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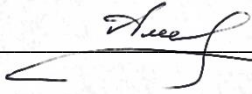
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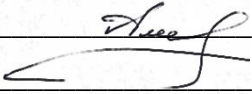
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**Наименование работы:** Влияние HR-практик и брендинга работодателя на инновационную результативность фирмы

**Ключевые слова:** Бренд работодателя, управление человеческими ресурсами, инновация, инновационная результативность

В настоящее время организации находятся в более конкурентной среде, чем когда-либо прежде. Причиной этому является широкая глобализация мировой экономики и быстро развивающиеся технологии. В данных условиях у компаний жестко стоит вопрос сохранения и улучшения конкурентных позиций на рынках, и одной из возможностей для них является улучшение собственных инновационных показателей. Цель данного исследования - по-новому взглянуть на возможности улучшения инновационных показателей компании за счет сочетания брендинга работодателя (EB) и практик стратегического управления человеческими ресурсами (SHR), направленной на основу любой инновации - человеческий капитал.

Эмпирическая часть исследования основана на методе моделирования структурных уравнений (SEM). В работе анализируются 122 ответа опроса 35 крупных фирм на российском рынке для поиска подтверждения теоретически обоснованных гипотез. Для исследования взаимосвязи была создана теоретическая модель, в которой SHR и EB выступают в качестве прямых факторов, влияющих на инновационную эффективность фирмы (IFP), и дополнительно EB оценивается как модератор, влияющий на взаимосвязь между SHR и IFP. Результаты исследования показали значимость влияния SHR и EB практик на инновационную деятельность компании. В то же время EB как модератор, хотя и показал свою значимость, оказывает слишком слабое влияние, чтобы принимать его во внимание, что может объясняться ограничениями самого исследования. Результаты исследования вносят вклад в существующий исследовательский пробел в оценке EB как предиктора инновационной деятельности, а теоретическое обоснование роли EB как модератора открывает большие перспективы для будущих исследований.

## ABSTRACT

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**Thesis topic:** Influence of HR Practices and Employer Branding on Innovative Firm Performance

**Keywords:** Employer Brand, Human Resource Management, Innovation, Innovation Performance

Nowadays organizations are in a more competitive environment than ever before. This is due to the extensive globalization of the world economy and rapidly developing technologies. In these conditions, companies are hard pressed to maintain and improve their competitive position in the markets, and one of the opportunities for them is to improve their own innovation performance. This study aims to take a fresh look at the opportunities to improve innovative firm performance through combinations of Employer Branding (EB) and Strategic Human Resource (SHR) management practices aimed at the basis of any innovation - human capital.

The empirical part of the study is based on the Structure Equation Modelling method (SEM). The paper analyzes 122 responses of a survey of 35 large firms in the Russian market to look for confirmation of the theoretically grounded hypotheses. To investigate the relationship a theoretical framework was created in which SHR and EB act as direct influencers on Innovative Firm Performance (IFP), and additionally EB is assessed as a moderator influencing the relationship between SHR and IFP. The results of the study showed the significance of the impact of SHR and EB practices on company innovation. At the same time EB as a moderator, although it showed its importance, but the influence is too weak to take it into account, which can be explained by the limitations of the study. The results of the research contribute to existing research gap in assessing the EB as predictor of innovation performance, while theoretical while the theoretical justification of EB's role as a moderator offers great promise for future research.

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## INTRODUCTION

Today we live in a rapidly evolving world. The past couple of decades have seen the introduction of major innovations, such as the Internet and personal computers (Tellis et al., 2009), which have significantly changed existing markets. Modern technology is bringing all economies together in a single ecosystem, where companies are empowered to compete throughout the new global world. Globalization brings with it a high level of competition for both local and global customers (Farniha et al., 2016). In such an environment, it becomes much more difficult to maintain one's sustainable position than before. It is not enough to degrade, it is necessary to move forward together with the entire market, and if an organization wants to gain an advantage, it must move even faster.

The modern economy is characterized by highly dynamic processes and increased product competitiveness. In this environment, companies need to constantly come up with something new to maintain and improve their position in the market. This process has accelerated significantly since the middle of the last century and is unstoppable. Rapidly acquiring innovations across all industries is a result of the accelerated engine of progress, which produces more and more novelties in products, services, and solutions that improve the aggregate standard of living of people today. Innovation is thus beginning to play a critical role in the global economy (Baskara & Mehta, 2016).

Today, innovation allows companies to remain competitive, improve their own performance (Diaz-Fernandes et al., 2017), and meet consumer needs by synchronizing the opportunities offered by the market with the strengths of the organization, as well as taking the initiative in a strategic perspective (Rujirawanich et al., 2011). The value of innovation is only increasing because of rapidly changing consumer preferences as well as the ubiquitously unpredictable nature of markets (Brown & Eisenhardt, 1997). In this environment, companies have to actively develop new products and solutions, as well as develop strategies to attract new customers and satisfy old ones (Ungerma et al., 2018).

With such a high importance of innovation for well-being and success in today's economy, organizations have a great need for quality tools to manage innovation. Previously researches were trying to address the demand by exploring the opportunities to enhance innovation by restructuring it as a process (Benner & Tushman, 2003; Ottosson, 2019, Bican & Brem, 2020), changing decision making (Lopez-Fernandez et al., 2016; Bierly et al., 2014) and revising the management system (Andriopoulos & Lewis, 2010; Brix, 2012; Lanker et al., 2016) Since the need for innovation did not arise today, most organizations have already been able to master some basic management practices,

but to gain a competitive advantage it is necessary to look for new and unconventional solutions. This is the gap current study is trying to address. The idea behind is that the basis of any innovation is human capital. It is people who are looking for, inventing, creating something new. Therefore, this study focused on the question of how organizations can influence the innovative performance with the help of tools that primarily influence people. These tools were practices of Strategic Human Resource management and Employer Brand.

The term “Human Resources” can be defined as a strategic and logical approach to managing an organization's most valuable asset: the people working there, who collectively and individually contribute to the organization's objectives. Personnel management practices are a very powerful tool for influencing a firm's various metrics through the current and future composition of personnel and their qualities. HR practices applied through the lens of company strategy have an even greater role in influencing the bottom line, as they work in close collaboration with other departments to achieve overall organizational goals, changing organizational structures and employee qualities to meet current needs. Therefore, as part of the evaluation of the impact of practices aimed at people in the company to increase innovation, it was impossible not to consider Strategic Human Resource management.

The term “Employer Brand” is mainly perceived as an overall organization image that can be weak, neutral or strong as a "great place to work". It usually refers to the impressions of current employees on the internal side and key external stakeholders on the external side, such as active and passive candidates, clients, customers, and other key stakeholders. This study focuses on the internal direction of Employer Brand which goal is to create the necessary conditions for employees to feel comfortable and be able to fully devote themselves to their work. Employer Brand practices allow to improve employee engagement, motivation, and retention rates.

In past literature, the Employer Brand has received little attention in managing organizational performance, and particularly innovation, despite the fact that the Employer Brand has great potential in influencing employee behavior. Previously most researchers focused only the correlation between implementing employer branding principles and human resource management. (Sokro, E., 2012; Davies, G., 2008; Wilden, R., 2010) or only theoretical aspect of the interaction of the employer's brand and innovation (Martin G. et al., 2011). Only recent work has begun to focus on the potential of the Employer Brand as a determinant of organizational innovation success, but even that work has not examined the effect on ultimate innovation firm performance. This is the research gap in literature current research is trying to address. Moreover, this paper introduces a new idea of considering the



Employer Brand as a factor that creates favorable conditions for enhancing the effect of applied Strategic HR practices on innovative firm performance. Thus, Employer Brand acquires moderation effect.

Based on the above, the research goal of this study is to reveal the role of Employer Branding and Strategic HR practices in determining the Innovative Firm Performance. For the purpose of achieving the research goal the following tasks were made:

1. Existing literature on innovation, employer brand, and Strategic HR practices was reviewed in detail.
2. Based on the deep study of the literature the main hypotheses of the research were formed:  
H1: Strategic HR practices positively relate to innovative performance of a firm.  
H2: Employer Brand positively relates to innovative performance of a firm.  
H3: Employer brand moderates the relationship between Strategic HR practices and innovative performance of a firm.
3. A questionnaire was formed based on adapted blocks of questions from previous research, which confirmed their over-time validity.
4. To achieve a correct understanding of the items by the respondents, a pilot study was held on 10 participants with the requirement of detailed feedback on the comprehensibility of the questionnaire, as well as a short conversation on the question that raised doubts.
5. After final improvement of the questionnaire based on pilot feedback, the main study was conducted on representatives of 35 Russian companies of large businesses.
6. The responses were cleaned of all kinds of errors and biases and analyzed in detail
7. On the basis of the work done, conclusions were made with details on the limitations of the survey and recommendations for future research

All the following steps were held to answer the main research questions:

- How Strategic HR practices affects Innovative Firm Performance?
- How Employer Brand affects Innovative Firm Performance?
- Does the Employer Brand of a company strengthen the influence of Strategic HR practices on Innovative Firm Performance?

The results of the research provided support for the hypotheses that Employer Brand (Training and Staffing) and Strategic Human Resource (Career Development, Financial Rewards, Job Content and Social Atmosphere) practices have a significant impact on Innovative Firm Performance.

However, the hypothesis of moderation effect of Employer Brand was not confirmed, which can be explained by research limitations.

This research makes a significant contribution to the existing literature because previously the Employer Brand was considered as a factor influencing company innovation only in a few recent papers, and even they did not assess the ultimate innovation performance of a firm. Despite the unsupported hypothesis of the Employer Brand moderation role, this study provides a notable theoretical rationale for this relationship, which opens up new opportunities for future research. Also, the work offers additional evidence on the sustainability of Strategic HR practices as a tool for managing firm innovation.

The results of the study also have great potential for application in practice. Managers should take into account the Employer Brand practices used, if they want to improve the competitive position of their companies. Also, the research provides extensive recommendations for all practices encountered to improve in order to achieve better innovation results based on current marketing reports and innovations in the areas of Employer Branding and Strategic Human Resource Management.

The next parts of the paper are structured as follows. In the Literature Review there is an extensive review of the current literature on innovation with the disclosure of the term, errors in its definition and factors of influence. In the Theoretical background and hypothesis development there is a review and disclosure of the main factors of influence on Innovative Firm Performance, as well as justification of the formulated hypotheses. In the Research Design part, the details of the process of preparing and conducting the main study are disclosed, and the main analysis takes place in the Data Analysis part. Summary summarizes the main results of the analysis, which are then disclosed in the Discussions part, where the limitations of the work, theoretical and practical implications, as well as the opportunities that the paper offers for future research are reviewed

## LITERATURE REVIEW

### 1. Innovation capability of a company

#### I. Defining innovation

##### In the direction of clarification

Defining the term "innovation" is not as straightforward as it might seem at first glance. There is no doubt that "innovation" is commonly perceived as something new (Pitra, 1997), however more detailed description might be an issue (Kahn, 2018). Public opinion studies show that people, besides thinking that "innovation" is something innovatory, most often also associate innovation with solving problems, being creative, focusing on growth and being a leader (Stenberg, 2017; Cox, 2010). All mentioned associations have some overlaps in their meaning; however, such perceptions are far from clear understanding of innovation concept. At the same time in the business world, it could be found that "innovation" is perceived as something risky, time consuming and potentially profitable (Costello & Prohaska, 2013). The lack of a clear understanding of innovation in the business environment is a serious issue (Acosta et al., 2016), because without a clear and authoritative definition it is difficult to build an effective management system and develop strategies to become innovative (Baragheh et al., 2009).

The definition issue appears even in the academic sphere. The understanding of innovation varies due to different views on the concept (Carneiro, 2000). Economists mostly focus mainly on product, process and financial outcomes from innovation (Cohen & Levinthal, 1989; Freeman, 1995; Sood & Tellis, 2009), while overall studies agree in understanding innovation as important tool to gain competitive advantage (Hunt & Morgan, 1995; Knight & Cavusgil, 2004). Many scientific papers illustrate quite different understanding of the commonly used terms as «innovation», «emerging technology», «innovativeness» etc (Razavi & Attarnezhad, 2013; e.g. Kougias et al., 2019; Rahman et al, 2017; Hollebeck & Rather, 2019, Chan & Parhankangas, 2017,). This is the important point when we start to compare different studies in case, we will face the two of them both telling us about «novel technology» which are in each case its own thing. Even though the concept of innovation has been researched from the beginning of 20th century (Lorenzi et al., 1912), there is some field for misunderstandings.

The first misunderstanding is perception of innovation as something radical in nature. In this case incremental changes that still introduce something new could be overlooked. (Kahn, 2018). That doesn't mean that radical innovations are not important. They play a great role helping companies and society to solve global problems of today. (Papaioannou, 2011) and enhance organization

competitiveness (Agostini & Nosella, 2017). Radical innovations create new markets and industries, they radically change the way of doing business, giving companies that got to grips with them a significant competitive advantage. In addition, in many cases, radical innovation is the only option available to maintain and improve existing performance in mature stages of product or technology development (Sood & Tellis, 2005).

Radical innovation often involves significant changes in product strategy, behavior in markets of presence and technology (Korberg et al., 2003). Radical innovation is large-scale in nature and involves the creation of new products, services, and markets. Radical innovations are rare, but unlike equally rare disruptive innovations, they include not only changes in technological part of the product or service, but also changes in the business model (Souto, 2015). An example of this kind of innovation is the advent of the personal computer and the Internet. These changes, which took place in the last century and were developed at the beginning of the new millennium, have radically affected the modern global economy, transforming almost all business spheres (Tellis et al., 2009).

Radical innovations do not have a preconceived and written template of creation. Each innovation is unique that complicates the process of managing the creation of radical innovations. Moreover, in most companies it is more difficult to get support even for single radical projects (Dougherty & Hardy, 1986). But despite doubts about the ability of companies, especially large ones, to create radical innovations, they still have to do so in order to achieve long-term success in their highly competitive markets. (O'Connor & Ayers, 2005).

Nevertheless, most innovations occurring in markets are incremental ones that bring continuous improvements to existing solutions (Tontini et al., 2014). This is because incremental innovations are easier to produce with greater regularity. Incremental innovations today are considered to be an important part of innovation. (Fuglsang & Sørensen, 2011). Unlike radical innovation, incremental innovation more often involves improving existing products and services that aim to better meet consumer needs (Varadarajan, 2009).

According to classification developed by Herbig (1994), there are 3 types of incremental innovation: continuous, modifying, and technological. Continuous innovations involve the expansion of the product line in the company's portfolio as well as improving their changes. Modifying innovation in turn involves replacing old technology with new technology while performing the same functions. Technological innovations imply technological changes in the production chain of a product or service, which affect the final characteristics of the result (Azar & Ciabuschi, 2017). Also, incremental innovations include the local opinions in the field, which are brought by employees to the

work process. The importance of incremental innovation lies in its ability to attract higher-paying customers by enabling them to meet higher demands and needs through improved product or service characteristics. In addition, incremental innovation allows you to attract a broader and more mass market by being able to create a product with the same quality, but at a lower cost. Therefore, it is certainly important to consider less significant changes when defining innovation.

Another common misunderstanding is the confusion between the terms "innovation" and "innovativeness. Innovativeness is a personality trait that all people possess to varying degrees (Midgley & Dowling, 1978, Van de Ven & Rogers, 1988). The degree of innovativeness affects the level of influence in creating new products and solutions. Innovativeness refers to a subject's ability and potential to innovate, while innovation is the creation of something new. If we look at the level of companies, organizational innovativeness reflects the ability to create the conditions for involvement in innovative activities, to support new ideas and creative activities, and to support them (Salavou, 2004). Organizational innovativeness in turn defines the desire of firms to initiate and implement an innovation process that creates administrative, technological, product improvements. (Salavou et al., 2003).

Another place for misunderstanding arises from the lack of clarification of the difference between innovation and creativity. Both concepts have a great impact on the performance of the firm and its competitiveness, and therefore, its success on the market. (West, 2002a). Due to the reconsideration of the concepts, even though multiple definitions have been proposed in different studies on the topic, there is still a lack of unity in the representation of innovation and creativity. (Anderson et al., 2014). Most often, creativity and innovation are perceived as tightly linked concepts responsible for improving and enhancing current products, processes, business practices, and solutions (Paulus, 2002). In this case, creativity is responsible for the initial stage of creating innovation (Baer, 2012), namely the generation of ideas, while innovation refers to the development and implementation stages (West, 2002b). According to the stage's creativity builds around divergent thinking and Innovation around convergent thinking (Gurteen, 1998). The processes of creation and innovation do not necessarily have to follow each other (Anderson, N. et al., 2004), especially in accordance with current trends in innovation, which advocate a cyclical process of creating, testing, and learning. However, this does not prevent the process from being contradictory because of the combination of opposite actions: generating ideas and trying to implement them (Rosing et al., 2011). The other view is that creativity could be the phenomena that creates and fosters the innovation. (Sousa et al., 2012). In this case innovation and creativity is similar in the way of new thinking. (Tienken, 2003).

More recent researchers have tried to accumulate all the scientific knowledge created and create a unified definition (Baragheh et al., 2009; Kogabayev & Maziliauskas, A., 2017; Fri et al., 2013). According to latest research innovation is defined as a multi-dimensional and multi-stage concept (Baregheh et al., 2009), which, like an umbrella, includes transformation of ideas and improvement of solutions, changes in technology and socio-cultural, organizational changes, changes in ecology and economy (Schachter, 2016). Innovations are diverse: they are fundamental and local, make changes in all spheres and systems or only in some of their elements. Innovation covers all stages of bringing new: the process of development, the process of transforming or changing and the final result (Kogabayev & Maziliauskas, 2017).

### **Views on innovation from different angles**

Besides, the entire innovation can be both a process and a result and a mindset (Quintane et al., 2011). Each approach to presenting innovation separately has its own issues to deal with. One-sided view on innovation always hides significant part of the truth from the observer. (Gupta et al., 2016). Thus, by over-focusing on innovation as an outcome, the organization seeks to minimize and shorten the process of innovation, which leads to increased pressure and exceeding the inherent costs and by over-focusing on innovation as a process, the organization fosters bureaucracy and inefficiency, which makes it difficult to achieve quality results (Kahn, 2018). That's why the combined approach is the best way to perceive innovation.

#### **Innovation as an outcome**

Underlying the definition of innovation as an outcome is an understanding of novelty. This supports a generalized definition of innovation as something new (Kline & Rosenberg, 2009). However, the understanding of an idea is an abstract concept, it is not a natural characteristic of an object, this is the meaning given to it by the people who make the evaluation (Damanpour, 1991). Innovation as an outcome implies a transition to a specific and desirable result, which can be a change in product, an improvement in processes, a new approach in marketing, a revolution in the business model, an increase in supply chain efficiency, and an optimization of the organization.

Product innovation is usually understood either from the customer perspective as a development of new products that has distinctive characteristics and features that set them apart from their competitors and more effectively meet the needs of consumers (Hoonsopon & Ruenrom, 2012; Ziamou & Ratneshwar 2003; Govindarajan & Kopalle, 2006) or from the technological site as something novel among existing technologies or unique that highlights product among others

(Kristina & Dean, 2005; Gatignon & Xueb, 1997). In addition, products that are combinations of other products using new technology are also considered innovations (Leenders & Dolfsma, 2016).

Process innovation intends to focus on efficiency achievement such as faster processing and better performance (Bernstein & Kok, 2009; Dost & Badir, 2019), new audience attraction and competitiveness increase (Hojnik & Ruzzier, 2016; Moyano-Fuentes et al., 2018; Purtik et al., 2016), lower cost (Kahn, 2018; Keupp et al., 2012; Piening & Salge, 2015) or increase in quality and economic success (Reichstein & Salter, 2006). Innovations in processes open up opportunities to improve the environmental friendliness of business, create a responsible brand image and attract environmentally conscious consumers. (Jakobsen & Clausen, 2016; Raz et al., 2013). Process innovations primarily affect production costs, without touching the final product unchanged. At the same time, product innovations bring radical changes in the market structure, while process innovations affect market competitiveness. (Goel & Nelson, 2018).

Innovations in marketing can be perceived as new methods and channels for selling products (OECD, 2005). They can manifest themselves in new design, packaging, and placement (Chen et al., 2017), market segmentation, promotion, or pricing (Lin et al., 2010; Utkun & Atilgan, 2010; Weerawardena, 2003). In today's reality, marketing innovation is linked to Big Data analysis (Mařík, 2016). Qualitative promotion influences and stimulates demand (Yan, 2010; Karray & Zaccour, 2006; Xie & Neyret, 2009) as well as reduces the sales of competitors (Barigozzi et al., 2009; Viscolani & Zaccour, 2009).

According to Kahn (2018), business model innovation is an outcome that can change an industry. It is about model design reconfiguration that led to uniqueness or novelty (Dogson et al., 2014). Business model could be subdivided into 3 types of changes: industry type of innovation, revenue model innovation and enterprise model innovation (IBM, 2009). The other view is that business model innovation strives on changes in value position and operating model (Lingart et al., 2009). Moreover, business model innovation could go beyond single function and enhance overall company approaches to sales, value delivery. Chesbrough (2007) see business model innovation as development of company's business model through 6 stages from an undifferentiated model to an adaptive one.

Supply chain innovation includes changes in supply chain technologies, networks and processes, while the entire supply chain can be a part of one department within a company, an organization itself or overall industry (Arlbjørn et al., 2011). Supply chain innovations include changes in technology, networks, and supply chain processes, while the entire supply chain can be

part of a single department within a company, an organization itself, or the industry as a whole (Arlbjørn et al., 2011). Supply chain innovations are complex processes that respond to changes in demand and customer needs by introducing new technologies (Lee et al., 2011) or improved processes (Lee et al., 2014). Innovations have the goal of improving efficiency, service quality, and profitability (Wong et al., 2019). Partnerships and collaborations, including cross-industry ones, can be ways to improve efficiency (Storer et al., 2014). Innovation can take place both at the level of supply chain design and at the level of processes (Franks, 2000).

Organizational innovation is the creation of a culture within an organization of mutual learning and interaction that aims to achieve the best decision making in employee positions (Kahn, 2018; Söderquist & Godener, 2004). Another view of organizational innovation highlights it as a complex mechanism that is actively used in a competitive environment to adapt by creating new products, technologies, and systems (Utterback, 1994; Dougherty & Hardy, 1996), and processes (Birkinshaw et al., 2008). Organizational innovation is the ability to constantly learn new things (Gebauer et al., 2012; Knoppen et al., 2011), innovate knowledge, and create new value (Gumusluoglu & Ilsev, 2009).

#### Innovation as a process

Innovation can be perceived as a process or way of organizing the innovation process (Kahn, 2018, Damanpour et al., 2017). The innovation process can distinguish stages such as discovery, development, and delivery (PDMA, 2015; Perani & Sirilli, 2008). In this case, the measure of innovation effectiveness is on the first stage the extent to which ideas borrowed from the environment (Roper et al., 2008; Dahlander et al., 2021) or self-generated through R&D work that the organization has access to (Gao & Choub, 2015). The immediate product development stage can be divided into new product stage, product improvement stage, and mature product stage (Utterback & Abernathy, 1975). Delivery stage represents a very important part of the process, in which the explanation to future users of the result of the innovation of its essence and value (Kahn, 2018). Without the Delivery stage, an organization cannot achieve an innovation. However, according to recent trends, this stage is not and should not be the final stage (Meissner & Kotsemir, 2016). Latest approach tries to prove necessity of using agile approaches, which are based on continuous hypothesis testing in the development of products, innovations, solutions, etc. (Kimbel, 2011; Brown, 2008; Elsbach & Stigliani, 2018; Micheli et al., 2019). This change in processes leads to the need for innovators to process more and more information (Carayannis & Campbell 2011; Gokhberg et al. 2010). The model that is most frequently used among private companies for organizing development of innovations and new products was originally proposed by Copper (1990). The main idea behind Stage-Gate is to divide



the development process into 6-7 key stages from idea generation to full-scale production, and to highlight the key to-dos at each stage (Cooper, 2008; Cooper et al., 2002).

#### Innovation as mindset

Innovation as a mindset is perceived as a phenomenon that stimulates both individuals and teams to create something new (Kuczmarski, 1996). Achieving an innovation mindset is not an easy process that requires high motivation, effective management, and innovative leadership (Facey-Shaw, 2014). In literature exists an effect according to which individuals can transfer their innovative thinking to an entire organization (Harsono & Fitri, 2020). However, to function effectively, this mindset must be adopted by all employees, from top management to supporting functions (Kuczmarski, 1996; Kahn, 2018). Innovation mindset involves creating a unified innovation climate (Drucker, 2007). This is a good way to provide an advantage in today's highly competitive environment (Waite, 2014). Dyer et al. (2011) identified 5 skills that stimulate the development of an innovation mindset: associating, questioning, observing, experimenting, and networking.

In this paper's innovation is determined as multi-stage process that includes developing novelties from idea generation to launch to gain competitive advantage in differentiation, creating corporate image, and successfully compete that creates an outcome in a form of new products, services or solutions and is fostered by internal innovation mindset.

#### **The origin of innovation**

Innovation can be either created or adopted by the company (Damanpour & Gopalakrishnan, 1998; Rogers, 1995; Pérez-Luño et al., 2011). In each case it requires different company's capabilities. To generate innovation successfully and steadily company should be able to hold the innovation process efficiently through all stage gate process form idea generation to post realization review (Afuah, 2003).

The basic idea of modern innovation is to increase efficiency and competitiveness, using either internal or external sources (Drucker, 1985). Damanpour and Wischnevskuy distinguish two types of organizations: those that successfully implement and those that successfully generate innovation (Damanpour & Wischnevsky, 2006). The reason for the division lies in the difference of companies, because adoption and generation processes are different in nature and require different systems of organizational structure of autonomous units (Damanpour & Wischnevsky, 2006), but despite this organizations should try to combine these processes (Pérez-Luño et al., 2011; Pérez-Luno et al., 2014). Innovation generation most often refers to the processes of creating, changing products, processes, services, and technology that ultimately become new to both companies and the market as a whole.

(Dewar & Dutton, 1986; Pérez-Luño et al., 2011, Dost, 2016). This process is more complex, unstructured (Cheng & Van de Ven, 1996), and more time consuming (Pérez-Luno et al., 2014). The process of innovation adaptation, on the other hand, involves the simulation of already existing knowledge and technology, which as an outcome gives novelty only to the companies themselves, but not to the whole market (Mahmood & Rufin, 2005).

The important point to mention is that innovation generation is more complex process that for bringing value to the organization requires not only strong focus on value capture as in with adoption, but also advanced value creation competencies (Chesbrough et al, 2018; Zott & Amit, 2010). The benefits of proper focus on value creation in today's technology intensive economy is in opportunity to create effective digitalized value chains (Hartmann & Halecker, 2015; Kiel et al., 2017). At the same time the focus on innovation adoption is less resource requiring form a company, as building a system of continuous drawing of ideas from the outside involves its own complexities, investments, and risks (Traviglioni et al., 2020). One of the most essential disadvantages of outsourcing any kind of processes is that it could be rather easy to imitate such a successful solution by other companies. It can be unreasonably risky to outsource the important project which could be executed by internal resources, especially with integration of Cloud technologies (Gozman & Willcocks, 2019). By the way, one side focus on generating innovation is also not the optimal approach (Yun et al., 2020). Extensive concentration on internal sources lead to a loss of great opportunities that openness offers. As soon as scientists and commercial organizations realized that they were constrained by their own capabilities, they started looking for new sources of innovation (West & Bogers, 2013).

In recent years, the literature has been focusing on a relatively new direction in innovation – the creation of a system of open innovation. (Yun et al., 2020). Open innovation means opening the boundaries of the company to knowledge inflows, creating a certain transparency and division of their own achievements for the common good, boosting an entrepreneurial spirit within the company.

The term open innovation firstly appeared in the book of Henry Chesbrough in 2003 and received much attention as a very attractive new concept, all the methods that were presented in his book were not new. (Chesbrough, 2003). The reason for such success is the fact of integrating a range of existing activities in attractive concepts at the right time when the interest in outsourcing, network, core competences, collaboration, and the internet raised. The concept of open innovation was originally defined “as the use of purposive inflows and outflows of knowledge to accelerate internal innovation and expand the markets for external use of innovation respectively”. As it was mentioned above open innovation is a comprehensive concept that included proof of sufficiency, the concept of

moving towards the open innovation, and proper management of the open innovation practices. The concept was mainly focused on opening the organizational boundaries for inbound and outbound knowledge flows by using mechanisms for connecting technologies and markets and relationships with individual partners.

The concept of open innovation appeared in a very fast developing world where the pace of technological innovation is higher than it has ever been before (Enkel et al., 2009). Skyrocketing development leads to the fast appearance of new disrupting concepts as Industry 4.0 that is enabled by the Internet of Things, mobile devices, smart technologies, advanced data analysis capabilities, and many other factors that were developed recently (Travaglioni, 2009). Such development also influences all the processes of the organization that are held both within and outside the companies.

The dynamic capabilities of the companies become more and more important as every operation tends to speed up that leads to shorter product and service life cycle and less time to market (Schoemaker et al., 2018).

However, the significant increase in the organizational processes speed also implies an increase in demand for innovation that could be hardly satisfied in most of the organizations by their internal resources (Lee et al., 2016). The reason for it is that more innovation opportunities can be provided by an increase of investments of all the resources that leads to the appearance of new organizational structures, processes, and regulations that in term leads to an increase in complexity and higher cost. If such decisions are made rapidly and they are implemented in a short period, there is no way for the same level of return on investments to be held and thus most organizations could not succeed in it because of lack of required resources. (Drake et al., 2015). So, the circle appears in which organizations cannot invest so much in the innovation process, because they do not need enough resources and thus, they lose their competitive positions as they do not provide innovative solutions to consumers and thus they receive fewer resources from the market, so they couldn't invest in innovation processes as they did before.

The way to break up such a circle for many companies is to start implementing open innovation practices. Receiving a strong source of external knowledge could help companies to overcome difficulties with resource allocation to be more competitive in a quickly developing environment. (Robaczewskaa et al, 2019). And this is the point where the relevance of the open innovation topic becomes pretty clear.

For a company that beginning its transformation towards open innovation, it's very important to understand the key drivers to receive a more direct influence on open innovation indicators. Such

key drivers are horizontal and vertical integration and know-how in terms of process, product, and organizations it is important to understand the underlying drivers that can help the company to create a sustainable system of its performance. (Travaglioni et al., 2020). Such drivers are merger, acquisition, intuitive, research center, university, and internationalization. And the last thing and probably the most important one is the absorptive capacity that is needed for a company to link key direct drivers with underlying ones for the smooth run of the whole system.

The concept of open innovation is not new, and it significantly evolved. Large companies moved from inbound and outbound knowledge flows and individual partners to actively shape the environment in this way creates the right conditions for unprecedented and more advanced open innovation practices. (Bogers et al., 2018). This approach means the creation of strong mutual relationships with different social institutes on local and global levels like universities, governments, enterprises, start-ups to create a mutual value exchange. Large companies develop a strong, sustainable knowledge base combining talent expertise, infrastructure, policies, and funding through a variety of innovation and educational initiatives and events. The main focus shifts to nurturing and sustaining a broad ecosystem of partners in the region (Robaczewskaa et al, 2019). The other issue is that even the company has a well-designed innovation process and started to develop its ecosystems beyond its borders it is very important that it not only receives the knowledge and value from the outside but also shares its successes in the research field or its resources or gives opportunities of a different kind to external actors for common healthy functioning of the ecosystems. (Chesbrough et al, 2018). Only in this case company will be able to sustain the whole system in long-term in a highly competitive environment. It is worth saying that creation of value is certainly a highly important process that requires a ton of attention and highly efficient and highly qualified staff, because it is crucial for the companies to the external actor with something, they are really important to create interest for participation in created systems.

## **II. Factors determining innovation**

Since it is extremely desirable for a company to have a high rate of innovation in order to gain a competitive advantage in rapidly changing environment (Rhee et al., 2010; Subramaniam & Youndt, 2005), it worth considering all the systemic components that could lead to high innovation performance within the organization to properly manage them. These components are the basic units of a single organization, which are considered during any management decisions, at least ones that company can influence. The first is the organizational system.

The organizational system should be considered as combination of interlinked processes of internal rules, reward, and punishment principles, supported communication ways, methods and styles, systems of control and report. (Ravichandran & Rai, 2000). The way system is structured and organized and the principles and priorities it follows influence the results company achieve in each sphere of its operation, boosting employee inspiration (James & Lahti. 2011). More dynamic oriented and informal structures foster the efficiency of R&D departments, allowing companies to shift to more extensive and exploration-based strategies (Vedel & Kokshagina, 2020). Creating more opportunities and giving more freedom for inventors to focus on their main functions, fostering entrepreneurship within the company and providing with all the necessary resources enhance the innovation performance.

As the main benefit of the established organizational system is to make employees inspired by the company vision and involved in achieving of organizational goals (James & Lahti. 2011), the right way to boost workers engagement is to implement Strategic HR practices in a strategic partnership of functions within the organization (Bas, 2012; Green et al., 2011). On the stage of strategy formulation HR play a sufficient role as a strategic asset for gaining competitive advantage, and thus point of consideration (Wright & McMahan, 1992). Once all elements of the strategy have been formulated, the HR competency model is created to form the desired state of the system and is then used as a tool in training, compensation, performance appraisal and compensation. On the stage of spread HR function could accelerate the diffusion of the initiatives taken by introducing proper training practices (Bas, 2012). On the stage of implementation HR management can achieve the transformation of conceived goals into clear and specific tasks for employees, building a system of performance appraisal.

The other way is to influence existing organizational structure via employer branding. Internal employer brand focuses its attention on the employees of the organization. Its task is to create a favorable work environment, provide career opportunities and professional development of employees (Backhaus & Tikoo, 2004). Employer brand is able to increase employee engagement, giving them additional motivation and retention (Al Badawy et al., 2017).

The second factor is managers and management system. Managers use social influence and status to direct and manage their subordinates' the opinions, views, and behaviors; empower, motivate and mobilize team members rather than impose them; and engage their organizations in a systemic or holistic process of change, not just a top-down process. (Damanpour & Schneider, 2009). Managers play a great role of balancing system. On the one side they should direct the operations of R&D

department, plan innovation process, investigate and allocate resources and create a proper climate for innovational performance on the other side they should not allow concentration on innovative performance to prevail over other components of the business system to avoid imbalance. (Vedel & Kokshagina, 2020). Managers seek balance in sustaining current assets and displacing them with new, more innovative ones, aiming at the same time to maintain long-term business growth and foster organizational innovation. (Salaman & Storey, 2002).

The degree of influence of management system on the innovation could be determined by the style of the leadership represented in a company (Khan et al., 2012). Transformational leadership that is based on inspiration, intellectual stimulation and individualized consideration is widely considered as the most “ideal” style of leadership to foster innovation activity (Hu et al., 2012; Reuvers et al., 2008). At the same time research shows that transactional leadership that is based on the carrot and stick method can also positively contribute to company’s innovations (Riaz, 2009). The laissez-faire leadership that gives much more autonomy to team members and provides less control is associated with the least contribution and even decreases the innovation performance (Khan et al., 2012).

Leadership research and Strategic HRM research have similar goals - to identify the most effective and efficient ways to manage people in organizations. At the same time leaderships research focuses on individual employees or their small groups (Northhouse, 2015), while Strategic HRM primarily focuses on the organization as a whole, with all the departments included in it. An important part of Strategic HRM is to provide the organization with quality managerial and leadership competencies, which are the basis of competitive advantage in the marketplace. Moreover, Strategic HRM, through its selection, training, and performance appraisal practices, can direct the leadership approaches used to create maximum value for the organization (Shah & Aman, 2019).

The other aspect of the managerial factor is that the more managers in top management team (TMT) with scientific or engineering education or R&D experience there are in the organization the better it is for R&D performance as R&D projects are the riskier challenges could be taken. (Lee et al., 2017). However, that is one sided point of view on the member of TMT choice decision process. There is no research done related with such membership change on the main and basic indicators of the company overall performance such as revenue, profit, efficiency of departments, proper planning and so on. However, on the other side the more diversified previous experience and education of TMT members could let to quality increase in internal project investments decisions. But for that synergy effect specific proportion of members of TMT with different backgrounds may be required. And identifying this balance could be a good base for establishing further research

First two factors work in a combination, in balanced system creating a convenient environment for third factor to reach its full potential. It works in a way that the system encouraging initiative, entrepreneurship, freedom of implementation, minimal bureaucracy is compensated by management decisions aimed at preserving the strategic orientation of the company to its business interests. Correct observance of this balance allows the company to get the maximum increase of efficiency of innovative activity, the task of which is to improve the financial indicators in the long-term perspective.

The third factor should be considered as one of the most important. the personal. The RBV approach originally identified three main assets that could give an organization a long-term competitive advantage: physical, organizational, and human. With rapidly evolving digital technologies, which also include information transfer, the ability to use physical and organizational resources to achieve significant competitive advantage has been significantly limited and human resources have come to the fore (Shah & Aman, 2019). The primary importance of people in the organization is also justified by the fact that the combination of values and rules, restrictions and freedoms, principles of work and reporting in alignment with all organized management system alone will never bring any productive result. They represent the created conditions for functioning, while the final result is always generated by the company's employees. The same goes with innovation as all the innovation potential of the organization lies in the minds of its employees (Gaspersz, 2014). Therefore, if there is a desire to achieve significant improvement in innovation activities, it is necessary to focus on them in the first place.

The scientific staff is the main active force in achieving an innovative result. They are engaged in research, collecting information, generating ideas, and developing them. However, within the scientific staff, the contribution to innovation activities is not evenly distributed. Over a long period of time, researchers have identified a separate group of personnel who make a comparatively more significant contribution to overall success. (Pilkington et al , 2009; Ernst & Vitt, 2002). This group is called "key inventors". These people contribute more to the major stages of innovation creation, which leads to faster and more successful technology implementations, as well as increased economic and innovation activity. Key investors are extremely rare representatives of scientific staff, and therefore are of value to each company seeking to increase the efficiency of its innovation activities. (Ernst, 1998). Therefore, this group should be given special attention by companies in terms of attracting, engaging, and retaining them.

As talented inventors is a valuable and extremely limited resource, the demand for it will always exceed the offer. For each company there will always be a choice to hire new employees or grow them. Both approaches take place in practice and have both their strengths and weaknesses. When focusing on growing its own talent, the company spends a lot of resources investing in a talent generation system that is riskier but can pay off more in the long term. (Cohn, J.M. et al., 2005). This approach implies the creation of a comprehensive system of personnel development combined with appropriate training, motivation, and growth opportunities. In case of investment in the search for researchers outside the organization, the company gets a more guaranteed result, although still risky. (Blatter, M. et al., 2008) In addition, in this case it will be possible to take advantage of the effect of past discoveries in the industry. (Singh, J. and Arawal, A., 2011). However, even in this way, the organization requires a well-established system of development, motivation, and provision of opportunities to implement in conjunction with the need to create an attractive proposal for a potential candidate. The management of the two above-mentioned areas falls on the corporate system of the Human Resource Management and Employer's brand.

### **Summary**

According to the literature mentioned above this paper tries to cover all the main aspects of innovation performance and assess organizational Employer Brand and Human Resources practices as an important tool to manage innovation activity.

## **2. Theoretical background and hypothesis development**

### **I. Human resource practices**

Human resource practices are an important tool for managers in shaping the skills, attitudes, behaviors, and motivation of employees (Collins & Clark, 2003). Some previous studies prove the validity of this tool for managing the firm's key performance indicators (Huselid & Becker, 2011; El-Kassar & Singh, 2019).

This paper focuses on Strategic Human resource management pragmatics. A distinctive feature of Strategic HRM is the top-level planning of the practices used to achieve specific results important for the business (Chen & Huang, 2009). It works in a way that Strategic HR practices go in alignment with company's main strategy and is aimed at adapting the existing structure of the company (specific positions, skills and competencies of employees) for most efficient movement toward the desired results. In case of Strategic HR approach the synergy effect of practices applied can be reached (Jiang, K. et al., 2012; Foss et al., 2015) and it is even more boosted by the synchronization of practices and their focus on a single goal (Purcell, 1999). However, this effect has some limitations that are



highlighted by several authors (e.g.: Boxall, 2011, Andreeva et al., 2017). They say that wide range of practices that are used together simultaneously not always bring additional value for the company and can even adversely affect each other's work. This creates the need to study the effects of different practices on each other's work. For this reason, this paper uses scales already created and tested in several studies to measure Strategic HR practices.

## **II. Strategic Human recourse practices and Innovative Firm performance**

The basis for the creation of any innovation is human capital (Chen & Huang, 2009). Employees are the ones who find new ideas and develop and promote them (Dorner, 2012). Therefore, human resource management practices can stimulate enterprise innovation, while Strategic HR practices can discover and leverage organizational knowledge and expertise (Scarbrough, 2003). Strategic HR practices that include a variety of tools to encourage and incentivize innovation operate in all main areas of innovation: generation, transition and adoption (Kang et al., 2007; De Winne and Sels, 2010). Strategic practices are diverse and include a large number of tools such as recruitment, education and training, direct participation, performance appraisal and remuneration. (Laursen and Foss, 2003). Quality recruitment will allow a company to gain an additional source of innovation for adopting new workers' knowledge (Chen & Huang, 2009). Well-designed training pushes employees to be open to new ideas and add to their knowledge (Jaw and Liu, 2003), and the organization to develop expertise in terms of demand and content innovation (Weisberg, 2006).

It is worth keeping in mind that Strategic HR practices has different efficiency in each case, and in order for employees to gain the greatest increase in innovation, some must navigate the unknown, be willing to take risks, and adapt well to new environments (Madsen and Ulhøi, 2005). A tool such as fair rewards and celebrating quality work, both individual and group, will further enable even more innovative outcomes in the form of newly developed and commercially successfully launched products (Mumford, 2000). Rewards for employees can include rewards for finding and coming up with new ideas and their initial development or openly encouraging knowledge sharing (Andreeva et al., 2017). Some researchers consider this effect of reward practices to be less unambiguous (e.g., Foss et al., 2015), since these tools may carry a non-unique message for employees, i.e., in addition to informing them that the company cares about the innovative activity of co-workers, a sense of control is created (Andreeva et al., 2017). However, studies show that the innovation performance of individuals within transitional leadership based on all-round support and transactional leadership with a rigid system of controls and rewards do not vary significantly, while at the same time Laissez-Faire leadership with the highest degree of trust and lack of control shows

the worst results (Khan et al., 2012). In addition, Foss et al. (2015) suggest combining reward with other HR practices. Employee evaluation is one of the most important components of Strategic HR practices (Winne and Sels, 2010), which can include evaluating employee engagement in company innovation and knowledge sharing (Andreeva et al., 2017). The level of employee engagement arising from high motivation has a positive impact on company innovation (Jiménez-Jiménez and Sanz-Valle, 2005). However, as well as remuneration practices separately they may not give the right perception of the employee, how they are treated by the company (Budworth et al., 2015), so it is worth to use them in conjunction with other practices. Taken together, all practices should increase employees' motivation to innovate (Lerchenmueller & Nembhard, 2015).

The above arguments indicate that firms can use Strategic HR management practices to drive innovation and increase its quality. Using personnel selection, training, evaluation, performance appraisal, and participation practices, firms can improve their performance in developing and releasing new products, services, and solutions.

**H1:** Strategic HR practices positively relates to innovative performance of a firm.

### **III. Employer brand concept**

Employer brand (EB) was originally defined by Amber and Barrow as "a package of functional, economic, and psychological benefits provided by employment and identified with the employing company." (Amber, T. and Barrow, S., 1996). The employer brand is perceived as a valuable non-tangible asset in the eyes of current and potential employees (Maxwell & Knox, 2009; Roy, 2008).

The value of the Employer Brand is to create a unique image of a company that with proper management can attract, attach, and retain valuable employees (Edwards, 2009; Lievens, 2007). The chain of creating an employer brand may include the following steps: strategic analysis of labor market, identification the target audience, building the employer brand concept, employer brand promotion and employer brand evaluation (Kucherov et al., 2019).

The concept of branding means integrating marketing and branding practices into the HR management paradigm in order to improve the effectiveness of HR practices and company performance (John & Raj, 2020). As with the tools used in marketing, employer branding practices must be properly targeted and adapted for the audiences they are targeting. (Kucherov & Zamulin, 2016).

According to the EB concept, companies should think of their employees as potential customers (Amber & Barrow, 1996). Therefore, companies should perceive their own recruiting and

hiring processes as attracting new customers. Companies should place great emphasis on attracting, retaining, and incentivizing their talented employees, including by creating a strong and attractive brand (Martin G. et al., 2011).

The employer brand extends its influence on both the internal and external environments of the company, managing awareness, influencing perceptions, trust, and loyalty (Backhaus & Tikoo, 2004). Maxwell & Knox (2009) distinguish 3 different approaches to looking at the employer brand: intrinsic (company focus on potential future employees), extrinsic (company focus on existing company employees), perceived external (focus on brand perception by external participants). In the previous literature, most attention has been paid to the external part of the employer brand, that is, the focus on job seekers (e.g. Barrow & Mosley, 2011; Rampl & Kenning, 2014). Perception of external employer brand is pretty close to perception of marketing brand (Backhaus & Tikoo, 2004). Thus the tools that are used are rather similar to that of general marketing (Barrow & Mosley, 2011).

The internal employer brand has received less attention in the academic literature (De Stobbeleir, 2016). The concept of internal employer brand would define the part of the employer brand that targets company employees and shapes understanding of organizational identity and culture, thereby shaping a more supportive work environment (Backhaus, 2016). Employees' adoption of the brand concept and values is very valuable because they will subsequently be able to communicate these values to the world around them, and especially to stakeholders at the point of contact with them (Punjaisri & Wilson, 2007).

Nevertheless, there is still a very large gap in the research on the impact of the employer's internal brand on the company's employees. Some papers nevertheless also consider the internal brand as a tool that can be used to achieve goals, through word of mouth, in which the employee represents the company (Knox & Freeman, 2006; Maxwell & Knox, 2009; Lievens et. al., 2007). This paper highlights the importance that the internal and external brand work in tandem to maximize the effectiveness of brand image action. Therefore, it is important to pay attention to the internal part of the employer brand in order to maximize the effect (De Clippeleer, 2017).

#### **IV. Employer Brand and Innovative Firm Performance**

Few studies have focused on the impact of employer brand on firm performance. Tanwar and Pasad (2017) and John and Raj (2020) are rare examples. Both of these papers used a 23-item employer brand rating scale, which covered five main dimensions: healthy work environment, training and development, work-life balance, ethics and corporate social responsibility, and compensation and benefits. Their interest to the sphere of employer brand application is caused by the company's

potential for creating a powerful image to increase employee engagement, reduce employee turnover (Kucherov & Zavyalova, 2012) and positively influence individual performance of the employees, including innovative work behavior (Pukkeeree, et al., 2020). Innovative work behavior represents the innovative activity of individual co-creators, which includes idea generation, promotion and realization (Woods et al., 2017). Jong (2008) emphasized the importance of 2 additional dimensions: championing and application, because they showed the activity of the employee in promoting novelty through the stages of development of a new solution. The influence of innovation work behavior of employees on the cumulative innovation activity of a company is essential, due to the origin of the concept. (Jong, 2008).

Factors that determine employee innovation work behavior include the level of support from the organization (Sulistiawan et al., 2017), type of leadership (Muchiri et al., 2020; Khan et al., 2012), breadth of psychological empowerment (Bhatnagar, 2012), level of employee involvement (Slåtten & Mehmetoglu, 2011), and the relationship between management and employees (Sulistiawan et al., 2017). When employees receive the full range of support, they feel good about themselves, become more engaged in their work, and become more engaged in their job-related behaviors (Kaur et al., 2020), which leads to increased innovation (John & Raj, 2020).

Thus, based on the arguments presented we can hypothesize that the employer brand can positively influence company innovation. Practices such as the built supportive environment, fair compensation, engaging job content, and career prospects should encourage workers to get more involved and create more innovation in the workplace.

**H2:** Employer Brand positively relates to innovative performance of a firm.

## **V. Moderation effect of Employer Brand**

As it was said earlier one of the features of internal employer brand is that it creates supportive environment for the employees. (Backhaus, 2016). When organizational support is high, employee commitment and emotional connection to the company increases (Rhoades et al., 2001). To achieve this effect, the organization must actively meet employee expectations to increase employee engagement by applying various benefits support from managers and a well-organized work environment. (Arasanmi & Krishna, 2019). Organizational support is a very important management tool as it has a significant impact on firm performance (Park et al., 2018). West (1990) has proposed that supportive environment encourage the innovation on the team level.

The internal employer brand focuses on motivating and retaining current employees (Hitka et al., 2015; Love and Singh, 2011). The study of Urbancova and Hudakova (2017) provided evidence

that companies with developed EB has more success in HR processes, especially in terms of attracting and retaining employees.

In addition, Backhaus and Tikoo (2004) defined Employer Branding as a set of subjective beliefs regarding an exchange agreement between an individual and the organization.

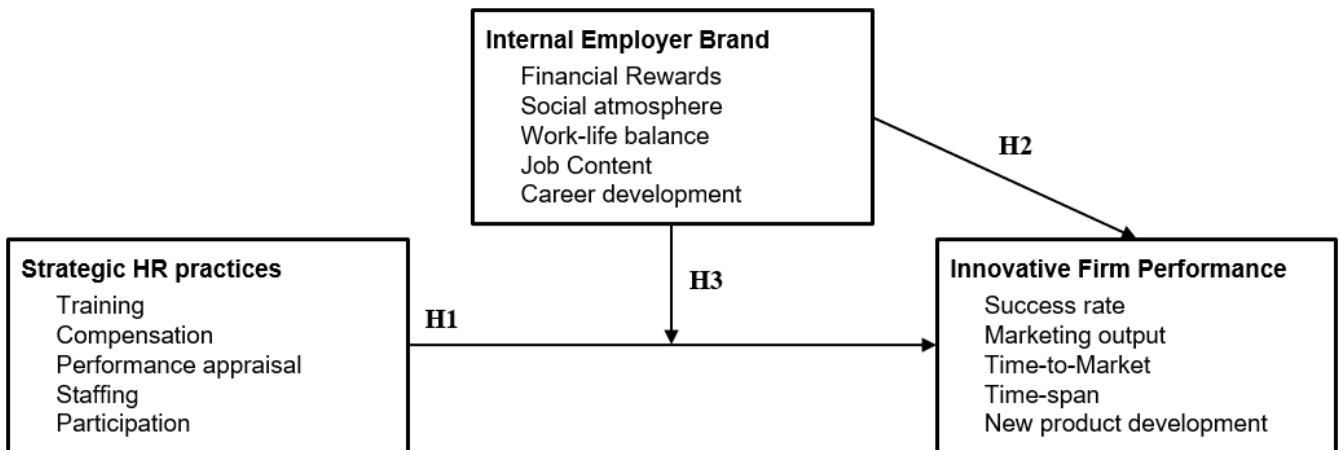
According to social exchange theory, relationships between people become consistent and reliable over time because they accept the terms of exchange on which their relationship is built (Cropanzano & Mitchell, 2005). The principle of social exchange is the reciprocity in the contributions of different parties, so that the investment of one party increases the contribution of the other (Blau, 1964). The benefits and resources received from the company make employees feel indebted to the organization and encourage them to increase their overall productivity (John & Raj, 2020). Personnel management practices applied against this background should increase the result, which manifests itself in the innovation performance of a firm. Though it is imperative to study this relationship, there is a dearth of knowledge that explores it. Therefore, this paper will attempt to determine the beneficial impact of the employer brand on the existing relationship in the company between Strategic HR practices and innovation performance, based on this theory.

Thus, based on the arguments presented we can hypothesize that the employer brand can make a positive moderation effect on link between Strategic HR practices and Innovative Firm Performance, creating a certain environment or climate in relationship increases its strength.

**H3:** Employer brand moderates the relationship between Strategic HR practices and innovative performance of a firm.

### 3. Nomological Framework

Based on theory presented above the following research framework has been developed (see picture 1).



Picture 1. Nomological Framework

## RESEARCH DESIGN

### 1. Methodology

#### I. Sample and Data collection

The proposed model was tested on the sample of employees of large companies in Russia. Companies were considered large if number of employees were larger than 250 workers. The choice of the large companies was done, because we wanted to get the most complete picture of the Employer Brand and Strategic Human Resources practices represented (Black et.al, 1987). Moreover, we have to focus on specific category of the firm based on size, because large firms have different employee's productivity compared to SMEs (Walter, 1999). Small and medium-sized organizations have less representation of these practices due to their financial capabilities and small number of staff (Brewster et al., 2006).

The data was gathered via an online survey delivered directly to the potential respondents. Contacts of GSOM partners, personal recommendations, professional communities, and social networks were used to reach the audience of the research. As a result, 150 responses were received from about 35 companies from various industries (the approximation is explained by the fact that the survey was anonymous). The company representatives were asked to provide at least 2-3 respondents from a single company to reduce the Common Method bias.

A detailed study of the responses received revealed significant biases in responses of employee's who were related to Human Resource management and Employer Branding within the company. Their responses show considerable skewness in answers on question related to their main function, while their colleagues from other departments show other and presumably more objective results. Thus, all answers from HR departments were eliminated as well as the answers of employees form support functions due to their uncomplete understanding of the functioning of the company, they mostly answered "Undecided". After eliminating irrelevant responses according to the criteria presented above, we received 130 responses. The significant part of the responses were done by female respondents (see table 1) that may be a result of female higher willingness in participation in online-surveys (Smith, 2008).

<b>Gender</b>	<b># of answers</b>	<b>% of total</b>
<b>Female</b>	79	61%
<b>Male</b>	51	39%

Table 1. Gender distribution of respondents

During the collection of survey responses, all age groups were interviewed to the best of their ability for the most even representation. However, as can be seen from the actual statistics (see table 2), the 20–25-year-old group has a significant advantage. As a result, the criterion of a minimum of one year of work experience at the last place of employment was introduced, as a guarantee that employees are well acquainted and know the company in which they work.

<b>Age</b>	<b># of answers</b>	<b>% of total</b>
<b>Under 20</b>	2	2%
<b>21-25</b>	81	62%
<b>26-30</b>	22	17%
<b>30-40</b>	15	12%
<b>40 and more</b>	10	8%

Table 2. Age distribution of respondents

As a result, the criterion of a minimum of one year of work experience at the last place of employment was introduced, as a guarantee that employees are well acquainted and know the company in which they work. Accordingly, all answers that do not meet the requirements were removed from the sample (see table 3).

<b>Last job experience</b>	<b># of answers</b>	<b>% of total</b>
<b>From 1 to 5 years</b>	116	89%
<b>More than 5 years</b>	14	11%

Table 3. Experience distribution of respondents

In each case, efforts were made to solicit responses from management personnel to get the highest quality and most balanced responses (see table 4). 27% of responses came from management personnel, from which we can say that we were able to reduce homogeneity.

<b>Positions</b>	<b># of answers</b>	<b>% of total</b>
<b>Managers</b>	35	27%
<b>Non-managers</b>	95	73%

Table 4. Position distribution of respondents

For proper results the equal representation of main departments that contribute to value creation was tried to achieve (see table 5). This was done due to each company operation specificity and different contribution of departments to the overall success in each case.

<b>Department</b>	<b># of answers</b>	<b>% of total</b>
<b>Marketing</b>	23	18%
<b>Sales</b>	22	17%
<b>R&amp;D</b>	21	16%
<b>Finance</b>	17	13%
<b>Production</b>	18	14%
<b>Supply chain</b>	17	13%
<b>Other</b>	12	9%

Table 5. Departments distribution of respondents

The study attempted to receive respondents from various industries to assess influence of the main observable variables regardless of the companies' areas of operation (see table 6). The resulting distribution of responses can be considered sufficiently diversified and reflect the current market structure in the Russian economy.

<b>Industry</b>	<b># of answers</b>	<b>% of total</b>
<b>FMCG</b>	30	23%
<b>IT</b>	20	15%
<b>Consulting and Audit</b>	19	15%
<b>Mining, oil &amp; gas</b>	12	9%
<b>Forest industry, woodworking</b>	7	5%
<b>Finance</b>	6	5%
<b>Medicine and pharmaceuticals</b>	6	5%
<b>Retail</b>	6	5%
<b>Energetics</b>	6	5%
<b>Construction and real estate</b>	5	4%
<b>Other</b>	13	10%

Table 6. Industry distribution of respondents

## II. Measures

All the measures for the variables in the study were taken from the existing literature to ensure the measurement reliability and validity. All items have been translated into Russian and adjusted to survey design. To achieve a correct understanding of the items by the respondents, a pilot study was



held on 10 participants, that were not included in the final sample. The pilot study included detailed feedback on the comprehensibility of the questionnaire, as well as a short conversation on the question that raised doubts.

All the constructs were reflectively measured. For convenience and ease of interviewing, all responses were reduced to the same 5-point Likert scale, which goes from negative to positive to make sure that an increase in the value of the response represents an increase in the trait measured. The points of the scale were the following: “fully disagree”, “disagree”, “undecided”, “agree” and “fully agree”. All questioned measured only one item at a time and no reverse coded questioned were used to avoid misunderstandings and biases in answers. The obligation to answer all questions was included in the online survey to avoid missing data. The Appendix I lists all items.

Subjective measures were used to assess Innovative Firm performance as it was rather complicated and, in some cases, even impossible to collect the objective measures in a way it is often done in scientific studies as not all the companies that create innovations protect their work with patents or licenses, either because the requirements do not allow so, or because there is no such practice due to the specific nature of the industry. At the same time there is significant evidence that “carefully collected subjective data could be equally valid” (Singh et al., 2016) to objective data.

### **Strategic HR practices**

Prior research has used various ways to assess Strategic HR (SHR) practices (Koodij D.T.A.M. et al., 2013; Wright et al., 2005; Prieto & Perez-Santana, 2012). This study used 16-item scale, developed by Chen C. J. and Huang J. W. (2009) to keep the questionnaire compact and because of the most complete coverage of the main components. The construct includes 5 main dimensions of Strategic HR: Training (measured by 4 items; e.g.: Comprehensive training programs are available to employees), Compensation (measured by 3 items; e.g.: Bonuses are paid to employees for exceeding the plan in terms of productivity, financial or other indicators), Performance Appraisal (measured by 3 items; e.g.: My company regularly evaluates the professional development of employees), Staffing (measured by 3 items; e.g.: A candidate's development potential is an important factor in the hiring process), Participation (measured by 3 items; e.g.: The opinion of employees is valued by the organization).

### **Internal Employer brand**

Internal Employer Brand (IEB) was measured by 5 item scale developed by De Stobbeleir, K. E. M. et al (2017). It covered 5 dimensions of internally directed employer brand: Financial rewards,

Social atmosphere, Work-life balance, Job content and Career Development (e.g.: My company helps employees find work-life balance).

### Innovative Firm performance

Innovative Firm Performance (IFP) was measured as employee perceived phenomenon by 5-item scale developed by Oke, A. et al. (2012). It covered 5 dimensions of innovative performance: Success rate, Market output, Time-to-market, New product development long-term, Time span (e.g.: My company takes less time to develop an innovation from idea to implementation than the industry average). Originally the scale included estimation of new product development in last 5 years, justifying this period by the need for time to implement new practices, which will result in an increase in new products in the portfolio. It was decided to add one more item – New product development in last 1,5 years to assess the effect of COVID-19.

### III. Methods for testing hypothesis

To test the hypothesis structural equation modeling in AMOS will be used. To test the moderation effect of IEB the interaction method is used. Before that the Reliability and Validity (CFA) analysis is held using SPSS and AMOS.

#### 2. Data analysis

### IV. Data screening

The data screening stage is held to make sure that the data is clean and ready to conduct the further analysis.

#### Missing data in rows

		Statistics																											
	Tr_1	Tr_2	Tr_3	Tr_4	Comp_1	Comp_2	Comp_3	PerApp_1	PerApp_2	PerApp_3	Staf_1	Staf_2	Staf_3	Part_1	Part_2	Part_3	FinRev	SocAt	WLB	JobCon	CarDes	SucRat	MarkOu	Tm	NPDhr	NPDlr	TimeSpan		
N	Valid	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122
	Missing	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mean		3,877	3,623	4,148	3,369	3,779	3,754	3,426	3,623	4,361	2,607	3,926	4,27	4,098	4,025	4,467	4,115	3,713	4,066	3,41	3,656	3,869	3,828	3,664	3,525	3,918	4,123	3,41	
Median		4	4	4	3	4	4	4	4	4	2	4	4	4	4	5	4	4	4	3	4	4	4	4	4	3	4	4	3
Mode		4	4	5	3	5	5	4	5	2	4	5	4	4	5	4	4	4	4	3	4	4	4	4	4	3	4	4	5
Std. Deviation		1,0953	1,1084	1,0498	1,1223	1,1464	1,145	1,2055	1,2487	0,728	1,302	1,1072	0,8236	0,957	0,7973	0,6945	0,845	1,0162	0,9248	1,089	1,0505	0,8995	0,9154	1,0254	0,8834	0,9757	1,0089	0,9938	

Table 7. Descriptive statistics

Due to the questionnaire design, there is missing data neither in rows nor in columns (see table 7).

#### Unengaged responses

We removed 8 cases out of 130 due to being not engaged (answering the same way to every Linkert scale item). The standard deviation for that answers were lower than 0,45.

#### Outliers (on continuous variables)

The questionnaire originally contained 51 items measured with 5-item Linkert scale. Thus, all the variables are descriptive in nature.

## Skewness & Kurtosis

It was observed fairly normal distributions for our indicators of latent factors in terms of Skewness (see table 8). There are a slightly negative skewed items such as Tr\_1, Tr\_3 and PerApp\_2, Staf\_1, Staf\_2, Staff\_3, Part\_1 and Part\_2. That could be a result of limited prevalence of some SHR practices among Russian large companies. Mild Kurtosis is observed for the indicators of our independent variable (SHR) and dependent variables (IEB and IFP). These Kurtosis values ranged from benign to 3,11. While this violate strict rules of normality, it is within more relaxed rules suggested by Sposito et al. (1983), who recommend 3,3 as upper threshold for normality.

		Statistics																											
		Tr_1	Tr_2	Tr_3	Tr_4	Comp_1	Comp_2	Comp_3	PerApp_1	PerApp_2	PerApp_3	Staf_1	Staf_2	Staf_3	Part_1	Part_2	Part_3	FinRew	SocAt	WLB	JobCon	CarDev	SucRate	MarkOu	TdM	NPDaht	NPDit	TimeSpan	
N	Valid	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122
	Missing	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Skewness		-1,13	-0,58	-1,56	-0,27	-0,73	-0,64	-0,41	-0,57	-1,33	0,33	-1,08	-1,26	-1,52	-1,04	-1,39	-0,97	-0,55	-1,02	-0,29	-0,57	-0,71	-0,57	-0,59	-0,22	-0,81	-1,23	-0,23	
Std. Error of Sk		0,22	0,22	0,22	0,22	0,22	0,22	0,22	0,22	0,22	0,22	0,22	0,22	0,22	0,22	0,22	0,22	0,22	0,22	0,22	0,22	0,22	0,22	0,22	0,22	0,22	0,22	0,22	
Kurtosis		0,83	-0,29	2,20	-0,50	-0,11	-0,43	-0,68	-0,68	3,11	-1,08	0,58	1,93	2,76	1,80	2,22	1,10	-0,39	0,99	-0,52	-0,24	0,56	0,23	0,12	0,36	0,47	1,32	0,14	
Std. Error of Ku		0,43	0,43	0,43	0,43	0,43	0,43	0,43	0,43	0,43	0,43	0,43	0,43	0,43	0,43	0,43	0,43	0,43	0,43	0,43	0,43	0,43	0,43	0,43	0,43	0,43	0,43	0,43	

Table 8. Skewness and kurtosis

## V. Validity and Reliability

### Reliability analysis

The reliability analysis was run using SPSS (see table 9) and it showed that most constructs have a reliable set of variances loadings, except for the couple in initial SHR construct. The Compensation and Performance Appraisal constructs with all items included were removed, because they didn't fit threshold rule for construct Cronbach's alfa (should be larger than 0,7). Additionally, the following items were removed due to lowering the construct Cronbach's alfa: Tr\_4, Part\_1.

Construct	Cronbach's alfa if item Deleted	Cronbach's alfa	
<b>Training</b>		0,884	
Tr_1	0,825	-	
Tr_2	0,84	-	
Tr_3	0,851	-	
Tr_4	0,884	-	*removed
<b>Compensation</b>		0,634	*removed
Comp_1	0,607	-	*removed
Comp_2	0,449	-	*removed
Comp_3	0,544	-	*removed
<b>Performance Appraisal</b>		0,645	*removed
PerApp_1	0,358	-	*removed
PerApp_2	0,612	-	*removed

PerApp_3	0,619	-	*removed
<b>Staffing</b>		0,811	
Staf_1	0,707	-	
Staf_2	0,763	-	
Staf_3	0,745	-	
<b>Participation</b>		0,763	
Part_1	0,802	-	*removed
Part_2	0,686	-	
Part_3	0,517	-	
<b>IEB</b>		0,810	
FinRew	0,777	-	
SocAt	0,758	-	
WLB	0,773	-	
JobCont	0,766	-	
CarDev	0,790	-	
<b>IFP</b>		0,856	
SucRate	0,813	-	
MarkOut	0,826	-	
TtM	0,823	-	
NPDsht	0,838	-	
NPDlt	0,85	-	
Timespan	0,840	-	

Table 9. Reliability Analysis

### Common method bias

To test if the majority of the variance can be explained by a single factor, because of single method used in data collection, the Harman's single factor test was run. PCA 1 component analysis showed that 44,113 % of Variance could be explained by a single factor (see table 10), that follows under threshold of 50% (Posakoff, 2003).

### Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5,735	44,113	44,113	5,735	44,113	44,113
2	1,434	11,032	55,145			
3	1,174	9,034	64,179			
4	,772	5,940	70,119			
5	,722	5,555	75,674			
6	,623	4,791	80,466			
7	,534	4,109	84,574			
8	,512	3,941	88,515			
9	,414	3,182	91,697			
10	,299	2,299	93,996			
11	,288	2,216	96,212			
12	,265	2,039	98,251			
13	,227	1,749	100,000			

Extraction Method: Principal Component Analysis.

Table 10. PCA analysis (Total variance explained)

#### Confirmatory Factor Analysis

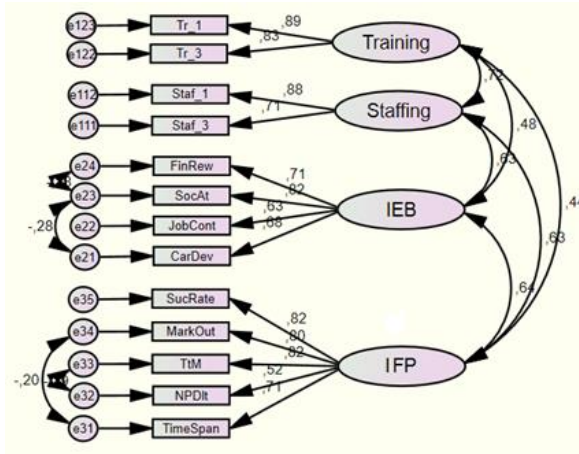
To check the convergent and discriminant validity of proposed model the Confirmatory Factor Analysis was run. The initial SHR construct implied the existence of 2<sup>nd</sup>-order factor. To use model with 2-order factor we have to test the assumption that the correlations among a set of first-order factors is accounted for one or more higher-order factors (Brown, 2006). For that purposes the following steps were done:

A first-order model CFA with the same constructs and good model fir was created that was logical from the conceptual standpoint.

The correlation between firs-order factors were assessed to determine if the second-order model could take place for better explanation of the correlation

2-order model was tested for the fir and conceptual validity was evaluated

The 1-order model looked as following (see picture 2). The following items were removed due to model fit discrepancies (inflating chi-square): Tr\_3, Part\_2, Part\_3, Staf\_2, WLB, NPDsht. We felt justified in doing this as items belonged to large latent reflective factors and thus somewhat redundant. We leave the NPDIt item despite it's not large factor loading due to its importance in estimating innovation performance (Alegre, 2006) and our desire to preserve the original construct developed by Oke, A. et al. (2012).



Picture 2. 1-order CFA

From the 1-order standardized factor loadings we can see that (see figure 2). Based on the structure coefficients, the loadings indicate strong relationships between the first-order factors and their indicators (see figure 2). The correlation between the Training and Staffing factors is strong ( $r=.72$ ) (see table 11). Notably, the Training and Staffing factors correlate to a lower degree with IEB and IFP factors.

1-order

			Estimate
<b>IFP</b>	<-->	<b>IEB</b>	0,637
<b>IFP</b>	<-->	<b>Training</b>	0,439
<b>IFP</b>	<-->	<b>Staffing</b>	0,635
<b>IEB</b>	<-->	<b>Training</b>	0,478
<b>IEB</b>	<-->	<b>Staffing</b>	0,632
<b>Training</b>	<-->	<b>Staffing</b>	0,719

Table 11. Standardized Regression Weights

The pattern of correlations suggests that a second-order factor may explain the correlation between Staffing and Training.

We observed convergent and discriminant validity in 1-order model (see table 12) as evidenced by (convergent is AVE above 0.5, discriminant is square root of AVE greater than correlations) and reliability (evidenced by the CR above the 0.7).

Construct/ items	Standardized factor loading	Cronbach's Alpha	CR	AVE
	0.5, p<0.05	>0.7	>0.7	>0.5
<b>Training</b>				
Tr_1	0,892	0,851	0,85	0,74
Tr_3	0,832			
<b>Staffing</b>				
Staf_3	0,709	0,763	0,78	0,64
Staf_1	0,879			
<b>IEB</b>				
SocAt	0,820	0,773	0,81	0,51
FinRew	0,712			
JobCont	0,632			
CarDev	0,682			
<b>IFP</b>				
TtM	0,817	0,838	0,86	0,55
MarkOut	0,803			
SucRate	0,824			
TimeSpan	0,71			
NPDIt	0,522			

Table 12. 1-order model measurements

Seems to be no validity concerns as the model satisfies Fornell-Larkell criterias (Hair et al., 2010) (see table 13):

$$R_{1,2}^2 < AVE_1 \text{ and } R_{1,2}^2 < AVE_2$$

	Mean	Standard deviation	Training_mean	Staffing_mean	IEB_mean	IFP_mean
<b>Training_mean</b>	4,01	1,00	0,74	0,32	0,18	0,18
<b>Staffing_mean</b>	4,01	0,93	0,57	0,64	0,31	0,31
<b>IEB_mean</b>	3,83	0,75	0,43	0,56	0,51	0,32
<b>IFP_mean</b>	3,71	0,75	0,42	0,56	0,57	0,55

Table 13. 1-order model descriptives

The following items were removed due to model fit discrepancies (inflating chi-square): Tr\_3, Part\_2, Part\_3, Staf\_2, WLB, NPDsht. We felt justified in doing this as items belonged to large latent reflective factors and thus somewhat redundant.

## Measurement of model fit

To assess the model fit for goodness fit the traditional measurements were used, such as CMIN, DF, RMSEA, PCLOSE (Kline, 2011), TLI, CFI (Whittaker, 2016) as well as the threshold values were taken from the appropriate literature. (Hu & Bentler, 1999). Given the chi-square goodness of fit test is significant in our data, we will accept the exact fit hypothesis,  $\chi^2(48)=57,214$   $p=.393$  (see table 14).

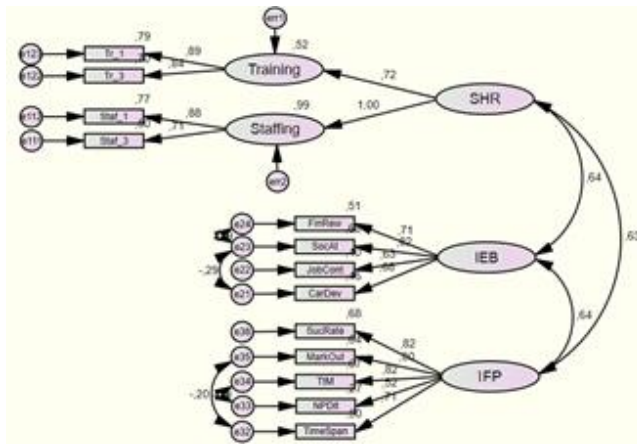
### 1-order

Measure	Observed	Threshold
Chi-square	57,214	-
DF	55	-
CMIN/DF	1,04	<3 (good)
p-value	0,393	>0,05
CFI	0,997	>0,95 (great)
GFI	0,933	>0,9
RMSEA	0,018	<0,05 (good)
PCLOSE	0,865	>0,05

Table 14. 1-order model fit

### 2<sup>nd</sup> order factor model CFA

The next step is to measure the originally proposed model with one second-order factor: Strategic Human Resources practices (SHR). As you can see, the standardized factor loadings associated with the second-order factors are all quite substantial (see picture 3). There is a modest positive correlation ( $r=.63$  and  $r=.64$ ) between the second-order factor and two first-order factors accordingly.



Picture 3. 2-order CFA



The model with second-order factor shows good model fit (see table 15).

2-order

Measure	Observed	Threshold
<b>Chi-square</b>	57,474	-
<b>DF</b>	56	-
<b>CMIN/DF</b>	1,026	<3 (good)
<b>P</b>	0,42	>0,05
<b>CFI</b>	0,998	>0,95 (great)
<b>GFI</b>	0,933	>0,9
<b>RMSEA</b>	0,015	<0,05 (good)
<b>PCLOSE</b>	0,882	>0,05

Table 15. 2-order model fit

Since the correlation between second-order factors with two first-order factors is greater than in the case where all factors were 1-order ( $r=.633$  and  $r=.638$  compared to  $r=.439$ ,  $r=.635$ ,  $r=.478$  and  $r=.632$  accordingly), it can be assumed that the presence of the second-order factor is reasonable (see table 16).

2-order

			Estimate
<b>IFP</b>	<-->	<b>IEB</b>	0,636
<b>IFP</b>	<-->	<b>SHR</b>	0,633
<b>IEB</b>	<-->	<b>SHR</b>	0,638

Table 16. 2-order Standardized Regression Weights

To test second-factor model relevance it was compared whether the model fit changes significantly when the second-order factor is introduced. To do this, a Chi-square difference test was performed, comparing the two models we have.

$$\chi^2_{diff} = \chi^2_{second-order} - \chi^2_{first-order}$$

$$\chi^2_{diff} = 57,474 - 57,214 = .26$$

$$df_{diff} = df_{second-order} - df_{first-order}$$

$$df_{diff} = 56 - 55 = 1$$

Next, the computed chi-square difference value ( $\chi^2_{diff}=.26$ ) against the tabled chi-square value was compared to determine if there is a significant decrease in fit from the first model (first-order factors) to the second model (second-order factors). The tabled chi-square critical value for 1 df and assuming  $\alpha=.05$  is 1.84.

Since our obtained chi-square value of .26 is  $< 1.84$ , the null hypothesis is maintained that the second-order factor model does not fit significantly worse (since  $p>.05$ ) than the first-order model. This finding supports the tenability of the second-order factor model.

We observed convergent and discriminant validity in 2-order model as evidenced by (convergent is AVE above 0.5, discriminant is square root of AVE greater than correlations) and reliability (evidenced by the CR above the 0.7) (see table 17).

Construct/ items	Standardized factor loading	Cronbach's Alpha	CR	AVE
	0.5, $p<0.05$	$>0.7$	$>0.7$	$>0.5$
<b>SHR</b>				
Tr_1	0,888	0,826	0,90	0,69
Tr_3	0,836			
Staf_3	0,71			
Staf_1	0,878			
<b>IEB</b>				
SocAt	0,823	0,773	0,81	0,51
FinRew	0,713			
JobCont	0,631			
CarDev	0,682			
<b>IFP</b>				
TtM	0,817	0,838	0,86	0,55
MarkOut	0,802			
SucRate	0,824			
TimeSpan	0,709			
NPDIt	0,524			

Table 17. 2-order model measurements

Additionally, there are no validity concerns as the model satisfies Fornell-Larkell criterias (see table 18):

$$R^2_{1,2} < AVE_1 \text{ and } R^2_{1,2} < AVE_2$$

	Mean	Standard deviation	SHR_mean	IEB_mean	IFP_mean
<b>SHR_mean</b>	4,01	0,85	0,69	0,31	0,30
<b>IEB_mean</b>	3,83	0,75	0,55	0,51	0,32
<b>IFP_mean</b>	3,71	0,75	0,55	0,57	0,55

Table 18. 2-order model descriptives

## VI. SEM

### Multivariate Assumptions

#### Outliers and Influentials

Cook's distance analysis was run to determine if any multivariate influential outliers existed (see appendix II). There were no observations of cook's distance greater than 0,4 that is significantly lower than threshold value of 1. Most cases were lower than 0.100 thus we have no case to remove answers due to being an influential outlier.

#### Linearity

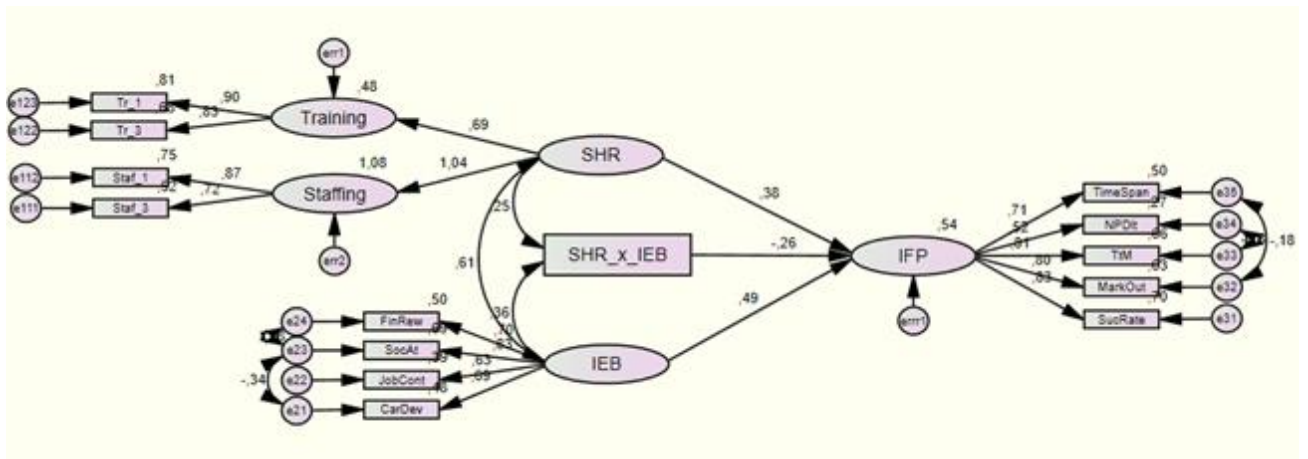
Curve estimation was conducted for all of relationships in the model and determined that all the relationships were sufficiently linear to be tested using covariance-based structure equation modeling. Thus, the relationships among 3 pair of IV and DV are represented by consistent slope of change.

#### Multicollinearity

No multicollinearity test needed as in the model there are less than 3 factors predicting another variable. (O'briemn, R. M., 2007).

#### Moderation via interaction

The SEM model using the interaction approach was run to assess the moderation effect of IEB on the relationship between SHR and IFP (see figure 4).



Picture 4. Moderation via interaction model

To demonstrate sufficient exploration of alternative models, the model fit was checked. According to the number presented (see table 19) the good model fit was achieved.

### Model

Measure	Observed	Threshold
Chi-square	1,285	-
DF	66	-
CMIN/DF	1,268	<3 (good)
P	0,07	>0,05
CFI	0,975	>0,95 (great)
GFI	0,911	>0,9
RMSEA	0,047	<0,05 (good)
PCLOSE	0,541	>0,05

Table 19. Moderation via interaction model fit

It was observed that all relationships were significant and falling under 0,01 threshold constraint. (Li et al, 1998). SHR has a positive and considerable influence on IFP (H1 approved) as well as IEB does (H2 confirmed).

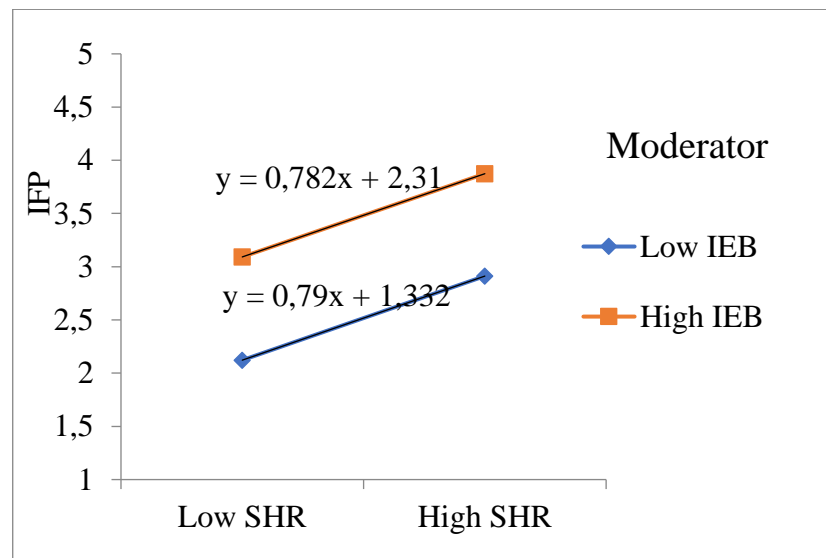
## RESULTS

### 1. Results of hypothesis testing

			Estimate	P
<b>IFP</b>	<-- -	<b>IEB</b>	0,483	***
<b>IFP</b>	<-- -	<b>SHR</b>	0,393	0,003
<b>IFP</b>	<-- -	<b>SHR_x_IEB</b>	-0,002	0,001

Table 20. Regression weights

The interaction effect, while significant, was negative and at the same time not very influential. Therefore, H3 can be considered rejected (see picture 5).



Picture 5. Moderation effect

### Post-hoc analysis

Post-hoc analysis was run, and it showed enough power to detect significant effects. Therefore, we are confident that non-significant effects are truly non-significant.

### Final results

The final results of the empirical research are provided in the following table (see table 21).

Hypothesis	Evidence	Conclusion
<b>H1:</b> Strategic HR practices positively relate to innovative performance of a firm	p-value = 0,003	Supported
<b>H2:</b> Employer Brand positively relates to innovative performance of a firm	p-value > 0,001	Supported
<b>H3:</b> Employer brand moderates the relationship between Strategic HR practices and innovative performance of a firm	p-value=0,001	Not supported

Table 21. Final results

According to the results of the analysis held, it could be concluded that both Strategic Human Resource Practices and Internal Employer Brand have significant positive direct effect on Innovative Firm Performance. Thus, we can conclude that hypotheses 1 and 2 are supported by the research. At the same time despite the fact that the Internal Employer Brand as a mediator is statistically significant, it has too low unstandardized factor loading (-0,002), thus the influence is rather weak and hypothesis 3 is not supported.

## DISCUSSIONS

### 1. Summary

The current study was done to address the gaps existing in the present research of companies' innovation performance, Employer Branding and Strategic HR management practices. In previous literature only a little attention was paid to the implementation of Employer Brand practices to influence different types of organizational performance. This study stresses attention on the innovation as one of the most relevant parts of performance in global economy and desirable outcome of many firms that are fighting for competitive advantage.

Based on the literature reviewed, hypotheses were made about the possible effects of Employer Brand and Strategic HR management on Innovative Firm Performance. Firstly, it was tested if there is a direct effect of the employer brand and Strategic HR practices on Innovative Firm Performance. Secondly, it was tested that the employer brand could strengthen the relationship between Strategic HR practices and Innovative Firm Performance. The results of the analysis only supported the hypothesis of direct influence of Employer brand and SHR practices on Innovative Firm Performance.

### 2. Theoretical Contributions

The current study has a number of important theoretical contributions to the existing literature. First of all, it contributes to the theoretical development of the Employer Brand as a construct that could foster firm performance. This paper examined the impact of a combination several practices, such as the Financial Rewards, the Career Development, the Job Content and the Supportive Work Environment on innovative firm performance. Only a few recent studies previously attempted to assess such a relationship between Employer Branding and firm performance (Tanwar & Pasad, 2017) and even less focused on innovation (e.g. John & Raj, 2020). However even these papers haven't addressed the firm innovation directly, focusing on individual innovative behavior. The results of the research provide evidence for sustainability of Employer Branding as a predictor of innovative performance and fill the gap in the literature that lack of empirical examination of the relation.

Additionally, a theoretical justification for the Employer Brand moderation effect on the relationship between Strategic HR management practices and Innovative Firm Performance. The existing literature haven't that direction previously, so this research is a starting point for further deep studies. The rationale for this relationship is based on the theory of creating a supportive work environment that increases employee engagement and contribution (Arasanmi & Krishna, 2019; West, 1990), as well as work on enhancing the performance of Strategic HR initiatives by implementing Employer Brand practices (Urbancova & Hudakova, 2017) and principles of social exchange theory

(Blau, 1964). Despite the fact that the relation hasn't revived enough empirical evidence, that may be caused by research limitations, it still has noticeable theoretical value, and provides a great prospect for further study.

This study also provides additional support for the hypotheses put forward in earlier papers about the positive relationship between Strategic HR management practices and organizational innovation (Lepner, 2018; Wikhamn, 2019).

### **3. Managerial Implications**

The general managerial implication of the study is to emphasize the importance and effectiveness of applying Strategic Human Resource management practices and the Employer Branding in order to stimulate the innovative results of the firm.

#### **Strategic Human Resource management**

Within the concept of Strategic Human Resource management, the current study stresses attention on two fundamental practices: Training and Staffing (Recruiting). Results of the Empirical part provided additional proof for sustainability of this practices in fostering company innovative output that goes align with previous research (Bauernschuster et al., 2009; Dostie, 2018).

Training plays such an important role in determining company innovativeness, because it creates access to leading-edge knowledge and open perspectives for creation something new (Bauernschuster et al., 2009). The additional benefit of the advanced training provided is the ability to create a strong grip with the individual innovativeness. (Acemoglu, 1997). It works in a way that workers tend to invest more in new skills development and even accept lower wages today as they expect that company will create innovations, gain benefits and thus pay more in long term. And at the same time the companies tend to innovative more if they expect to receive high-quality personnel in long-term as an additional benefit of innovation. From that we can say that training gives a company an opportunity to restructure its costs related to human capital in a way that to spend more on training purposes and a little less on wages and this practice will bring even more value for the organization in term of high-quality staff and innovation output.

The current study highlights two aspects of Training that primarily influence the firm innovations. Firstly, training programs should be comprehensive. That means that such programs deliver practical or at least simulation of practical experience in conjunction with theoretical knowledge. Such an approach ensures a higher quality of knowledge assimilation by providing trainees with useful skills in applying theory in practice. Recent trends in the field of personnel training boil down to the introduction of more and more novel digital solutions, providing a better selection of



individual courses in accordance with the desires of workers and business needs, as well as greater quality simulation of the conditions in which it could be applied (Deloitte, 2019). However, most companies are still very far from implementing the latest digital tools, even though they have proven to be effective. According to a joint report by SAP and Deloitte (2019) in terms of the use of modern innovative solutions in training and development, the average maturity of these processes according to respondents from HR and business is far below current global trends. On average, companies in Russia are at the fragmented automation stage with unconnected systems for training, out-of-sync training data and scaling limitations. These circumstances make it difficult for HR department employees to provide a decent level of training and track the results.

Secondly training programs should be available to everyone, including new hires. For new hires it is especially important because as it was said earlier many seek for such opportunities among potential employers. More and more, new generations are entering the labor market and their interests and priorities are strikingly different from those of their predecessors. Young workers perceive the opportunity to learn and develop their careers as one of the key principles of choosing an employer, and they view training as a tool to realization of career and professional goals. It is important to pay attention to this because, in addition to the great need for access to training among the younger generation, it can be difficult for companies themselves to cope with the task of providing such access. About a third of the companies surveyed by Deloitte (B, 2019) say they have difficulty with the initial education and training of their new hires. In this area there is a great need for quality solutions on the part of management.

Based on the above rationale, it is clear that most companies have many opportunities to improve their learning practices to achieve better innovative productivity. As noted in the case of the challenge of improving innovation, companies should focus on the advancement and comprehensiveness of the training provided, combined with its accessibility to all employees in the company. The best approach companies can take is to create a focus not only on creating user-friendly IT platforms, but primarily on moving toward becoming high-performance organizations with a high learning culture. Such organizations are more commonly referred to as High-Impact Learning Organizations. The main difference of this approach is to focus not only on the needs of training today, but also to build a culture of continuous learning in the face of constant change.

Such organizations predominantly adhere to key principles. The first principle is the creation of a tight connection between training and work processes. In this case, the organization becomes self-learning, when employees learn without disconnecting from the work process. In practice, this takes

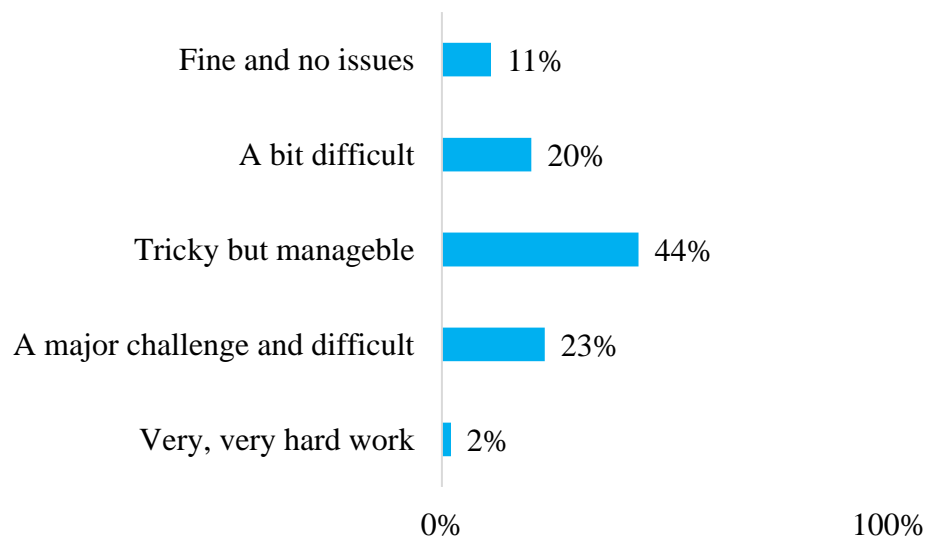
the form of predictive analytics of employee performance using artificial intelligence and integrating learning into the calendar on a regular basis. The second principle is to include not only the department responsible for learning and development on the HR side, but all other departments in the organization as well. The departments in which employees work should also provide training to employees, as well as be held accountable for their success. Thirdly, departments of Learning and Development must become more important within organizations and be responsible for indicators associated with business efficiency. Departments must be given the authority to influence key employee decisions to ensure that they have the proper impact on the business. In terms of training practices themselves, organizations must provide the broadest possible range of opportunities for employees (see table 22) to cover all possible needs of today and tomorrow.

<b>Education approaches</b>	<b>Targeted points</b>			
	<b>Environment</b>	<b>Development</b>	<b>Experience</b>	<b>Education</b>
<b>Work results analysis</b>	-	+	+	-
<b>Publications</b>	+	-	-	+
<b>Estimations</b>	-	-	+	+
<b>Blogs</b>	+	+	+	-
<b>Books</b>	+	-	-	+
<b>Check-lists</b>	-	-	+	-
<b>Coaching</b>	-	+	+	-
<b>Professional community</b>	-	+	-	-
<b>Conferences</b>	-	+	-	+
<b>Clients feedback</b>	+	+	-	-
<b>Individual development plans</b>	-	-	+	-
<b>Discussion forums</b>	+	+	+	-
<b>E-learning courses</b>	+	-	-	+
<b>Games</b>	+	-	-	+
<b>Messengers</b>	+	+	-	-
<b>Classroom learning</b>	-	+	-	+
<b>Supervision of professionals</b>	-	+	+	-
<b>Educational portals</b>	+	+	+	+
<b>Mentorship</b>	-	+	+	-
<b>Mobile applications</b>	+	-	+	+
<b>MOOK</b>	+	+	-	+
<b>Search Engines</b>	+	+	+	-
<b>Work Tasks</b>	-	-	+	-

<b>Feedback from colleagues</b>	-	+	+	-
<b>Performance tools</b>	+	-	+	+
<b>Podcasts</b>	+	+	-	-
<b>Professional Teams</b>	-	+	-	-
<b>Reference materials</b>	+	-	+	+
<b>Simulations</b>	-	-	+	+
<b>Social networks</b>	+	+	-	-
<b>Videos</b>	+	-	-	+
<b>Online courses with tools</b>	-	+	-	+
<b>Wikis</b>	+	+	+	-
<b>Seminar</b>	-	+	-	+

Table 22. Approaches to lifelong learning (Deloitte, 2019)

The other fundamental Strategic HR practice that should be taken into consideration to foster innovation performance of a firm is Staffing. Staffing considered to be a significant challenge for many companies nowadays. Most companies on Russian market found it difficult to acquire new digital talents in a company (see picture 6). Only 11% of manager could say they actually succeed in hiring people to their digital business.



Picture 6. The difficulty of hiring staff to operate a digital business (DT-GBC, 2020).

Another challenge that even successful in hiring companies may face is the high cost of staffing, especially in the digital sphere. This investment may not always pay off, since many competitively capable workers may leave the company in the medium term, having been outmaneuvered by competitors.

A good solution in this case is to hire less qualified, but more motivated employees and further train them with the help of internal as well as external resources. In this case, the cost of hiring will be lower, and the employee will be able to stay with the company longer, motivated by the prospect of development. In this case, to ensure that employees contribute more to the development of the company's products and solutions, the right move would be to contribute to the development of the employer's internal brand, which would also influence the perception of the company from the outside (De Stobbeleir, K. E. M. et al, 2017) and attract more people to choose from.

In support of this decision, the current study shows the importance of paying attention to the potential and comprehensive evaluation of the candidate in the selection process. As the work shows, this is even more important than assessing the professional competencies of the future employee.

To improve the current situation and provide greater support for innovation from Strategic HR management, companies should transform their traditional life-cycle approach with recruitment based on future roles, with procurement and IT departments responsible for developing solutions to increase staff and each department separately managing their talent needs. The right way is to create a workforce ecosystem approach. HR employees should work in tight collaboration with other departments to coordinate Talent acquisition, with external and internal resources valued equally. HR must develop its own analytics for quality decision making based on analysis of external and internal workforce.

## **II. Employer Brand**

There is a common trend across all industries among the companies that tend to implement most recent practices of Employer Branding and Human Resource management to stress more attention on fostering a sense of employee ownership (Deloitte insights, 2020). Within the companies there is tendency to transfer from employee personal comfort towards unity and personal contribution. Organizations that invest in promoting employee ownership within corporate projects and tasks primarily focus on creating an atmosphere of mutual respect and honesty with one another. While this continues to be a critical issue for many, leading organizations are making a stronger connection between ownership and organizational performance by strengthening employees' ties to their teams and encouraging their sense of contribution to meaningful shared goals. When teams are united around a common idea, they pay less attention to detached disagreements, and their discussions are reduced to discussions of ways and approaches to achieve a common goal.

Another aspect that stimulates a sense of personal ownership of the overall cause and the company's cause is the level of well-being. More often than not, employers focus on the person within

the office walls, while the most advanced approaches tell us about the need for companies to achieve well-being within the work process itself. Companies must therefore include in their range of programs not only those related to working conditions but also those aimed at achieving well-being within the working process. In this way, organizations will be able to make employees feel better about their work, give more of themselves and feel the importance of their work, improving the productivity of the firm, especially innovation and seeing the results of efforts.

In today's companies, a great deal of attention is paid to compensation strategies, processes, and practices, so any change becomes an important decision. In addition to active benchmarking and analytics, organizations should pay a great deal of attention to human principles to gain a stronger foothold in a rapidly changing competitive marketplace. This approach involves communicating to employees that compensation is not just a number, but a reflection of how much the organization values its employees.

The paper emphasized the importance of fair rewards for employees. As discussed earlier, compensation and financial rewards are a great opportunity for companies to increase employee engagement by demonstrating their value to the organization, and thereby increase their contribution to productivity, including innovation. To enhance this effect, organizations should abandon the traditional remuneration system, based on a rigid link to the position occupied by the employee and the average market indicators. This system is also characterized by an annual review of the amount of remuneration, as well as benefits are offered only to those who comply with the requirements for working hours.

The new compensation system for employees should be based on their contribution to the company and its projects, development of their own competencies and adaptability to new conditions. When drafting the compensation plan much attention should be paid to the needs of the employees, as well as to their preferences regarding the balance between financial compensation and additional bonuses. A greater range of micro-insurance should be offered to employees to ensure their safety and comfort.

Currently, most organizations still follow the traditional approach to building the career paths of their employees (Altman et al., 2021). This approach implies that the organization has a linear hierarchical career path within a single business unit. More often than not, employees are only introduced to mentors on demand, and only a small fraction of employees participate in rotation programs.

In the new paradigm, however, the organization is a kind of acceleration center for applying skills and expertise to external and internal talent, giving them opportunities for development. The organization should offer more career opportunities, including horizontal and expert (on the same place) development. Employees should have opportunities to participate in team projects, giving them the opportunity to expand their expertise and prove themselves.

On the Russian market a noticeable trend towards the improvement of conditions for employees. The greatest emphasis is on retraining opportunities, meaningful work, greater autonomy in the workplace, and fair compensation. Creating comfortable working conditions for employees is an important task for every company. A favorable working environment is a guarantee of productivity, especially for today's workers. If organizations want to ensure a high level of innovative output, they must think about the conditions in which employees spend most of their time. According to a study by Jeanne C. Meister (2021) that employees who work in a comfortable environment are 16% more productive and they are 30% more likely to stay with the same company, and the employer itself will be 18% more attractive to them than the competition (Meister, 2021). In addition, even at the stage of choosing a future employer, 41% of job seekers highlighted a pleasant atmosphere as an important factor in their choice (Randstad, 2021).

Because this paper notes the importance of a supportive atmosphere in influencing firm performance, managers may need to transform existing practices to enhance this effect.

First and foremost, companies should pay attention to the bonuses and benefits that most employees will enjoy, such as comfortable workspaces, access to clean air, and daylight. Of course, its own gym and a psychologist, can be a very important point in the choice of the employer in the case of some applicants, but here it is better to properly allocate costs, and perhaps choose alternative routes, such as partnering with outside agents. The second point could be the possibility of personalizing the work environment for each employee. In this case, it is necessary to rearrange the workspace so that everyone can adjust the temperature, lighting and noise level to their needs, including opportunity to move around the office to special zones. The third and very important point is to form a holistic view of well-being in the workplace. Here it is important to understand that well-being is not limited to the physical comfort discussed in the previous points. Emotional well-being also plays an important role in well-being. To ensure emotional well-being, you need to provide employees with a bright and quiet place to work, help managers form teams that are friendly and supportive, and help your senior management team build healthy leadership and good management at the middle and lower levels.

#### **4. Limitations**

Though the present research has significant advantages and valuable contributions, it faces several limitations. The first limitation that should be highlighted is the limited to 122 respondents sample size. While the sample has a statistically sufficient number of observations from various industries to test hypotheses and draw conclusions, an undisclosed topic such as employer brand influence requires more large-scale research to identify patterns. Secondly, this study used the only method of data collection, the questionnaire, which affects the quality of the study by introducing some common method biases, even though all necessary steps to reduce its impact have been taken.

The other point is that the study focused on large companies that have wider representation of Strategic Human Resource Management and Employer Branding practices and thus has certain limitations on generalization the results to companies of other sizes and operating principles. At the same time, the survey included companies represented in the Russian market, which imposes some local specificity in terms of practices widely used in the market. This effect is of less importance because most of the companies surveyed are international and have similar conditions for all employees around the world.

There are also a couple of limitations on the conceptual side. The research used self-measurement to assess company innovative performance that may increase the common method variance. Though the Harman one-factor test hasn't indicated any significant issues, the influence of it may still exist. The other potential issue was noticed in the paper of Andreeva et al. (2017) saying that there is certain specificity of Strategic Human Resource Management and Employer Branding practices implemented in terms of their influence on performance. The thing is that different combination of practices may give absolute different results. Some practices implemented together may even show a negative relation to the desired outcome. Taking that into account in current study already established combination of practices to measure constructs were used that have proved their significant in several papers, but ones again the issue may still exist.

#### **5. Future Research**

Based on the theoretical contribution and limitations of current study, the research opens a great perspective for future research. First of all, although the concept of Employer Brand was defined quite some time ago, and has recently received more and more attention from researchers, not many studies have focused on the impact of Employer Brand on specific firm performance. This study of the evidence of Employer Brand influence on firm performance provides opportunities to further explore the impact of the concept. To begin with, research can try to assess the impact of other

combinations of Employer Brand practices on innovation activity as was stated they can vary in their contribution to firm performance. In the future the attention of researchers can be paid to an in-depth analysis of the quality and strength of the impact of the concept on innovation performance. It is also worth investigating the impact of the Employer Brand on other indicators of the firm, such as, for example, financial, strategic, organizational and competitive performance.

Additional opportunities open up when focusing on the study of markets in other countries, as factors affecting employees can be disconnected in the strength and quality of their impact within different cultures. In addition, as indicated earlier, this study focuses on large companies because they are easier to analyze for practices that work and practices that do not work simply because of the large number of practices represented. Therefore, there are prospects for researchers to study the impact of certain practices on the innovative performance of small and medium-sized enterprises.

This study also examines the effect of Strategic Human Resource management practices on Innovative Firm Performance. New research could focus on developing the idea of the impact of Strategic HRM practices on various firm indicators and pay attention to less studied areas.

This paper provides a theoretical justification for the moderation effect of Employer Brand on the relationship between Strategic HRM practices and innovation. Although empirical research has shown little effect of Employer Brand, there is confidence in the existence of this relationship, and the contradictory results of the study could be explained by its limitations. In the future, researchers can try to prove the above-mentioned moderation effect by paying attention to other combinations of practices, as well as by getting rid of the limitations of current study.



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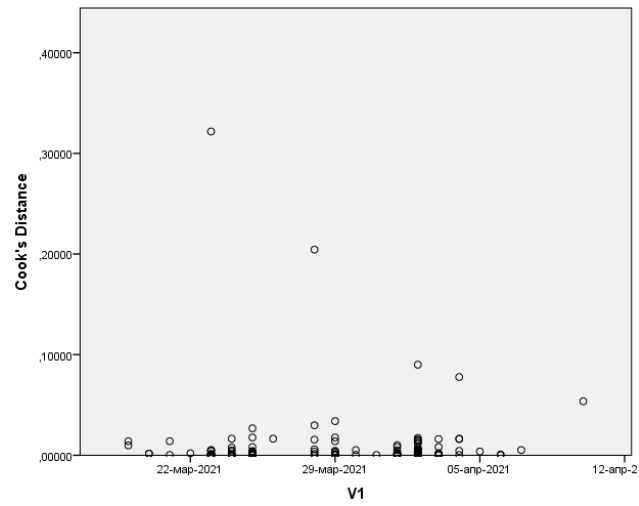
## List of survey items

Dimensions	Items	First - order factor loading
<b>Strategic Human Resource practices (16 items)</b>		
<b>Training</b>	Comprehensive training programs are available to employees	0,89
	New employees have access to training programs	0,83
	The training programs are well structured	-
	Problem - solving training is available to employees	-
<b>Compensation</b>	Remuneration of top management includes participation in the company's profits (payment of bonuses/equity incentives)	-
	Bonuses are paid to employees for exceeding the plan in terms of productivity, financial or other indicators	
	When paying wages and bonuses, there is a direct correlation between performance and the amount of compensation	
<b>Performance appraisal</b>	My company regularly evaluates the professional development of employees	-
	My company regularly evaluates employee performance	
	My company conducts regular personality tests	
<b>Staffing</b>	My company has a thorough and comprehensive approach to recruitment	0,88
	A candidate's skills and professional competencies are important factors in the hiring process	-
	A candidate's development potential is an important factor in the hiring process	0,71
<b>Participation</b>	Employees can make decisions in the field	-
	Employees are allowed to make suggestions to improve work processes	
	The opinion of employees is valued by the organization	
<b>Internal employer brand (5 items)</b>		
<b>The financial rewards</b>	Employees are fairly rewarded for the work they do	0,71
<b>Social atmosphere</b>	My company is a comfortable place to work	0,82
<b>Work-life balance</b>	My company helps employees find work - life balance	-

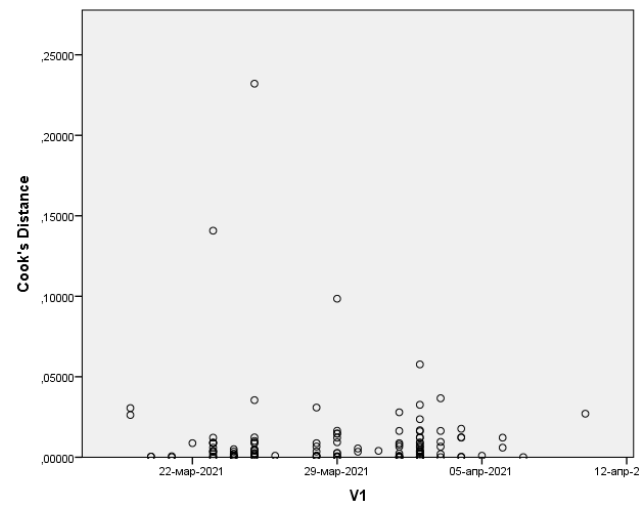
<b>Job content</b>	My job is more than "just a job," it has a special meaning.	0,63
<b>Career development</b>	Promotions go to those who deserve them	0,68
<b>Innovative Firm performance (6 items)</b>		
<b>Success rate</b>	My company is on average better at developing new products, services, and solutions than competitors	0,82
<b>Marketing output</b>	My company is perceived by customers as more innovative than competitors	0,8
<b>Time - to - Market</b>	My company finds ideas and turns them into new products faster than competitors	0,82
<b>NPD short - term</b>	The number of innovations (new products /services/solutions) in my company's portfolio has increased over the last year	-
<b>NPD long - term</b>	The number of innovations (new products /services/solutions) in my company's portfolio has increased in the last 5 years	0,52
<b>Time span</b>	My company takes less time to develop an innovation from idea to implementation than the industry average	0,71

Table 1. Measurement variables

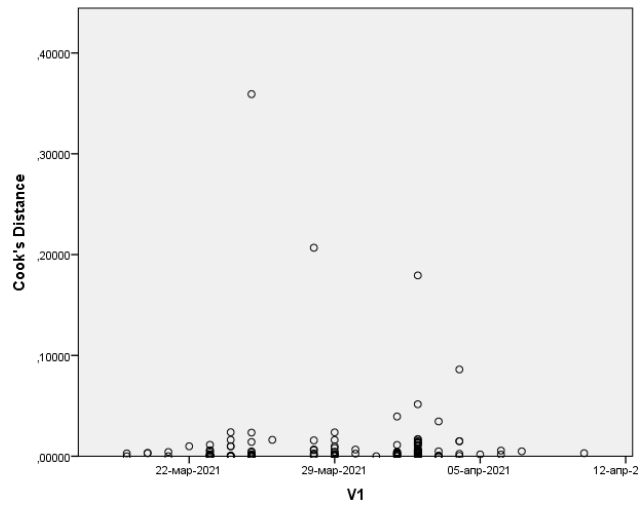
### Cooks's distance test



Graph 1. Cook's distance analysis (SHR; IFP)



Graph 2. Cook's distance analysis (SHR; IEB)



Graph 3. Cook's distance analysis (IEB; IFP)