strategy of the owner is to digitalize the business as much as possible. He communicates this quite clearly.’ (Participant 2)

That corresponds with Hendrickson (2003) who considered digital HRM as innovation and with Johnson & Diman (2017) who stated that the more that top management supports
implementing a cloud-based HRIS, the more likely the organization will be to adopt it. Boundarouk et al. (2016) identified management support as one of the key facilitators of e-HRM adoption in the context of emerging economies. According to Kossek (1987), if the top management does not view HRM innovation favourably, it will simply not occur. This is even more relevant for smaller firms, where top leaders have an outsized influence on business activities (Johnson & Diman, 2017). The importance of top management support in SMEs is mainly explained by the fact that top executives in SMEs have a strong influence on the overall corporate culture of their firms, being in close contact with employees and communicating corporate values directly (Ruta, 2005). Thus, the more top executives support innovation, the more innovative a corporate culture will be, which, in its turn, enables the implementation of new technologies, including those in HR. At the same time, the findings of Hussin et al. (2002) demonstrated that for IT strategic alignment within small firms CEO’s commitment is required, but not necessarily his/her personal involvement to IT.

4.4.2.2. Employees’ attitude towards changes/innovation

Another discussed element of corporate culture in regard to innovation and, thus, HR digitalization, was the attitude of the employees’ to innovation activities and changes in their companies. It appeared to facilitate the implementation and had a positive influence on the further employees’ adoption of the implemented tools. For instance,

‘...I would say the whole company is participating [in the innovation process].
Employees are ready for digitalization, opened. The ideas on it are in the air.’

(Participant 7)

At the same time, employees resistance to changes became a constrain for the further adoption of e-HRM. However, most of the participants reported that successfully employees adapted to the implemented tools after some time. Therefore, in corporate cultures that are not so innovative, more time was needed for the employees to adapt to newly implemented technologies. For example,

‘I know that some employees, especially those after 40-50, were not very happy at the beginning [of implementation of HRIS]. They got used to call, asking, emailing
accounting, admin, whoever. They were saying ‘it is so easy to take a phone, call and discuss everything in details. But after some time I guess they became more familiar with the new system, saw how I am using it and how other employees do and started to at as the most. (Participant 3)

Overall, data revealed that employees’ attitude to innovation and changes may act either as a facilitator or a constrain in the process of technology adoption. As an element of corporate culture, such an attitude is tightly connected with the values promoted by top leaders. This is in line with the research from the innovation domain. For instance, Martins & Terblanche (2003) emphasized the importance of shared organizational norms which provide employees with an understanding of the importance of creativity and innovative behaviour. Leavy (2005) highlights the importance of creating an atmosphere of trust and openness that provides employees with the opportunity to experiment and learn from mistakes. Thus, when the value of innovations is communicated by top leaders, employees are more open to changes and more willing to initiate innovations themselves. This is especially relevant for SMEs, where top executives are in close communication with employees (Ruta, 2005) and have an important influence on the corporate culture of their company.

4.4.2.3. Performance orientation

Most of the participants described the corporate culture in their companies as rather performance-oriented. For instance,

‘[Firm’s corporate culture] can be characterized as performance-oriented. It was even strengthened by [Covid-19] pandemic: employees had to work independently and demonstrate good performance while working from home.’ (Participant 1)

‘Of course, that [performance orientation] depends on the department. It is highest among the sale speople. However, if we talk about the whole company I would say it is overall rather high. We don’t have specific KPIs for our employees, but as the company is small and everybody is ‘visible’ and job performance is transparent, employees are motivated and do to demonstrate good results’. (Participant 8)
It appeared that in more performance-oriented cultures, where employees are trying to demonstrate higher job performance, they are more motivated to search for innovative ideas, including, digital tools which can be used for the business process improvements and their efficiency increase. That is in line with the findings of Jackson & Harris (2003) which showed that performance-oriented cultures are more likely to accept change, and, therefore, to adopt electronic tools, while in less performance-oriented cultures employees are not thinking too much about the ways of increasing their job performance and thus, less willing to initiate innovations.

4.4.2.4. Opportunities for employees' professional growth

Participants reported that when employees knew how they could grow within the company and understood the connection of their job performance and potential professional growth more clear, they were more willing to demonstrate better results of their work. The same appeared to relevant for HR professionals. The interviews revealed that when the latter worked in companies with transparent opportunities for professional development, they were more motivated to initiate the digitalization of their function. The key reason for that described during the interviews is that HR professionals realized the link between the process of digitalization and job performance as well as freeing up free time for more interesting, non-routine tasks which provided more opportunities for their professional development.

‘I understood that routine paper-tasks automation will bring me at least two three hours per week which I can spend on my professional development. At least for reading novel materials about the HR sphere or even for attending additional training related to HR which I have planned a long ago already and which have been already approved by the CEO, but I simply could not time for that because of handling routine paperwork on weekly basis’ (Participant 7)

‘I realized that after at least a partial automation of recruitment process, I would get some time for communicating more with employees and to think more about what I as an HR manager is able to do for the company during this tough time’ (Participant 10)
Overall, it appeared that corporate culture plays an important role in HR digitalization. More specifically, such elements of corporate culture as top executives’ support of digitalization, employees’ positive attitude towards changes, high-performance orientation and transparent opportunities for professional growth within a company facilitate HR digitalization as innovation. It resonates well with the previous research on technologies’ adoption, which demonstrated that organizations with open and democratic corporate cultures where the value of innovation is supported by top executives, more easily adopted innovations (Legnick-Hall & Moritz, 2003) and more successful in information systems adoption (Jackson, 2011). That is is even more relevant in the context of an economy in transition with its turbulence and fast pace of changes. As stated by Bondarouk (2011), the introduction of e-HRM is likely to meet less opposition if the existing corporate culture emphasizes innovation and decision-making in more risky environments.

4.4.3. **Low-hierarchical organizational structure**

Interviews revealed that a less hierarchical firm’ structure stimulated more open communication between HR professionals/employees and owners-managers. That, in its turn, provided *easier access to the latter as key decision-makers in SMEs*. HR professionals reported that due to the lack of bureaucracy and low hierarchy in their companies they were able to discuss their innovative ideas directly with owners-managers. As data revealed that in most situations investments into the implementation of digital HR tools required approval from owners-managers, such easy access to the key decision-makers have a facilitating role for the implementation.

‘[…] I just came to my boss, the CEO of the company to discuss the idea [of recruitment automation]’. (Participant 7)

‘Overall, as the company’s culture is not bureaucratic and not too hierarchic, it is easier to digitalize HR’. (Participant 1)

‘Initially, it was me and my HR colleague who initiated the idea. I discussed with CEO if the company may consider the possibility to install such kind of portal. I got a preliminary ‘Ok” from the CEO: he said we might consider such an opportunity but he needed more information about that. Our CEO likes to deep into important details of
the projects like that one. [....] Finally, we discussed with the CEO, presenting him the project.’ (Participant 4)

Overall, data revealed that organization with less hierarchical structure provided a more facilitating environment for e-HRM implementation and adoption. That corresponds well with the findings of Arad et al. (1997) which showed that a flat structure and autonomy promoted innovation, whereas formalization and centralization hindered it. One of the motivations for this is that the flat structure allows easier access to decision-makers, including those who approve e-HRM implementation. Effective internal communication acts as a facilitator for e-HRM implementation (Ruta, 2005; Shrivastava & Shaw, 2003). Top executives need to be convinced about an innovation’s benefits to approve its implementation (Lin, 1997; Teo et al., 2007). As defined by Simmons et al., (2008), perceived benefit is a primary motivation for e-HRM implementation decisions.

4.4.4. IT infrastructure

Interviews revealed that a firm’s IT infrastructure played an important role in the implementation. IT support organization and technical skills of IT support were mentioned by participants in this regard which affecting the complexity of implemented technologies. Seven out of ten interviewed companies did not have internal IT support, but rather outsourced IT function. These companies could not afford to customize the purchased solutions and, thus, less flexible from this perspective.

‘They [HR digital tools] were purchased from IT vendors. It is not possible to develop within our company: we do not have an IT department for that. And it is not core for the business, so we prefer not to spend many resources on non-core tasks. (Participant 2)

Companies that have their own IT department/IT specialist appeared to be more flexible in this regard and customize implemented solutions:

‘The solution was purchased from an external company and then modified by our own IT department. That was necessary because the solution we purchased from the vendor was not 100% satisfying all our needs. So finally the solution looks more customized. And it was not so challenging for us because we have well-developed internal IT
resources so we have people who were able to modify it technically and administer it further. If we don’t have internal IT resources for that, we would have faced a lot of challenges with implementation, I am sure. It is important to have a person within a company who will provide technical support for the implemented tools otherwise you have to contact an external provider every time: it takes time and a lot of money. For example, Bitrix24 which we implemented works on the IKEA principle: to sell the basic and cheap solution, and then to provide additional services for rather expensive prices. They do not provide customized solutions.’ (Participant 1)

Overall, interviews revealed that an internal IT infrastructure influenced a firm’s capabilities for HR digitalization. Companies with more developed IT resources could afford to implement more complex solutions and have better internal support during the adoption. This is in line with the existing research that demonstrated that robust IT infrastructure had a positive influence on the implementation of digital HR tools (e.g. Hooi, 2006; Ruel, 2004). Furthermore, it has been shown that SMEs, which are limited in their resources in comparison with bigger companies, often suffer from poor IT infrastructure and lack of technical skills which hinder technologies’ implementation (ibid). Moreover, the findings of Hooi (2006) showed that IT infrastructure, in general, was less advanced for the companies operating in developing countries.

4.4.5. Summary of factors from firm’s level

The factors from the firm-level, which appeared to be important for digital HR tools implementation, are summarized below. To start with, data revealed that a firm’s resource munificence played an important facilitating role in the implementation of e-HRM. It resonates well with the existing research, which demonstrated that slack of resources, primarily those financial and human, provides business with an opportunity to invest in technologies’ implementation (Rogers, 2003; Stone, 2012; Tomas, 2020). Therefore, the higher the amount and quality of available resources, the more likely it is for new technology to be successfully implemented (Dekimpe et al., 2000).

Another important resources category that appeared to be important for e-HRM implementation is the IT resources of a company. More specifically, a firm’s IT infrastructure in terms of the IT support organization. Empirics demonstrated that when
a company had more developed IT resources and, therefore, better IT support organization, it could afford more complex and more customized solutions for HR digitalization. And the opposite, in a situation of rather poor IT-infrastructure (e.g. having outsourced IT support instead of internal IT personnel with required skills and capabilities), the business had to rely more on standard solutions offered by IT vendors as well as their further support during technology adoption. Thus, data revealed that financial, human and IT resources munificence are key enablers of e-HRM implementation at the firm level. Consequently, a shortage of described resources hinders implementation.

In its turn, it appeared that SMEs with the slack of described resources put more efforts and invested more into their firm’s human resources development in general. That was done, for instance, through recruiting better talents with desired competencies, providing training opportunities for the employees, more opportunities for professional growth within the company, creating additional opportunities for motivating staff. It may be explained by the fact that sufficient resources allow a company to minimize risks in case of personnel’s mistakes and failures. Thus, it enables a company to provide more freedom and autonomy to its employees. In other words, SMEs with resource munificence does not need to introduce rather tight control over their employees, providing the latter with a space for growth and development. Management is more tolerant of personnel’s experiments and failures. In its turn, this contributes to the development of trust and openness within the company which provides employees with more willingness to try, experiment, make mistakes and learn from it. Consequently, such an environment stimulates creativity. Leavy (2005) identified an atmosphere of trust and tolerance to failures as essential elements which stimulate personnel to offer new innovative ideas. This lies in the heart of innovative corporate culture development (Leavy, 2005).

Organizational culture is defined in the literature as an important factor in the success or failure of information systems adoption (Jackson, 2011).

The empirical results of this study demonstrated the importance of innovation-friendly corporate culture for e-HRM implementation. One of the important elements of such corporate culture appeared to be open communication: in order to facilitate new ideas development and their further implementation, employees were provided with the
opportunity to discuss it directly with their companies’ top leaders. Consequently, as was revealed, a **low hierarchical structure** acted as an important facilitator of digital HR tools implementation. Lack of hierarchy facilitated open communication and allowed easier access to decision-makers. Overall, organic and low-hierarchical structures are defined in the literature as facilitating innovations (Lam, 2006). Moreover, it appeared that SMEs with successful HR digitalization experience attributed an important role to attracting and recruiting personnel with the necessary innovation capabilities. This is in line with Leavy (2005) who identifies talented individuals as the primary source of creative ideas, which underpin further innovations. Therefore, the recruitment of staff with the necessary digital skills and innovative potential plays a special role in innovation adoption, including those in HRM.

It worth mentioning that revealed characteristics of corporate culture are not correlated with those typical for Russian national culture. According to existing research, the national culture in which a company operates has a major impact on an organization’s culture (Hofstede et al., 2011). For instance, Russian national culture, inheriting its Soviet past, is characterized by the high power distance and low-performance orientation (Ruta, 2005). That means a more authoritative management style with less autonomy of employees, which has a negative impact on innovation adoption as personnel is less willing to collaborate (Ruta, 2005). However, interviewed companies with the successful HRM digitalization experience appeared to have rather opposite characteristics: a democratic management style with low-power distance and high employees’ involvement, willingness to cooperate and contribute to business performance. It may be explained by the fact that top executives of successful Russian SMEs are aware of the effectiveness of Western management practices, including those for creating a ‘right’ corporate culture, and tries to implement them in their enterprises. This, in its turn, may be based on their completed higher education, international experience, wide network, i.e. well-developed human and social capital, which were discussed in the section attributed to the summary of individual-level factors.

Finally, viewing the described factors from the resource-based view of the firm: businesses which consider their human and IT resources as potential sources of competitive advantage are more willing to invest in their development. Overall, it
appeared that e-HRM implementation was more successful and more smooth for SMEs with sufficient resources which viewed their resources as the sources of business’ competitive advantage and, therefore, invested in their development.

4.5. Context-specific factors

Revealed context-specific factors are presented in Table 5 and discussed in the following section.

Table 5 Environmental context-specific factors

<table>
<thead>
<tr>
<th>Theme</th>
<th>Sub-theme</th>
<th>Category</th>
<th>Enabler/Disabler</th>
</tr>
</thead>
<tbody>
<tr>
<td>Declining national economy</td>
<td>Reducing investment opportunities into non-core activities</td>
<td>Decline in business performance</td>
<td>Disabler</td>
</tr>
<tr>
<td></td>
<td>Disabling strategic planning in terms of digitalization</td>
<td>Shift to short-term planning in terms of digitalization</td>
<td>Disabler</td>
</tr>
<tr>
<td>Unpredictable business environment</td>
<td>Hindering long-term planning and additional investments</td>
<td>Rapidly changing regulations from the government</td>
<td>Disabler</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Increased control from regulatory authorities</td>
<td>Disabler</td>
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<tr>
<td></td>
<td></td>
<td>Corruption</td>
<td>Disabler</td>
</tr>
<tr>
<td></td>
<td>Shifting to online work set up during lockdown</td>
<td>Influence of pandemic and lockdown</td>
<td>Enabler</td>
</tr>
<tr>
<td>Highly competitive business</td>
<td>Preventing investments into non-core activities</td>
<td>Focus on core business activities</td>
<td>Disabler</td>
</tr>
<tr>
<td>environment</td>
<td>Stimulating business competitiveness increase</td>
<td>Tracking rivals' usage of HR-digital tools</td>
<td>Enabler</td>
</tr>
<tr>
<td>IT vendors' market specificity</td>
<td>Enabling external support for implementation</td>
<td>IT vendors' support</td>
<td>Enabler</td>
</tr>
<tr>
<td></td>
<td>Preventing personalized IT solutions for specific company’s needs</td>
<td>The limited market of IT solutions for SMEs</td>
<td>Disabler</td>
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<tr>
<td></td>
<td></td>
<td>Standard, not-customized IT solutions for SMEs</td>
<td>Disabler</td>
</tr>
<tr>
<td>Governmental policy in terms of</td>
<td>Limiting digitalization opportunities/business processes improvements</td>
<td>Lack of governmental support in terms of digitalization</td>
<td>Disabler</td>
</tr>
<tr>
<td>digitalization</td>
<td>for business</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Motivating businesses to use online technologies for interaction with</td>
<td>Governmental digitalizing infrastructure</td>
<td>Enabler</td>
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<tr>
<td></td>
<td>regulators</td>
<td>Personnelling reporting digitalization</td>
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<tr>
<td>Labour market specificity</td>
<td>Stimulating increasing business competitiveness via digitalization</td>
<td>Tough competition for best talents</td>
<td>Enabler</td>
</tr>
<tr>
<td></td>
<td>Limiting digitalization initiatives within the company</td>
<td>Shortage of employees with necessary IT skills</td>
<td>Disabler</td>
</tr>
</tbody>
</table>

Source: Own creation
4.5.1. Declining national economy

Participants described the economic situation in the country as rather negative or worsening during the last years. As a CEO explained:

‘[Economic situation in the country was] rather negative, especially during the last year. The real incomes of many people and, thus, customers or potential customers have decreased. The people prefer to save rather than to spend now.’ (Participant 3)

‘Last year, it [economic situation] was quite taught. People’s incomes are decreasing which has a negative influence on purchasing power.’ (Participant 4)

As reported by interviewees, the declining economy has negatively affected HR-digitalization by 1) reducing investment opportunities into non-core activities, which participants attribute HR-digitalization to, and 2) disabling strategic planning in terms of business digitalization.

Reducing investment opportunities into non-core activities

As was explained by participants, the worsening economic situation negatively affected business performance. As HR-manager reported:

‘Last year, we [the company] did not reach our target sales volume and, thus, did not reach the targeted budget. I believe it is going to be the same this year due to the macroeconomics conditions in the country, which are not supposed to be improved rapidly after the recession of the last few years. (Participant 10)

Consequently, it led to cost reduction and budget savings by smaller companies. This particularly hindered investments into additional projects as non-core activities, to which HR-digitalization was attributed by interviewees. As HR-manager explained:

‘Finally, we decided to implement the basic version of [e-recruitment] tool due to its lower price and lower costs of further servicing. We simply cannot afford to invest in more complex and, thus, more expensive tools due to the cost-saving policy of the firm’.

(Participant 10)
Disabling strategic planning in terms of digitalization

Unstable economic situation decreased the opportunities for overall long-term planning and, therefore, led to the shift to short-term planning in terms of digitalization. HR professionals described it in the following way:

‘[An economic situation in the country is] rather negative. Turbulent. Not confident about what will happen tomorrow. The permanent situation of ‘fire extinguishing’ rather than long-term planning.’ (Participant 1)

‘We [the company] cannot really have a long-term plan for business digitalization as we constantly have to deal with the unstable economic situation. Will we succeed in economic recovery and how much time will it take? Instead, it looks more like iterative activities such as the implementation of some digital tools, as e-recruitment tool for instance.’ (Participant 10)

Overall, unstable and worsening economic conditions demonstrated a negative influence on HR digitalization, limiting its scope and opportunities as well as preventing long-term planning in terms of digitalization or making it rather iterative. At the firm level, it limited the financial resources available for the implementation projects. At the individual level, it reduced decision-makers willingness to invest in additional projects. This is consistent with the findings of Strohmeier & Kabst (2009) about e-HRM adoption factors among European firms. They identified the level of the country's economic development, as a part of the national context, as one of the main factors affecting digital HR adoption. Tumpel-Gugerell & Mooslechner (2003) stated that e-HRM implementation depended on the stage of economic development of a national business system and the overall economic capacity of a country. More broadly, Tornatzky & Fleischer (1990) identified macroeconomic context as affecting an organization’s adoption and implementation of technological innovations.

4.5.2. Unpredictable business environment

Participants described the business environment in which their companies operated as rather unpredictable and unstable. As the CEO reported:
'Even though you plan and prepare a budget, something unpredictable happens. Taxation may be increased, you may lose a client as it goes bankrupt due to an unstable situation, or the pandemic like last year could happen.' (Participant 3)

Or as HR-manager described it:

'Rapidly changing environment, I mean various perspective: taxation, legislation, loans’ rates etc., many different factors. Tougher regulations on not completely white business.' (Participant 4)

In its turn, it had a negative effect on the implementation of digital HR tools in two ways described below.

**Hindering long-term planning and additional investments**

The mechanisms described by the participants in this regard highly correlated with the ones described in relation to the influence of the declining national economy: fast-changing environment negatively affected opportunities for the business for long-term planning as well as investments into digitalization and specifically HR-digitalization. Among the key elements of a rapidly changing business, environment interviewees described rapidly changing regulations from the government, increased control from regulatory authorities and corruption. For instance, as HR-specialist reported:

‘Our government tends to change the rules of the game quite often. We have to spend additional time and resources to track these changes, first of all, in terms of regulations. Otherwise, if we miss something, we will have to pay a penalty. And the control from the state is becoming tougher every year. It is more and more difficult for companies that operating not 100% officially to survive in these conditions. So investments into HR-digitalization is not a top priority for a business when it's thinking about how to survive’. (Participant 7)

As the owner reported:
'Corruption is the part of the existing regime. I mean that we have to pay black money to various inspectors from authorities, which means additional financial losses for the business which we cannot prevent. And you never know how much and how often you will have to pay ‘in black’ this year.’ (Participant 5)

**Shifting to online work set up during lockdown**

In this regard, the influence of the worldwide pandemic caused by the spread of SARS-Covid-19 and further national lockdown which took place in 2020 were discussed by the participants. Some participants shared how this situation facilitated HR digitalization. As HR- lead reported:

‘During [SARS-Covid-19] pandemic in 2020 our company moved to a home office and, thus, we had to organize infrastructure for working remotely for our employees. That pushed the need for digital HR tools.’ (Participant 1)

At the same time, some participants considered this situation more as a constrain. As HR- manager expressed:

‘It [SARS-Covid-19 pandemic] was actually a big shock for the company. I believe the owner was frustrated in the beginning. Most of the employees were questioning him about the company’s future plans. […]After some months it became more stable, but still, nearly all additional projects and spendings including the plans for further HR-digitalization were frozen until “better times” as the owner explained.’ (Participant 9)

At the same time, as were discovered during the interviews, SMEs which were lacking financial resources preferred using free and open-sourced tools or simple tools rather than purchasing some complex digital tools.

To sum up, it appeared that an unpredictable business environment hindered HR digitalization, negatively affecting strategic planning and forcing SMEs to focus on adaptation to fast-changing conditions, reserving financial resources for unpredictable spendings which could appear. This is consistent with the findings of Roztocki & Weistroffer (2011), which characterized the business environment in developing
economies as unpredictable and showed that it challenged long-term strategic planning, making it more complicated and less desirable. Strategic vision was identified as one of the critical success factors for e-HRM systems implementation (Stone, 2012). However, according to Hoskinsson et al. (2000), strategy implementation may be hindered in developing economies due to missing institutional features.

4.5.3. **Highly competitive business environment**

Besides describing the business environment where the companies were operating as unpredictable, participants also characterized it as highly competitive. That appeared to have both negative as well as a positive influence on the implementation of digital HR tools via the mechanisms discussed below.

*Preventing investments into non-core activities*

As were reported, in a situation with tough competition and limited resources, SMEs had to focus on their core activities which brought the most profit to the business. This in its turn limited the opportunities for investing in non-core activities, to which HR-digitalization was attributed.

*Stimulating business competitiveness’ increase*

Under tough competition, SMEs are forced to monitor how their rivals were using the HR digital tools in order not to lag behind. As HR-professionals:

‘[…] definitely, we keep an eye on which tools competitors are implementing and try not to lag behind. It is also important in order to be an attractive employer and to compete successfully for attracting better talents as the battle for talents in the IT field is very very taught now.’ (Participant 1)

‘From time to time I am looking for what competitors are doing in terms of HR digitalization. We try not to lag behind and I think we are rather successful at that.’ (Participant 2)
At the same time as CEO reported about the situation when rivals were not highly digitalized:

‘I don’t think that companies in our industry are now so digitalized that we need to compete with them in this regard. I think in comparison with most of our direct competitors, we are more modern and digitalized for the moment.’ (Participant 3)

To sum up, it appeared that a tough competition affects HR-digitalization twofold: enabling it by stimulating smaller companies to be in line with their rivals in terms of HR digitalization as well as hindering it due to diverting financial resources from non-core projects. It correlates with the research of Iacovou et al. (1995) who found that the strongest driver of adoption was external pressures. Moreover, Tornatzky & Fleischer (1990) described competitive pressure as one of the most important environmental factors influencing an organization’s adoption and implementation of technological innovations.

4.5.4. IT vendors’ market specificity

Describing the IT vendors’ market in Russia, participants characterized it as rather limited and monopolized by the bigger vendors. It had a negative influence on HR digitalization in SMEs by:

Preventing personalized IT solutions for specific company’s needs
As were reported, there was a rather limited market of IT solutions for SMEs with a few key players which provided standard, not-customized IT solutions for SMEs. As HR-lead reported:

‘The market of IT vendors was and still is very limited in fact. The first group is big international IT vendors such as SAP but their solutions are very expensive and it is mostly big corporations that may afford it. Their solutions are normally quite complex which is not needed for smaller business which needs simpler and cheaper solutions. Smaller companies really not spend much money on HR digitalization. […] The second group is around 5-7 IT vendors: HR-tech small companies, which offer more or less the same solutions, which differ just in terms of interface of provided service or something
like that. Bitrix24 is almost a monopolist in the market of IT solutions for HR
digitalization within SMEs. Overall, the IT-vendor market is very limited.'

(Participant 1)

Enabling external support for implementation
Participants reported that the support from IT vendors played an important role during e-
HRM implementation and further use. For instance, as the CEO explained:

‘When questions or problems appeared I was the one to contact the vendor and ask for
support. (Participant 3)

Thus, data revealed that IT vendors played a dual role in the HR digitalization process.
On the one side, vendors’ support acted as an important contributor to the implementation
and further use of digital tools in HR. It correlates with the findings of Chau & Hui (2001)
and Thong et al. (1996), which demonstrated that external vendor expertise was
positively related to the adoption of informed decisions by SMEs. And Zhu & Kraemer
(2005), who defined support from IT vendor as the driver of IT technology adoption for
SMEs. It is mainly since SMEs are normally focused on their primary business area and
are lacking the required IT skills and knowledge about the technology. Thus, they have
to rely on the third-part support during HRIS implementation.

On the other side, a limited Russian market of HR IT vendors specifically for SMEs
narrowed down the opportunities for the implementation of diversified and more
personalized solutions. It is in line with the findings of the research from the innovation
domain. For instance, Lam (2006) stated that the source of innovation may lie outside a
company. In this regard, external providers may potentially act as a source of innovations,
especially for SMEs which are limited in their abilities to develop innovations internally.
Therefore, the monopoly in the IT vendors market may negatively affect the opportunities
for SMEs to adopt digital HR solutions. IT infrastructure in emerging economies is
overall described as less advanced in comparison with developed ones (2006).
4.5.5. Governmental policy in terms of digitalization

Limiting digitalization opportunities improvements for business
Interviewees reported a lack of direct governmental support, primarily in terms of finance, for HR digitalization. As the CEO reported:

‘From a financial perspective, there is no such a role. If a business wants to digitalize, you cannot rely on the financial aid from the state in Russia.’ (Participant 3)

At the same time, several indirect mechanisms from the government were discussed, which stimulated HR-digitalization.

Motivating businesses to use digital technologies for the interaction with regulators
As were revealed it was done through the overall governmental digitalizing infrastructure as well as personnel reporting digitalization.

‘Now governmental services are shifting to online. Not all and the speed of such shift is quite slow but in the future it will be even easier, for instance, to submit reports to governmental authorities online. The same is relevant for HR digitalization.’

(Participant 5)

‘[..] in terms of infrastructure, the state is introducing more online portals and tools for online reporting, communication and so on.’ (Participant 3)

To sum up, a lack of direct support of HR-digitalization from the government was indicated as a negative factor, while digitalizing governmental infrastructure was indicated the opposite, as an enabling factor. These results are consistent with the findings of the existing research on SME adoption of non-HRIS technology (Alamro & Tarawne, 2011; Ifinedo, 2011). If an organization lacks access to the capital necessary to afford a new system, the organization still may not implement the system, even if the system could provide tremendous benefits (Johnson & Diman, 2017).

4.5.6. Labour market specificity
Participants described the labour market as highly competitive.
'[...] the battle for talents in the IT field is very very taught now.' (Participant 1)

'[...] quite high competition in terms of attracting talents'. (Participant 2)

As was reported, this influenced HR digitalization through:

**Stimulating increasing business competitiveness via digitalization**

Participants viewed HR digitalization as an instrument for attracting better talents, which is highly important due to the tough competition for best talents. At the same time, the labour market was characterized as limited in terms of a shortage of employees with necessary IT skills. This, in its turn:

**Limiting digitalization initiatives within the company**

‘I would not say that all the employees are so well prepared in terms of IT and digital. We are thinking of how we can improve the level of their IT related skills in the future as it is very important for the company’s success and further digitalization progress’.

(Participant 4)

‘Sometimes we feel the lack of knowledge. For instance, for 1C [automation software’s name] we would prefer to have a person within the company who is more familiar with that so that we don’t need to use the technical support from the vendor every time. But it is quite difficult to find such people: people with good IT skills ask for higher salaries and more interesting tasks which we as a small company cannot really provide.’

(Participant 2)

4.5.7. **Summary of context-specific factors**

This section aims to summarize the revealed context-specific factors. It appeared that the external environment in which interviewed companies operated was rather complex, dynamic and implying a high level of uncertainty. Several key factors which contributed to such an environment were reported. To start with the worsening economic situation in the country. It may be explained by the consequences of sanctions after the Russian invasion of Ukraine in 2014, weakened Russian currency due to oil price dropdown at the
international market and, more recently, the declined business activity and national lockdown during the pandemic of COVID-19 in 2020-2021. To continue with, the unpredictable business environment influenced mainly by rapidly changing regulations from the government, increased pressure on the SME sector from the authorities, increased taxation and corruption. It resonates well with the findings of previous research (Boundarouk et al., 2016; Hoskisson et al., 2000; Roztocki & Weistroffer, 2011) which demonstrated that the business environment in developing economies differs significantly from that in developed ones and is characterized as fast-moving and partially unpredictable. It appeared to have a negative effect on the SME sector in general: the situation of uncertainty hindered business opportunities for long-term planning and pushed the cost-saving policy introduction. This, in its turn, impeded digitalization in general and HR digitalization in particular as projects which required additional investments. High competition reported by the participants forced companies, even more, to focus on their core business activities and, therefore, took resources away from HR digitalization. The latter could have been compensated by additional support from the state, however, as was revealed, only limited support was provided by the Russian government for expanding SMEs digitalization opportunities. The support was executed mainly through the digitalization of the HR reporting infrastructure from the authorities, which enabled SMEs to provide some parts of personnel reports online.

The situation was aggravated by the specificity of the Russian labour market as well as the market of IT providers. Human and IT resources availability are important for successful HRM digitalization (Boundarouk et al., 2016; Stone, 2012; Thomas, 2020). Thus, its shortage negatively affects the firm’s digitalization capacity. As was revealed, Russian SMEs suffered from a shortage of skilled employees with necessary digital skills as well as from a limited market of IT providers, which is typical for developing economies (Roztocki & Weistroffer, 2011).

At the same time, some enabling environmental factors were revealed. Firstly, it appeared that the Russian government took steps to gradually digitalize communication with companies as well as various reporting, including those related to HRM. Secondly, IT vendors provide support during implementation and further use of IT tool, which enables companies with poor IT support still to implement digital tools. Thirdly, competitors’
usage of IT motivated interviewed companies not to lag in terms of digitalization. Finally, national lockdown and a shift to remote work set up caused by the pandemic of COVID-19 in 2020 facilitated businesses to introduce online instruments including those in HRM.

Overall, all the described characteristics of the environment reveal the concept of the Russian context. The inherent uncertainty and complexity of the environment have an influence on the key actors operating in this context, including companies, their owners-managers, various institutions etc. Drawing on the institutional theory, companies have to tailor their HRM and thus e-HRM policies and practices to suit the cultural, societal and legislative environment of the country where they operate to achieve efficiency and business success (Farndale et al., 2009). Therefore, their decision on e-HRM adoption depends on external isomorphic pressures: mainly from the government, IT vendors, competitors and the labour market.

The complexity and uncertainly which characterize the described external environment create the context that appeared to be rather disabling for long-term planning and additional investments including those to business digitalization in general and HR-digitalization as its part. In other words, such a context acts more as disabling to digitalization strategies implementation for SMEs. Consequently, this unfavourable context affects the main actors operating in it, including owners-managers, companies, various institutions etc. More specifically, it affects how owner-managers act and how they plan their firm’s activities, investments and strategies, including those for HR digitalization.

4.6. Refined research model

The refined research model is presented below (Figure 2).
The findings of the study showed that the e-HRM implementation process was shaped by interrelated factors from three levels. At the individual level, top executives’ digital awareness and innovativeness appeared to play a crucial role either in initiating or supporting HR digital tool implementation decisions. At the firm level, an innovation-friendly corporate culture and internal munificence, primarily in terms of financial, people and IT resources, were reported as key facilitators of HR digitalization. It is closely related to top executives’ characteristics revealed at the individual level due to the pivotal role of the former in building a corporate culture in their companies as well as a firm’s resources allocation.
Despite the importance of the identified factors at these two levels, their influence appeared to be limited due to the influence of the macro context, which has to be considered by companies operating in emerging economies. The context of emerging economies, presented by Russia in this study, drags down these points and creates obstacles to implementation. In other words, the context itself appeared to be rather disabling for e-HRM implementation.

However, actors such as individuals and companies, operating in this context, appeared to be finding ways to adapt to the existing context. As findings showed, despite disabling external context, top executives tried to view various obstacles created by the legislative, political, economic environment more as opportunities than problems in order to achieve efficiency and success of their business. They actively searched for possible solutions relying on their capabilities enabled by their cognition, previous experience and network. Their abilities enabled them to view innovation in general and digitalization specifically more broaden and favourable, understanding its benefits for their business. And therefore, they were more willing to initiate/support implementation decisions despite the unfavourable external environment.

The same is relevant at the level of companies: the most successful businesses try to create favourable conditions within the organization, their micro context, for both developing their personnel internally and attracting the best talents from the market, creating innovation-friendly corporate culture. In other words, they put efforts to create certainty within the firm, which resists the unfavourable external macro-context, standing again external forces. In this regard, the capabilities of the people (mainly top executives) who are engaged in this are extremely important, since they need to resist the external environment and find solutions for overcoming negative influence from the environment.
5. Conclusions

This section presents the conclusions of the study. First, the empirical results are linked to the research question. Secondly, theoretical and managerial implications are discussed. Next, the limitations of the study are outlined. Finally, the possibilities for future research are suggested.

5.1. Overarching Conclusion

The rapid development of the internet during the last few decades led to an unprecedented wave of digitalization which has revolutionized the corporate world and forced business to adapt to the ongoing transformation. Digitalized HRM plays an important role in this regard as a contributor to business success as well as a facilitator of the overall business digitalization process (Bondarouk, et al., 2009), which is associated with enhanced business performance and competitiveness (Greif et al., 2016). While larger companies have utilized various e-HRM tools to streamline HR operations (Strohmeier, 2007), small and medium-sized firms are at the early stage of its adoption (Bondarouk, et al., 2009). However, recent developments of non-proprietary technologies and open-access platforms (Morgan-Thomas, 2016) provides SMEs with never-seen-before opportunities to develop their technology infrastructure (Eller et al., 2020). The existing research on the adoption of e-HRM in the specific context of SMEs is odd (Hooi 2006) and focused on developed economies with nascent research available in the context of developing ones (Bondarouk & Ruël, 2009). Considering the role of SMEs as a vital part of modern economies as well as the increasing business power of economies in transition (Bondarouk & Ruël, 2009), and in response to the existing research-practice gap, the study on digital HR tools implementation in Russian SMEs was executed.

Given that the implementation of digital tools may differ for the developing economies due to its specificity of involved actors and institutions (Hoskisson et al., 2000), the purpose of this study was to explore which individual-, firm-level and environmental context-specific factors shape HRM digitalization in the context of small and medium-
sized companies operating in emerging economies, presented by Russia. More specifically, the research question was formulated as:

*Which individual-, firm-level, and context-specific factors and how do they shape digital HR tools implementation in SMEs in economies in transition presented by Russia as an example?*

The research framework was developed based on the synthesis of the relevant literature in the field: various factors were grouped into three levels, reflected in the research question. To support the explorative nature of the research question, HR- professionals and owners-managers with extensive HRM digitalization experience from 10 Russian SMEs were interviewed. A qualitative research design allowed the author to gain insights into the implementation of the digital HR tools in the research context. A chosen abductive approach provided the connection between obtained empirical insights and existing knowledge from the literature on HRM digitalization.

The research findings revealed that the influence of the factors from three levels are complex as they are interrelated. It is in line with Akrich (1992), Ciborra (1999), Orlikowski (2000), who demonstrated the complexity and dynamism of the technology implementation process which is influenced by various factors from the internal and external environment. To start with, the findings of the study emphasized the role of owner-managers and HR executives in the digitalization of HR function. There is an agreement in the literature about the overall highly important role of top executives for their SMEs due to its structural centralization (Nguyen & Waring, 2013; Rahayu & Day, 2015). They are setting corporate strategies, involved in operations, resource allocation and contributes to firm’s corporate culture. The results of this study demonstrated that regardless of which type of decision: strategical or operational e-HRM implementation was attributed by the participants, owners-managers, as well as HR executives, played a pivotal role in this process. They either initiated implementation decisions or support them. These involved top executives’ expertise and human capital required in decision making, the social capital that provides relevant information, and the cognition that creates biases in the actions taken (Adner & Helfat, 2003). Described are the underpinning foundations of Dynamic Managerial Capabilities theory, which explained how managers’
previous experience, cognition, skills, expertise and network defines his/her decision-making. The findings of this study demonstrated top managers who perceived innovations as favourable for their companies, were more willing to adopt e-HRM. A willingness to adopt technology was higher when the top executive was aware of its benefits for the business. This is in line with DMC assumptions, which considers that top executives behaviour is defined by their cognitive patterns, previous experience and social network within and outside their business. The more top executive was aware of technology, having some IT/digital experience, interest in new technologies, or people inside or outside the company who can share their digital experience and knowledge, the higher chance that the company will implement digital HR tools. Thus, at the individual level, top-executives characteristics and, more specifically, their digital and innovative capabilities appeared to be the determinant factors that shape HR digitalization in SMEs. At the more general level, it correlates with the findings of Menefee et al. (2006), which demonstrated that the success of SMEs heavily depends on the characteristics of the entrepreneur.

Due to the pivotal role of top executives in SMEs, individual factors appeared to be tightly related to those from the firm level. Some authors even incorporated these two groups into a united organizational context (e.g. Verhoef et al., 2019), demonstrating that organizational factors contribute most to the success of IT implementation in SMEs (Eller et al., 2020). At the firm-level, the findings of this study demonstrated the importance of the following factors for HR digital tools implementation: resource availability, corporate culture, low-hierarchical organizational structure and IT infrastructure. It appeared that when SME had a slack of resources, its’ management was more willing to develop long-term planning and invest in non-core activities including those on HR digitalization. Moreover, in this situation management attributed more attention and put more efforts to firm’s human resources development. This includes developing a corporate culture that will foster the development and motivation of a firm’s employees. Such a culture appeared to be an important enabler of HR digitalization. That correlates with the findings of previous research on technology adoption by SMEs (e.g. Eller et al., 2020; Nguyen et al., 2015), which showed that creating the right internal environment is a necessary prerequisite for SME for taking full advantage of IT. Coupling this with factors from the individual level, SMEs’ owner-managers with positive identification
with digital technologies were able to create a digital identity composed of future norms and values, which could be easily shared with employees (Bouncken & Barwinski, 2020). Moreover, despite the Russian national culture, which is more inherent in an authoritarian leadership style, typical for many developing countries (Roztocki & Weistroffer, 2011), interviewed owner-managers tried to adhere to the ‘western’ management style with its open communication and personnel involvement, that is recognized in the literature as more effective for facilitating innovations (Lam, 2006; Leavy, 2005). To summarize, it appeared that HRM digitalization heavily depends on firms’ developed human capital and resources munificence. SMEs that possessed this had a more favourable environment for e-HRM implementation. In applying an RBV perspective to HRM digitalization, human capital is the source of the SME’s competitive advantage (Barney & Wright, 1998). A combination of human resources and IT, and therefore, digitalized HR function has the potential to produce human resources and organizational capabilities critical to achieving competitive advantage (Marler, 2009).

In addition to internally driven factors that influence digital HR tools implementation, SMEs are faced with institutional pressure incorporated in the environmental context. The institutional theory implies that business is likely to be induced to adopt and use e-HRM by external isomorphic pressures from competitors and government. According to Roztocki & Weistroffer (2008a), the existing business environment determines the successful adoption and use of IT to a high extent. Companies are forced to tailor their HRM and thus e-HRM policies and practices to suit the cultural, societal and legislative environment of the country where they operate to achieve business success (Farndale et al., 2009). The findings of this study demonstrated that a range of environmental factors that define e-HRM implementation may depend on the context where SMEs’ managers operate. It is in line with the findings of Geffen et al. (2013), which demonstrated that the use of technologies is heavily dependent on a context. And with the findings of Bondarouk et al. (2016), which showed that contextual challenges in e-HRM implementation are mainly related to the complexity of the legal, political and economic system. This complexity affects how owner-managers act and how they plan their firm’s activities, investments and strategies, including those for HR digitalization. The study’s results show that cumulative factors of the Russian context contribute to the creation of an unfavourable environment for HRM digitalization. Such revealed characteristics of the
environment as the worsening economical situation, rapidly changing regulations, high control from the government, corruption, lack of governmental support, tough competition, insufficient labour market appeared to limit digitalization opportunities. Such a context forces smaller companies to focus on struggling with negative external conditions, preventing long-term planning and additional investments into non-core activities. This correlates well with the findings of Kozminski (2008) demonstrating that managers in developing economies, in comparison with those from developed ones, are forced to redefine their business models while using flexible business strategies. More generally, it is in line with Roztocki & Weistroffer (2011), who stated that business environments in developing economies require very different approaches to IT usage and, therefore, suggest very different success factors for IT applications. In Russian reality, SMEs with specific characteristics still able to cope with the rather negative influence of the environment. These are SMEs with well developed human capital, more specifically, with top executives who are capable of sensing and seizing opportunities for business development and reconfiguring the firm’s resources despite such an unfavourable context.

5.2. Theoretical contribution

Given that the existing literature on HR digitalization mainly pertained to large organizations operating in developed economies (e.g. Ball, 2001; Bondarouk et al., 2017; Marler, 2009; Ruël et al., 2004; Strohmeier, 2007), this study attempts to fill the gap in e-HRM and SME management literature by expanding the context to small and medium-sized companies operating in the context of developing economies represented by Russia. More specifically, the findings add to previous research on e-HRM implementation and, more generally, to the research on information technologies (Roztocki & Weistroffer, 2011) by explicitly addressing factors that influence such implementation in the context of SMEs in developing economies.

To continue with, it contributes to the understanding of individual characteristics of top executives which were previously examined in the more general context of technology adoption (e.g. Dasgupta et al., 1999; Nguyen et al., 2015), innovation adoption (Roger, 2003) or SMEs’ overall digitalization (Li et al., 2017) with nascent research available for the role of such factors specifically in terms of digital HRM implementation (Bondarouk
Moreover, it contributes to the literature that relies on Dynamic Managerial Capabilities theory (e.g. Adner & Helfat, 2003; Li et al., 2017; Teece, 2007; Thomas, 2020), adding the importance of managerial capabilities of top executives in smaller companies in the context of developing economy.

Furthermore, the results of this research add to the studies drawn upon the resource-based view of the firm (e.g. Eller et al., 2020; Chen, 2016). More specifically, it contributes to our knowledge of the resources that need to be configured for the e-HRM implementation to succeed specifically in the context of the economy in transition. Additionally, the findings of the study shed more light on the understanding of institutional factors that shape digital tools implementation. It adds to the literature that relies on the institutional theory (e.g. Burbach & Royle, 2014; Low et al., 2011; Olivas-Lujan et al., 2007; Panayotopoulou et al., 2010), demonstrating how the complexity of external pressures inherent in the developing economy environment affects e-HRM implementation strategies as well as to more general strand of research related to Information Technology success factors identification (Roztocchi & Weistroffer, 2011).

Finally, from the perspective of theory application, existing research in e-HRM is characterized as mainly non-theoretical and oriented on micro-level theories (Boundarouk et al., 2017; Strohmeier, 2007). This study demonstrates the application of a diverse theoretical framework, showing how a combination of theories from different levels may be used to explain a research phenomenon. By executing multilevel research, it was shown how factors from various levels interact with each other and how they are reflected in e-HRM implementation. Overall, it contributes to the development of a multilevel model as well as to an explanation of the more complex interactive type of models.

5.3. Empirical contributions

The empirical contributions of the study is mainly an outline and description of a range of factors that shape HR digitalization in Russian SMEs. Overall, Russian SMEs with higher human capital and resource munificence are willing to adopt new technologies in their HR function. At the same time, they are forced to adapt to the external environment which can be characterized as rather disabling for innovations. SMEs have to deal with
unpredictability and uncertainty caused by national economic decline, rapidly changing regulations for business, lack of governmental support, tough competition at the market as well as attracting the best talents, shortage of skilled labour resources. All these force smaller companies to save budget, limit non-core activities, switch to short-term planning and, therefore, constrain investments into new technologies in HRM. At the same time, the personal capabilities of SMEs top executives allow them to cope with these negative factors and overcome the challenges brought by the disabling national context. They appeared to be positive-minded, aware of current trends in their industry, including those related to digitalization, looking for opportunities to move the business forward despite the challenging context. Moreover, they try to make the best use of those environmental factors that can assist HRM digitalization. For instance, they use IT vendors’ support for e-HRM implementation, utilize the digitalizing infrastructure of the authorities, including those on personnel reporting.

Another interesting finding is that SMEs which were more western-oriented in terms of applied management practices appeared to be more successful in their HRM digitalization. Empirics showed that top executives in such SMEs were able to create a specific microclimate in their organizations which is characterized by open communication, low hierarchy, an innovation-friendly culture which is, in fact, more typical for western management rather than for ‘eastern’ ones with its autocracy and decision-centralization. Such micro-climate allowed them to resist the influence of the external environment with its disabling factors. Therefore, it may be assumed that those western practices may be effective for adopting innovation and new technologies in the developing economy context. Further investigation in this direction may potentially be beneficial.

Some more specific empirical contributions are to be mentioned additionally. Firstly, the digitalization of HR function is mainly perceived more as a part of overall business digitalization in general by owner-managers. The digitalization strategy is not formulated officially, but rather in an unformalistic manner. Secondly, implemented e-HR tools are primarily used to provide support at an administrative level rather than for strategic tasks. One of the key motivation for HR digital tools implementation is business process improvements and efficiency increase mainly through routine tasks automation. Even
though HR professionals reported that the freed up time would allow them to tackle more important HR tasks, it is difficult to judge whether routine tasks automation enables a shift to strategic HRM. This may be an interesting topic for further research. Thirdly, in terms of scope, the most digitalized HR sub-functions appeared to be recruitment and selection, adaptation, record-keeping and payroll administration. In terms of the complexity, implemented tools are rather simple in comparison with those introduced in larger companies, with the dominance of e-recruitment software and HRIS with limited modules (such as ‘1C’, ‘Bitrix 24’). Moreover, tools due to resource constraints, SMEs prefer cost-effective tools, giving priority to non-proprietary technologies and software-as-a-service.

5.4. Managerial implications

The first implication for SMEs’ managers relates to the fact that this study outlines the factors which facilitate or disable successful HRM digitalization. Therefore, practitioners interested in HRM digitalization could refer to the revealed factors that contributed to the success or failure of HRM digitalization projects to obtain insights into the potential success of e-tools implementation as well as to avoid possible mistakes. For instance, it was revealed that top executives digital capabilities, as well as their support for innovations, are among the key facilitators of digitalization push in SME. In this regard, a manager may assess his/her competencies and evaluate which of them are lacking or could be improved. Moreover, as findings demonstrated, innovation-friendly corporate culture with open communication, high-performance orientation and transparent opportunities for professional growth contribute a lot to HRM digitalization. Thus, it is important to develop such a culture within the company, communicating the right values to employees and providing a space for initiatives and professional development. Overall, the study contributes to a better understanding of the antecedents of HRM digitalization in SMEs.

Moreover, as human resources with developed IT/digital skills appeared to be of importance for HRM digitalization as well as for business digitalization in general, it is can be recommended to put more efforts into attracting employees with necessary competencies and skills and to develop these skills internally via training programmes. However, it may be challenging considering the tough competition for the best talents in
the labour market in developing economies. Companies can be recommended to work on their HR brand improvement. Additionally, SMEs are to track what rivals doing in terms of HRM digitalization in order not to lag in a competition for the best talents. Furthermore, as IT infrastructure and more specifically the way IT support is organized, may facilitate or disable implementation, it is important to organize a satisfying IT support that would be able to support the implementation and further use of e-HRM.

Another recommendation refers to HR professionals who are interested in the digitalization of their function within a company they work for but require approval from the firm’s top management. Findings demonstrated that the more owners-managers are aware of the benefits of HRM digitalization for their business, the more they are willing to invest in it. Therefore, it is important for HRs to get a full understanding of such benefits in terms of business performance increase and be able clearly to communicate them to the upper echelon.

5.5. Limitations

The study is not without limitations which will be discussed below. To start with the limitation related to the chosen qualitative research design. Although qualitative research findings cannot be generalized, it provides a fruitful starting point for further quantitative investigation. However, it is important to consider the limitation of the context related to the low level of trust in Russian society which leads to a low response rate and limited veracity when applying online questionnaires. To overcome this challenge, it may be suggested that a researcher visits respondents and hand in a questionnaire in person, which facilitates a more trustful atmosphere. However, considering the time and resources limitations of this research, that was not feasible.

The next group of limitations relates to the sample. First of all, the sample included a relatively small number of informants and is restricted to SMEs located in three large cities in the western part of Russia. The regional focus may limit the generalizations of the findings. In this regard, the reliability of findings could be improved by expanding the geography of the research. Secondly, the participants represented a limited number of industries, which hindered the opportunity to explore whether an industry can act as a specific factor that influences HR digitalization. Although it was noticed that interviewed
companies from the IT sector introduced a wider range of HRM technologies, which correlates with the findings of Thomas (2020) that identified IT and telecommunication industries as the most digitalized, however, there is not enough data to draw unambiguous conclusions. Thus, it could be beneficial for the research to expand the sample with more participants from various industries. Moreover, the scope of participants was limited to HR professionals and owners/CEOs from SMEs with experience in HRM digitalization. However, as was revealed during the interviews, other managers from the upper-echelon (e.g. Sales Directors, IT Directors) have also actively participated in the implementation projects. Therefore, it could be interesting to include them in the sample to broaden the perspectives and to get more insights into the research phenomenon. Additionally, it would be beneficial to expand the sample with more professionals who had less successful experience with HRM digitalization. It could assist in discovering additional factors which, for instance, hinder HRM digitalization. Although wider sampling would allow a more thorough exploration of the research topic, it was hindered by the limited time frames of the research.

To continue with, another limitation refers to the data interpretation process: all the interviews were held in Russian, as the native language of the participants, transcribed and further translated into English by the author. That could lead to minor loss or distortion of reported information during the translation. Furthermore, since the research was carried out by a single author, the interpreted data could not be triangulated.

Additionally, it worth mentioning that some of the participants demonstrated prudence and sensitivity when answering the interview questions about the political situation in the country and its influence on HRM digitalization. It could be cautiously assumed that the participants' responses in this regard were limited by some personal considerations. That, in its turn, could have decreased the opportunity to get maximum insights on this aspect.

Finally, the factors affecting e-HRM implementation were analyzed at a particular moment of time. Therefore, a longitude study could provide an interesting direction for future research. More potential directions for future research will be discussed below.
5.6. Further Research Suggestions

As was previously mentioned in this thesis, the existing research on e-HRM implementation in SMEs is limited. Previous research suggested that SME’s opportunity to adopt digital technologies were limited due to the shortage of resources required for implementation (Ball, 2001). However, recent technological advances change the situation for smaller companies, making HR digital tools implementation more affordable by offering standardized solutions which do not require capital investments (Kavanagh et al., 2015). Therefore, a nascent interest of researchers in the topic of e-HRM implementation in SMEs can be observed. For instance, Bondarouk et al. (2009) explored perceptions about the use of e-HRM tools in medium-sized organizations. Later on, Johnson & Diman (2017) examined the critical factors for HRIS implementation in small business. These were the first steps in the related research agenda. This study aimed to contribute to the research agenda by exploring the factors which shape HR digitalization in SMEs. However, more research is necessary to deepen an understanding of the phenomenon and to assist smaller businesses in the more effective adoption of digital technologies to support their human resources.

To continue with, existing studies on e-HRM adoption is limited mainly to developed economies. Considering the increasing role of emerging economies in the worldwide economy as well as the rise of ‘eastern’ management practices, it would be beneficial to conduct additional research on HR digitalization in the context of emerging economies with all their specificity. Although emerging economies share some common characteristics, they are, however, differ from each other for some parameters. For instance, while some economies such as Indonesia (Boundrouk et al., 2016) are characterized by rapid economic growth, others suffer from economic’s decline. The legislative environment may also differ to a high extent. Therefore, it can be beneficial to expand the research to various developing countries. It would be also interesting to have comparative research which demonstrates the difference in implementation environment between developed and developing economies.

Moreover, the insights gained from this qualitative research provides a fruitful starting point for further quantitative studies. Considering the limitations of the qualitative design, quantitative research would provide the opportunity to generalize the findings. A
A combination of different methods may also be beneficial for obtaining reliable and generalizable results (Strohmeier, 2007). However, it is important to consider the existing limitations of the Russian context, which has been already discussed in the details in the previous chapter of this study.

Finally, this study did not focus on differentiating between small and medium-sized companies. However, medium-sized businesses often have more sophisticated HR function and more diversified HR subfunctions in comparison with small firms. Therefore, further research might also investigate the implementation environment and additional factors influencing it separately for each type of business.
6. Reference list


### Appendix 1 Description of the context-specific factors influencing HRM digitalization

<table>
<thead>
<tr>
<th>Context-specific factors</th>
<th>Main impact on individual-level factors</th>
<th>Main impact on firm-level factors</th>
</tr>
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</table>
| - Low level of education                                      | - Top-executives awareness in terms of digital technologies:                                             | - Corporate culture: Top executives in SMEs have an enormous influence on their corporate culture and
| - Poor functioning labour market                              | Top executives who are in charge of strategic decisions on HR digitalization are less aware in terms of IT & Digitalization and thus, less aware of its benefits for the business. Therefore, less willing to implement HR digital tools | values. If the top executive is not low-aware in terms of IT & digitalization and its benefits, s/he is less likely to promote innovatively and tolerate to change organizational culture |
| - Nepotism                                                    | Employees at the top positions are not always hired based on meritocracy principles but rather on personal relations with the decision-makers, thus, lacking skills necessary for digitalization | - Lack of qualified human resources with necessary IT skills at the positions which are in charge of strategic decisions, including those on digitalization |
| - Turbulent business environment                              | - Top executives are forced to constantly search for opportunities to optimize/save budget.                 | - Lack of financial resources for digitalization                                                   |
| - Lack of governmental support                                | The decision on implementation depends in this case on their perception of the usefulness of HR digitalization: whether it brings cost savings for the company? Or will be an investment with an unpredictable payback period? |                                                                                                   |
| - Top executives are less strategic oriented and, thus, less willing to think in terms of long term digitalization strategies |                                                                                                         |                                                                                                   |
| - Laws and regulations                                        |                                                                                                          |                                                                                                   |
| High level of regulation from the state in terms of labour legislation, bureaucracy |                                                                                                          | The human and financial resources of a firm are more involved in coping with regulatory issues which turn to be a barrier to HR digitalization |
| National culture characteristics:                            | Centralization of decision making - high dependence on top-executives attitude towards innovation and change | - Higher resistance to change, lower innovation tolerance leads to less willingness to adapt to new digital tools -Lower technological readiness of a firm for new digital tools implementation |
| - High uncertainty avoidance                                  | The low motivation of employees (including HR-executives) to find the opportunities for increasing labour productivity and efficiency, which is suggested by HR digitalization |                                                                                                   |
| - Low-performance orientation                                 |                                                                                                          |                                                                                                   |
| - High power-distance                                         |                                                                                                          |                                                                                                   |
| IT vendors support                                            | Especially important and have a positive influence in case of low IT-awareness of top-executives who are in charge of strategic decisions in a company. | May compensate the lack of IT resources and skills in a company                                   |
| Competitive pressure                                          | Top executives tend to monitor competitors and implement similar technologies in order to keep a firm’ competitive advantage | -                                                                                                   |

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Appendix 2  An Interview Guide

1. Introduction

- Please tell me about your education.

- Tell me about your professional experience.

- Have you ever studied / worked / interned abroad? If yes, please share how you apply the knowledge / experience gained in your work? Tell us about the key differences between this foreign experience and your Russian experience (for example, key differences in mentality, corporate culture, attitude to change, performance orientation etc).

- How long have you been with this Company and what is your current role?

- What does the Company do? (field of activity)

*If clarification is required: What is your role in the context of HR management?

2. General part

2.1 Topic 1: General questions on HR digitalization in the Company

2.1.1. Which digital tools / technologies in the field of personnel management are currently used in the Company?

2.1.2. Describe your experience and impressions of these tools?

2.1.3. How and who made the decision to implement these tools / technologies?

2.1.4. What was your role in the described implementation process?

2.1.5. Please describe who else (both inside and outside the Company) and how participated in the implementation of these digital tools / technologies?

2.1.6. Why, in your opinion, were these instruments chosen?

2.2 Topic 2: Influence of individual factors on HR-digitalization in the Company

(General awareness of digital technologies; availability of knowledge / skills / connections in this area; understanding the benefits of digitalization, including HRM digitalization):

2.2.1. Please describe your overall experience in IT / digitalization.
2.2.2. How would you characterize your attitude towards digital technologies and
digitalization in general?

2.2.3. Where do you get your knowledge on digitalization? Are you receiving any
additional training on this topic? If so, how often?

2.2.4. Which benefits, in your opinion, does HR digitalization provides to business?
Which of the benefits and why were important to you when making decisions about the
implementation of digital technologies in HR in the company?

2.2.5. How did you get acquainted with the digital HR tools implemented in the
Company?

2.2.6. What in terms of knowledge / skills / experience / connections have been useful to
you in the implementation of these tools?

2.2.7. Was there anything that, in terms of lack of knowledge / skills / experience /
connections, hindered the implementation of these tools?

Or: Have you noted a lack of any knowledge / experience / skills, etc. when introducing
these tools?

2.2.8. Do you keep in touch with the professional community? If so, how do you use them
later in your professional activities? Did you find these connections useful in the HR
digitalization process in the Company?

2.2.9. How would you characterize your attitude to the introduction of changes /
innovations in the Company as a whole? In relation to which innovations are you more
positive, and to which less positive?

2.3 Topic 3: Influence of organizational factors on HR digitalization in the Company

2.3.1. Company Size:

- How many employees work for the Company?

2.3.2. Hierarchical structure of the Company:

- How are strategic decisions usually made in the Company?

- How are operating decisions usually made in the Company?

- What type of solutions (strategic or operational) would you consider the implementation
of digital technologies in HR in the Company? Why?

2.3.3. Corporate culture of the Company:
- How would you describe the working atmosphere in the Company?

- How would you characterize the attitude of employees to changes and innovations?

- Is it generally difficult to introduce innovations into the processes existing in the Company? Why? Which innovations are easier and harder to make?

- What is the rate of employee turnover in the Company and the most common reasons for layoffs?

- Is there an opportunity for professional growth in the Company? What are the key criteria for promotion within the Company?

- How would you rate the labor productivity in the Company? In your opinion, what is the attitude of Company's employees in terms of demonstrating high results / achievements in their work?

2.3.4. Availability of resources for HR digitalization:

- Which resources were required to implement digital technologies in HR (for example, financial, human, technical)?

- How would you rate the availability and quality of the above resources in the implementation process?

- How would you rate the level of training of your employees in terms of skills and knowledge related to IT and digitalization?

2.3.5. Technological readiness / readiness of the Company for HR-digitalization:

- How IT support is organized for the Company? Why was this particular scheme chosen?

- How is IT-related issues usually resolved in the Company?

- Have digital technologies been developed / implemented in-house or with the involvement of contractors? Why was this method chosen, in your opinion?

2.4 Topic 4: Influence of environmental factors specific to Russia

2.4.1. Quasi-legal limiting and supporting factors

- How, in your opinion, does the current legal regulation in the country (e.g. legislative regulation in the field of labor and tax law), affect the digitalization of HR? How critical is it to follow this regulation? How easy is it to get around it?
- In your opinion, how does bureaucratic red tape affect (for example, reporting requirements for personnel in a state office, etc.), on the possibilities of HR digitalization? How critical is it to follow established rules? How easy is it to get around them?

- How is the communication between the Company and government authorities organized? Do you personally take part in such communication? If so, please provide an example.

2.4.2. Government support for businesses in relation to digitalization (e.g. financial assistance, training)

- How would you assess the role of the state in the digitalization of small and medium-sized businesses? And specifically in HR digitalization?

- How do you assess the possibility for the Company to receive support from the state (for example, financial in the form of grants, subsidies, in the form of training programs, etc.) for business digitalization? Has the Company ever received such support from the state? If so, which one and how would you rate the experience?

2.4.3. Labor market

- How would you describe the current situation on the labor market in Russia?

- How difficult is it to find employees in the Company with the required level of skills and competencies?

- From what sources are employees mainly recruited to the Company?

- From what sources are top managers usually recruited to the Company?

2.4.4. Other environmental factors

General macro environment questions:

- What, in your opinion, are the main characteristics of small and medium-sized businesses in Russia?

- How would you describe the overall business environment in which your Company does business?

What are the important factors you, as a manager, need to consider when making decisions? / when making decisions on the digitalization of the HR function?

Economic factors:
- How do you assess the current economic situation in terms of the impact on Russian small and medium-sized businesses?

- What is the impact of the economic situation on the work of the Company?

- Does the economic situation in the country have any influence on decision-making regarding HR digitalization in the Company? If so, which one?

**Political factors:**

- How do you assess the current political situation in the country in terms of the impact on Russian small and medium-sized businesses?

- What is the impact of the political situation on the work of the Company?

- Does the political situation in the country have any influence on decision-making regarding HR digitalization in the Company? If so, which one?

**Industry competition:**

- How do you assess the competitive environment in which the Company conducts business?

- Do key competitors have any influence on decision-making on HR digitalization in the Company? If so, which one?

**IT vendors:**

- How would you assess the market of providers of solutions for business digitalization in general and specifically HR digitalization?

- What is the impact of IT vendors / digital solution providers on HR digitalization? If so, which one?

3. Concluding part

- Would you like to mention anything else that, in your opinion, has influenced the implementation of digital HR tools in the company?
Appendix 3  GDPR Consent

GDPR Consent for Master thesis on
“HRM digitalization in emerging economies”.

Please tick the appropriate boxes

Yes  No

Taking part in the study
I consent to JIBS processing my personal data in accordance with current data protection legislation and the data delivered.

I consent voluntarily to be a participant in this study and understand that I can refuse to answer questions and I can withdraw from the study at any time, without having to give a reason.

My signature below indicates that I choose to take part in the thesis study and consent to JIBS treating my personal data in accordance with current data protection legislation and the data delivered.

______________________________             ___________               _________________
Name of participant [IN CAPITALS]       Signature             Date
Appendix 4  Participant Information Sheet

Participant Information Sheet

You are being invited to take part in a thesis study. Before you decide whether or not to take part, it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully.

Personal data are collected for the purpose of conducting a 16-weeks research for the Master Thesis withing a Master Program in Digital Business at Jonkoping University. More specifically, the research aiming for exploring HR-digitalization process in the Russian SMEs and the factors which shape this process. Data collection will be executed through interviews. Personal data may include information about name, age, occupation, education.

Please be informed that it is entirely up to you to decide whether or not to take part. If you decide to do so, you will be given this information sheet to keep and will be asked to give your consent. All the information that we collect about you during the course of the research will be kept strictly confidential. You will not be able to be identified in any ensuing reports or publications.

Under GDPR you have the following rights over your personal data:

- **The right to be informed.** You must be informed if your personal data is being used.
- **The right of access.** You can ask for a copy of your data by making a 'subject access request'.
- **The right to rectification.** You can ask for your data held to be corrected.
- **The right to erasure.** You can ask for your data to be deleted.
- **The right to restrict processing.** You can limit the way an organisation uses your personal data if you are concerned about the accuracy of the data or how it is being used.
- **The right to data portability.** You have the right to get your personal data from an organisation in a way that is accessible and machine-readable. You also have the right to ask an organisation to transfer your data to another organisation.
- **The right to object.** You have the right to object to the use of your personal data in some circumstances. You have an absolute right to object to an organisation using your data for direct marketing.
- **How your data is processed using automated decision making and profiling.** You have the right not to be subject to a decision that is based solely on automated processing if the decision affects your legal rights or other equally important matters; to understand the reasons behind decisions made about you by automated processing and the possible consequences of the decisions, and to object to profiling in certain situations, including for direct marketing purposes.
You should also know that you may contact the data protection officer if you are unhappy about the way your data or your participation in this study are being treated at dpo@ju.se

Thank you for reading this information sheet and for considering whether to take part in this research study.

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