

**Nurturing Inbound
Open Innovation:
Exploring the Interplay
of High-Performance Work Systems,
Innovative Work Behaviour
and Innovative Culture**

Elona Çera, Ph.D.

Doctoral Thesis Summary



Tomas Bata University in Zlín
Faculty of Management and Economics

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Nurturing Inbound Open Innovation: Exploring the Interplay of High-Performance Work Systems, Innovative Work Behaviour and Innovative Culture

Podpora příchozích otevřených inovací: zkoumání vzájemného působení vysoce výkonných pracovních systémů, inovativního pracovního chování a inovativní kultury

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ABSTRACT

The increasing interest of companies in innovation matters has influenced research on open innovation strategies, namely in the field of human resources management strategy referred to as the “human side of open innovation”. Despite the studies focused on the influence of human resource management practices in open innovation, the existing research remains nascent, with several notable research gaps: 1) mediating effects of innovative work behavior toward the connections between High Performance Working Systems (HPWS) and inbound open innovation; 2) the interactive influences of among HPWS practices (additive, combinative and multiplicative model) on inbound open innovation; 3) moderating effects of innovative culture in the relations between HPWS and inbound open innovation; 4) HPWS applied for fostering inbound open innovation in the SMEs industry. Drawing on Ability-Motivation-Opportunity theory (AMO theory), social exchange theory, and social context theory, this thesis seeks to address such research gaps through the development of a new conceptual framework that explores the direct, indirect, and interactive roles of HPWS practices on SMEs inbound open innovation.

Survey was the research approach that is used in this thesis. The sample for this thesis consisted on Czech SMEs operating in high-tech manufacturing and knowledge intensive service sector according NACE (Nomenclature of Economic Activities) classification. A quantitative method has been employed to evaluate the formulated hypothesis. A total of 252 responses are used for the purposes of data analysis and hypothesis testing. The SmartPLS 4.0 software with the PROCESS along with SPSS, is used for data processing and analysis.

The main results of this study state that: a) opportunity-enhancing practices directly influence innovative work behavior. Also, the results confirm the direct effects of ability-enhancing practices on inbound open innovation; b) the indirect role of innovative work behavior towards effects of opportunity-enhancing on inbound open innovation is found; c) an essential two-way interaction between ability-enhancing and opportunity-enhancing concerning inbound open innovation is found significant; d) the positive significant effect of innovative culture on motivation-enhancing practices toward inbound open innovation. Nevertheless, the results show some unexpected results such as): a negative significant three-way interaction between ability-, motivation- and opportunity-enhancing.

ABSTRAKT

Rostoucí zájem firem o problematiku inovací ovlivnil výzkum otevřených inovačních strategií, konkrétně v oblasti strategie řízení lidských zdrojů označované jako „lidská stránka otevřených inovací“. I když existují studie zaměřené na vliv postupů a praktik řízení lidských zdrojů na otevřené inovace, je tento výzkum stále v počátcích a přetrvává několik významných mezer ve výzkumu: 1) zprostředkující vliv inovativního pracovního chování na vazbu mezi vysoce výkonnými pracovními systémy (HPWS) a příchozími otevřenými inovacemi; 2) interaktivní vlivy mezi praktikami HPWS (přídavný, kombinovaný a multiplikativní model) na příchozí otevřené inovace; 3) moderující vliv inovační kultury ve vztahu mezi HPWS a příchozími otevřenými inovacemi; 4) HPWS aplikované pro podporu příchozích otevřených inovací v malých a středních podnicích. Na základě teorie schopností, motivace a příležitostí (teorie AMO), teorie sociální výměny a teorie sociálního kontextu tato práce řeší zmíněné nedostatky ve výzkumu vytvořením nového koncepčního rámce, který zkoumá přímou, nepřímou a interaktivní roli praktik HPWS na příchozí otevřené inovace malých a středních podniků.

Pro sběr dat bylo využito dotazníkové šetření. Výzkumný vzorek tvořily české malé a střední podniky působící v oblasti high-tech výroby a znalostně intenzivních služeb podle klasifikace CZ-NACE. K vyhodnocení hypotéz byl použit kvantitativní přístup. Pro analýzu a testování hypotéz bylo použito celkem 252 odpovědí. Pro zpracování a analýzu dat byl použitý software SmartPLS 4.0 s PROCESS a SPSS.

Hlavní výsledky této studie ukazují, že: a) Praktiky zaměřené na podporu příležitostí přímo ovlivňují inovativní pracovní chování. Výsledky také potvrzují přímé účinky postupů zlepšujících schopnosti na příchozí otevřené inovace; b) byla zjištěna nepřímá role inovativního pracovního chování vůči účinkům podporujících příležitosti na příchozí otevřené inovace; c) byla zjištěna významná obousměrná interakce mezi postupy podporujícími schopnosti a postupy podporujícími příležitosti týkajícími se příchozích otevřených inovací; d) byl zjištěn pozitivní významný vliv inovační kultury na postupy podporující motivaci k příchozím otevřeným inovacím. Nicméně některé výsledky jsou neočekávané, jako například významná negativní trojstranná interakce mezi praktikami podporujícími schopnosti, motivaci a příležitosti.

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1. INTRODUCTION

Open innovation (OI) plays a critical role in fostering the distinctiveness and expansion of a company (Bogers, Chesbrough, *et al.*, 2018; Chesbrough, 2003; Majchrzak *et al.*, 2023). Chesbrough *et al.* (2006) characterizes open innovation as the deliberate utilization of both inflows and outflows of knowledge to hasten internal innovation and broaden the markets for external application of innovation. Hence, it's imperative for companies to embrace open innovation as a fresh approach that enables them to adapt to changes and maintain competitiveness (Lichtenthaler,

2009, 2011; West and Gallagher, 2006). Traditionally, firms have prioritized internal resources, as noted by Calantone and Stanko (2007). However, relying solely on internal organizational knowledge poses challenges in developing comprehensive solutions due to limitations in knowledge and resources (Lichtenthaler, 2009). Consequently, contemporary businesses are shifting from conventional innovation strategies, which heavily rely on internal resources, towards methods that emphasize external knowledge and collaborations among organizations (Engelsberger *et al.*, 2022; Naqshbandi *et al.*, 2023; Popa *et al.*, 2017). Indeed, the strategic implementation of inbound open innovation (INOI) and outbound open innovation (OBOI) is crucial for organizations, as it facilitates the adoption of new solutions, the development of products and services, enhances innovation outcomes, promotes corporate social responsibility (Camilleri *et al.*, 2023), and strengthens the competitive position in the market (Bogers, Foss, *et al.*, 2018; Dahlander and Gann, 2010).

Whereas it is acknowledged that open innovation exhibits the capacity that enables firms to enhance competitiveness, it is imperative to further explore the influence of human resource management (HRM) as a precursor to firm openness (Ahn *et al.*, 2017; Bogers, Foss, *et al.*, 2018). In this context, practices falling under the High-Performance Work Systems (HPWS) open innovation approach that drive organizational innovation outcomes, have garnered increased attention (Engelsberger *et al.*, 2022; Zheng *et al.*, 2020). Although existing literature highlights the relevance of HRM practices in open innovation contexts, several research gaps remain unresolved:

Primarily, even though the immediate impacts of HRM practices on innovative work behaviour (IWB) and innovation outcomes are well-established (Fu *et al.*, 2015; Sanz-Valle and Jiménez-Jiménez, 2018), there remains a gap in exploring the mediating role of IWB in the relationship between HPWS and open innovation (Sanz-Valle and Jiménez-Jiménez, 2018). *Secondly*, the interactive effects of HRM practices within the Ability-Motivation-Opportunity (AMO) framework on open innovation outcomes warrant further investigation. Although models like additive, combinative, and multiplicative have been scrutinized in organizational performance and innovation contexts, their application in the domain of open innovation necessitates additional empirical scrutiny (Remneland Wikhamn *et al.*, 2023).

Thirdly, despite recognizing the effect of organizational culture on HRM practices and innovation, empirical inquiries into the moderating effect of an innovative culture on the relationship between HPWS and inbound open innovation require deeper exploration (Barjak and Heimsch, 2023; Kaushik and Mukherjee, 2021). *Fourthly*, within the small and medium enterprises (SME) context, which confronts distinctive challenges and opportunities in innovation, the impact of HRM practices, particularly HPWS, on open innovation remains insufficiently examined (Martinez-Conesa *et al.*, 2017; Podmetina *et al.*, 2013; Van De Vrande *et al.*, 2009). Despite resource limitations, SMEs can exploit inbound open innovation to bolster competitiveness; however, empirical substantiation concerning the effects of HPWS on SMEs' inbound open innovation is scarce (Kaushik and Mukherjee, 2021) (Kaushik and Mukherjee, 2021). *Lastly*, the Czech Republic presents an intriguing context for investigating HRM practices and innovation within SMEs. With a substantial proportion of SMEs contributing to the nation's economy, comprehending the intricacies of HRM practices and innovation within Czech SMEs can furnish valuable insights for nurturing innovation and fostering long-term economic growth.

Utilizing a quantitative approach, this investigation collected and analysed data from a representative sample of SMEs comprising sectors with high-tech manufacturing operations and generating knowledge-intensive services in the Czech Republic. Employing a cross-sectional study design facilitated the examination of the research inquiry within a specified timeframe. The focal unit of analysis comprised deputy managers, general managers, CEOs, or proprietors of SMEs, chosen purposefully for their expertise in strategic decision-making and innovation performance. The sampling methodology adopted a randomized probability sampling technique, resulting in a dataset comprising 252 valid responses, thereby attaining a response rate of 14.8%.

This dissertation is organization in the following parts: 1) introduction, 2) literature review, 3) methodology and results, 4) discussions, 5) theoretical and practical implications, 6) conclusions and future directions

2. LITERATURE REVIEW: THEORETICAL APPLICATION, HYPOTHESES

2.1 Theoretical application

2.1.1 AMO theory

The theory named “Ability – Motivation – Opportunity” encapsulates HRM practices aimed at revitalizing organizational performance by bolstering employees’ ability through measures such as apt selection and training, amplifying employees’ motivation via methods like performance appraisal and compensation, and furnishing employees with opportunities, including avenues for participation and conducive work design (Appelbaum, 2000; Boxall, 2003). Superior organizational performance necessitates the implementation of integrated and coherent “bundles” of HR practices, rather than relying on isolated practices (Appelbaum, 2000; Macky and Boxall, 2007).

2.1.2. Social exchange theory

Cropanzano and Mitchell (2005) define social exchange theory (SET) as the most influential theory which explains workplace behaviour. This theory emphasizes that when employees perceive high organizational commitment, they offer positive support to their organization. Reciprocity is at the core of the social exchange theory (Blau, 1964). Cropanzano and Mitchell (2005) further argue that reciprocity could be understood as an: 1) “*interdependent exchange*”; 2) “*Folk belief*”; 3) “*Moral norms and individual orientation*” – this concept argues that individuals who fail to conform are subjected to harsh consequences.

2.1.3. Social context theory

Social context theory (SCT) is a conceptualization context presented by Ferris *et al.* (1998). According to the social context theory, organizational culture is a “social context” factor that influences not only people’s attitudes, values, behaviours, and perceptions of their organization, but also organizational management systems (i.e., HRM systems) (Ferris *et al.*, 1998, 1999). Therefore, “culture, climate, and political considerations” are interlinking factors between human resource management and organizational effectiveness (Ferris *et al.*, 1998).

2.2 Hypotheses development

2.2.1 Direct relationship

Innovative work behaviour is defined as an “*individual’s behaviour that intentionally seeks to create, introduce and apply new and useful ideas, processes, products or procedures*” (De Jong and Den Hartog, 2010; Farr and Ford, 1990; Janssen, 2000, 2005). Based on the social exchange theory, high-commitment HRM practices (i.e., HPWS) assist in positively enhancing innovative work behaviour (Bos-Nehles *et al.*, 2013; Bos-Nehles and Veenendaal, 2019; Datta *et al.*, 2023; Karin *et al.*, 2010; Obeidat, 2021; Prieto and Pérez-Santana, 2014; Sanz-Valle and Jiménez-Jiménez, 2018). Adaptation and implementation of HPWS are perceived as proof of the organization’s commitment to employees, according to which, employees will be more committed and respond reciprocally through innovative behaviours. According to Karin *et al.* (2010) when employees believe that firms are committed to them, they engage in practices that improve their abilities (ability-enhancing), such as training and development. The role that HRM practices play in fostering innovative behaviour has received attention from other authors focusing on motivation-enhancing practices (i.e., reward and performance appraisal) (Bos-Nehles and Veenendaal, 2019; Datta *et al.*, 2023; Laursen and Foss, 2003; Xu *et al.*, 2023). Similarly, in agreement with arguments concerning opportunity-enhancing factors (i.e., job design and participation), job design has a positive influence in IWB (De Spiegelaere *et al.*, 2014). In the light of the above studies and arguments, the study hypothesizes that:

H1: Ability-enhancing (H1a), motivation-enhancing (H1b), and opportunity-enhancing (H1c) have a positive influence on innovative work behaviour.

Chesbrough (2003), argues that it is imperative for organizations to implement an “open innovation” framework, which entails leveraging diverse external actors and resources to establish a viable innovation environment. The ability of firms to access external knowledge and information plays a pivotal role in determining their level of innovation performance (Bogers, Chesbrough, *et al.*, 2018). According to Barney (1991) and Peteraf (1993), organizations ought to invest in resources that are valuable, rare and unique (e.g., human resource) to compete in the industry, create value and enhance business performance. Specifically, there is a notable emphasis placed on the critical role that human resource plays in strengthening firm capacity

for innovation (e.g., product, process or open innovation) (Bogers, Chesbrough, *et al.*, 2018; Çera *et al.*, 2023; Do and Shipton, 2019; Farjam *et al.*, 2023; Haar *et al.*, 2022; Huizingh, 2011; Majchrzak *et al.*, 2023; Naqshbandi *et al.*, 2023). Regarding the adoption of external knowledge, when it comes to inter-organizational learning (e.g., open innovation), human resources play a central role (Alerasoul *et al.*, 2022; Cabrales *et al.*, 2011). The types of human capital that an organization possesses, their skills and abilities, employees' behaviour and how the firm's strategy and institutional policies manage and support effective HRM strategy development and implementation create the right environment for organizational outcomes (Wright and McMahan, 1992) and organizational learning (Alerasoul *et al.*, 2022). Having said that, Do and Shipton (2019) maintain that HPWS plays an essential role in establishing, implementing and sustaining organizational core competencies, as well as the execution of organizational strategy. Firms ought to hire people based on their skills and competencies, motivation for learning, acquiring knowledge and adapting to dynamic circumstances, as well as their capacity to cope with high levels of uncertainty (Cabrales *et al.*, 2011). Therefore, this line of discussion leads to the following hypotheses:

H2: *Ability-enhancing (H2a), motivation-enhancing (H2b), and opportunity-enhancing (H2c) have a positive influence on inbound open innovation.*

Innovative work behaviour is recognised as the employees behaviour to generate new ideas, promote them into the organization, and implement them within the firm (De Spiegelaere *et al.*, 2014; Janssen, 2000). IWB involves proactive engagement with organizational environment to solve problems, generate resources, and opportunities to innovative and drive positive change (Sanz-Valle and Jiménez-Jiménez, 2018). Scholars such as Escribá-Carda *et al.* (2017) and Park *et al.* (2014) have related the concept with learning. Therefore, companies that prioritize knowledge development, experimentation, and interaction among employees are very favorable to encouraging innovative work behavior (Thneibat *et al.*, 2022). By grounding in these arguments, it can be argued that employees need to generate knowledge and use that knowledge as a solution to their daily job demands and need for productivity, which would increase their participation in networking and external collaboration. Simply stated, employees' involvement in the innovation goals of the company relies on their innovative behaviors (Fu *et al.*, 2015; Thneibat *et al.*, 2022).

Hence, IWB can be understood as a designed to nurture employees' competitiveness empowering them to the introduction of inbound open innovation ((Thneibat *et al.*, 2022). Considering the above arguments, it is logical to predict that innovative work behavior can boost inbound open innovation, as posited in the following hypothesis:

H3: Innovative work behaviour positively influence inbound open innovation.

2.2.2 Indirect relationship

Although the role of AMO theory (e.g., HPWS) in organizational performance is largely acknowledged, there has been ongoing discussion regarding the direct impact of AMO bundles in organizational outcomes (Bos-Nehles *et al.*, 2023; Jiang *et al.*, 2012; Katou *et al.*, 2014). Pursuant to the behavioural perspective, Jackson *et al.* (1989) assert that organizations achieve performance through HR management systems that cultivate productive behaviours among employees, facilitating the attainment of desired outcomes. Drawing from the AMO theory, employee behaviours, such as innovative work behaviour, are proposed to act as mediators in the relationship between HPWS practices and organizational performance, such as inbound open innovation (Jiang *et al.*, 2012; Katou *et al.*, 2014; Seeck and Diehl, 2017). Extending IWB in the HRM and open innovation context, HPWS practices (ability-enhancing, motivation-enhancing and opportunity-enhancing) equip employees with the needed knowledge, abilities, and skills required to foster creativity, generate and develop new ideas, explore innovative solutions, collaborate, and generate new knowledge. Hence, it can be argued that when employees actively participate in innovative behaviours, organizations are able to generate and enhance their capacity for innovation (e.g., open innovation) (Fu *et al.*, 2015; Prieto and Pérez-Santana, 2014; Sanz-Valle and Jiménez-Jiménez, 2018).

H4: Innovative work behaviour mediates the relation between ability-enhancing (H4a), motivation-enhancing (H4b), and opportunity-enhancing (H4c) and inbound open innovation.

Innovative culture

According to Barney (1986), Fitzgerald (1988), and Barney and Clark (2007), organizational culture and human resource are rare and unique resources, very

difficult to be imitated, that have high potential to enhance organizational competitiveness and sustained competitive advantage. Thus, if organizations employ organizational culture and HRM effectively, and keep a focus on long-term profitability, they will have the chance to improve their business outcomes (Jackson *et al.*, 2014), and positively influence sustainable competitive advantage (Barney and Clark, 2007). Extending this theory to open innovation settings, Kirschbaum (2005) states that open innovation is a matter of culture rather than simply developing internal processes (e.g., HPWS). Lack of internal capabilities such as organizational structure and organizational culture increase people's resistance to “Not-Invented-Here (NIH)” and “Not-Sold-Here (NSH)” syndromes, thereby disabling the shift to an open innovation approach (Cricelli *et al.*, 2023). Hence, open innovation requires changes to organizational culture (Antons and Piller, 2015; Pinarello *et al.*, 2022), and adoption of an innovative culture that is different from internal/closed innovation (Herzog, 2011; Herzog and Leker, 2010; Kratzer *et al.*, 2017). Lazzarotti *et al.* (2015) claim that organizations are influenced by the external environment (e.g., industry), as well as by internal contextual factors, such as HRM and organizational culture.

H5: Innovative culture moderates the relation between ability-enhancing (H5a), motivation-enhancing (H5b), and opportunity-enhancing (H5c) with inbound open innovation.

2.2.3 The interactive effects

In accordance with the AMO theory, Bos-Nehles *et al.* (2013) propose that organizational performance operates on a combinative model represented by the formula: $P = fA(1+M+O)$. This model suggests that organizational performance hinges on the reciprocal interplay between ability-enhancing (AE) and motivation-enhancing (ME) factors (Bello-Pintado, 2015), as well as between ability-enhancing (AE) and opportunity-enhancing (OE) bundles (Bello-Pintado and Garcés-Galdeano, 2019). Blumberg and Pringle (1982) explain that the complete absence of at least one of the HR bundles, or the presence of one at lower levels, diminishes overall performance levels. Therefore, a multiplicative (three-way) interaction integrating ability-enhancing, motivation-enhancing, and opportunity-enhancing bundles is crucial for enhancing organizational performance ($P = f(A \times M \times O)$)

(Alkhalaf and Al-Tabbaa, 2024; Kim *et al.*, 2015). Utilizing HPWS within the AMO framework, it is expected that these HR practices will cultivate a highly skilled workforce and enhance their motivation, thereby aiding SMEs in focusing on and embracing innovation (Do and Shipton, 2019). Consequently, from the perspective of open innovation, it is expected that recruiting individuals with a suitable mindset and attitude toward developmental change and innovation (Engelsberger *et al.*, 2022) and providing them with training opportunities that equip them with the necessary capabilities to collaborate and participate in knowledge exchange practices (Cera *et al.*, 2023a; Zheng *et al.*, 2020) will enable them to better understand open innovation issues, leading to adjustments in open innovation actions (Hong *et al.*, 2019). In line with this, the study leads to the development of the following hypotheses:

H6: There is a two-way positive interaction relationship between ability-enhancing and motivation-enhancing (H6a) and opportunity-enhancing (H6b) with inbound open innovation.

H7: There is a three-way positive interaction relationship between ability-enhancing, motivation-enhancing, and opportunity-enhancing with inbound open innovation.

3. MOTIVATION AND NEED FOR STUDY, RESEARCH GAP, RESEARCH QUESTIONS AND OBJECTIVES

3.1 Motivation and need for study

With regard to addressing firms' innovation challenges, Jackson *et al.* (2014) assert that HRM play a significant role in internal organizational performance outcomes and external stakeholders (customers, organizations, etc). Among the strategies adopted by organizations to deal with open innovation approaches (e.g., inbound open innovation), HRM is an emergent field of research (Engelsberger *et al.*, 2023; Remneland Wikhamn *et al.*, 2023). However, published research has uncovered the following research gaps:

First, drawing on the Ability – Motivation – Opportunity (AMO) theoretical framework developed by Appelbaum (2000), Jiang *et al.* (2012) examine the effects of HPWS on different organizational outcomes. Based on the behavioural perspective of HRM, Jiang *et al.* (2012) argue the critical role of different sub-dimensions of HPWS, such as ability-enhancing (e.g., staffing and training – AE), motivation-enhancing (e.g., compensation and performance appraisal – ME), and opportunity-enhancing (work design and participation – OE), on organizational outcomes (e.g., inbound open innovation) through the mediating role of employee behaviour (e.g., innovative work behaviour - IWB). Admittedly, the success of a firm’s innovation relies heavily on its employees’ innovative behaviour, because such a behaviour can lead to an increased organizational innovation performance. Whereas, the direct effect of HRM practices under the AMO approach on IWB. *Second*, the motivation for this study derives from the growing awareness of the importance of interaction between HPWS practices under the lenses of AMO “bundles” and inbound open innovation. In the context of AMO practices and organizational outcomes, the interactive effects of these practices have attracted the attention of several authors (Bos-Nehles *et al.*, 2023). Nonetheless, literature on how interactive effects of AMO bundles channel innovation in general (Seeck and Diehl, 2017), and open innovation in particular, require future attention (Remneland Wikhamn *et al.*, 2023). *Third*, drawing on the Social-Context Theory (SET), established by Ferris *et al.* (1998), employee perceptions regarding their organization are influenced by the social context of the environment within the firm. Having said that, the authors assert that having an organizational culture that influences the effective execution of HRM practices and policies will improve organizational effectiveness. Extending this reasoning to the open innovation context, Lichtenthaler (2011) asserts that every company needs a degree of openness; hence, organizational culture is imperative in firm openness processes. Chaudhary *et al.* (2022), state that culture is an internal organizational factor that needs greater consideration in the open innovation process. To this regard, future research should examine culture as a moderator within the aforementioned context. *Fourth*, in the SMEs context, innovation performance has raised their need to adopt open innovation approaches (Albats *et al.*, 2023; Popa *et al.*, 2017; Van De Vrande *et al.*, 2009).

3.2 Research questions and research objectives:

<ul style="list-style-type: none">• RQ1: Do HPWS practices affect innovative work behaviour and SMEs' inbound open innovation?• RO1: To identify direct effects of HPWS on innovative work behaviour and SMEs' inbound open innovation;
<ul style="list-style-type: none">• RQ2: Does innovative work behaviour mediate the relation between HPWS and SMEs' inbound open innovation?• RO2: To analyse the mediating role of innovative work behaviour on the connection between HPWS and SMEs' inbound open innovation;
<ul style="list-style-type: none">• RQ3: Does an innovative culture moderate the relation between HPWS and SMEs' inbound open innovation?• RO3: To analyse the moderating effect of innovative culture in the connection between HPWS and SMEs' inbound open innovation;
<ul style="list-style-type: none">• RQ4: Are there interactive effects among HPWS practices and SMEs' inbound open innovation?• RO4: To study the interactive effects of HPWS practices on SMEs' inbound open innovation.

3.3 Conceptual framework

In short, while there has been a growing interest among researchers in the implementation of HRM practices in inbound open innovation, there is still need for research to better explain relations between HPWS and inbound open innovation. Therefore, this study combines three theories to explain possible relations between HPWS and open innovation. Reasons for proposing these hypotheses are based on: 1) AMO framework to explore direct, indirect and interactive effects of HPWS practices on inbound open innovation, and the mediating influences of innovative work behaviour towards the linkages between HPWS and inbound open innovation; (2) social exchange theory to measure the direct effects of HPWS on innovative work behaviour; and (3) social context theory to analyse the moderating effects of innovative culture in the relation between HPWS and inbound open innovation.

Hence, grounded in these theories, the theoretical framework is illustrated in Figure 1:

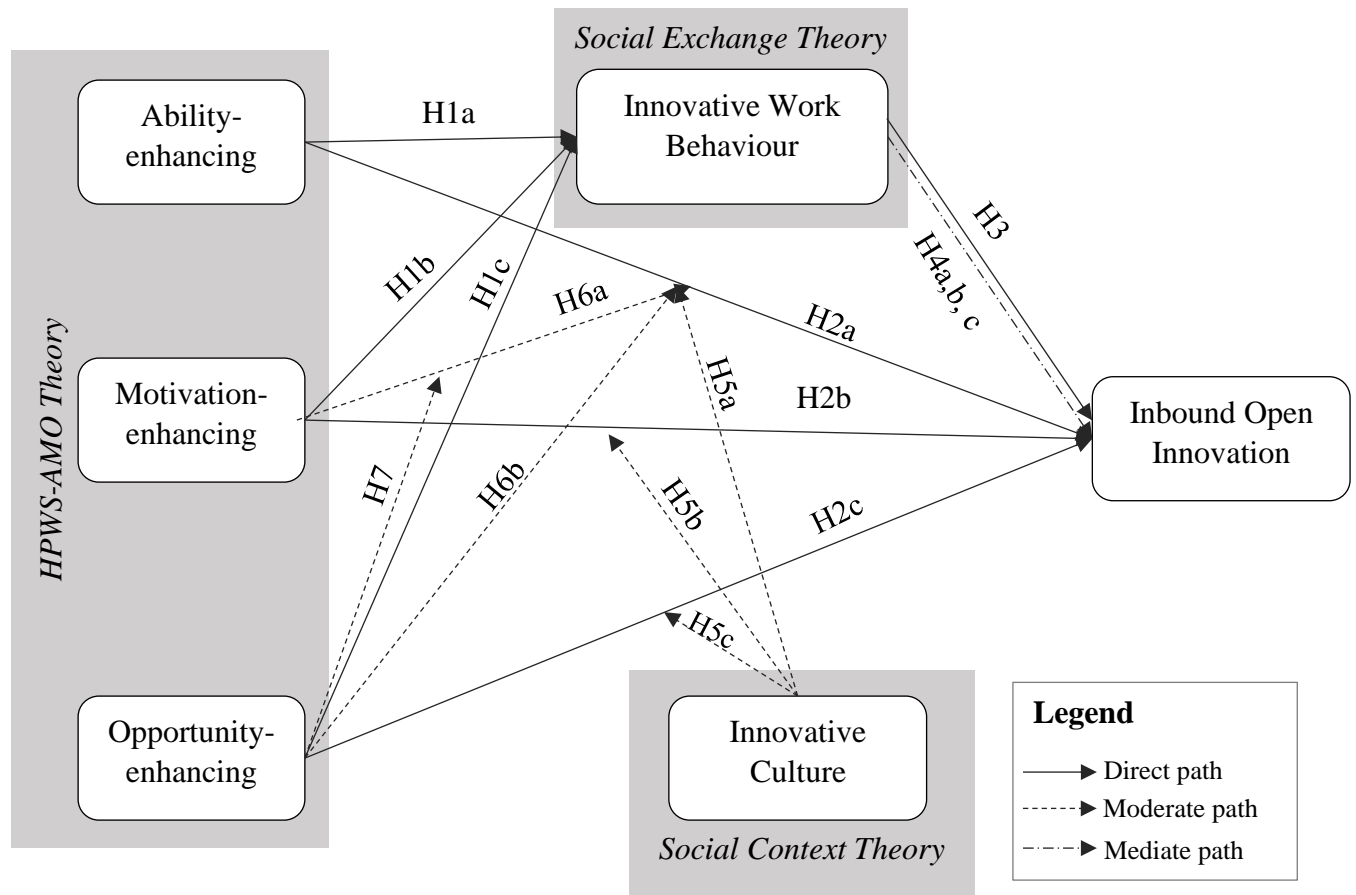


Figure 1: The conceptual framework

Source: author's own

4. METHODOLOGY

4.1 Research design

The research objective of this thesis is to develop and validate a comprehensive model to investigate the effects of HPWS practices, innovative work behaviour and innovative culture on open innovation in SMEs. According to Creswell and Creswell (2017), a quantitative approach can make the inference about the characteristic, attitudes and behaviours of the population from a representative sample of the same population. Consequently, a quantitative approach was used to conduct this research in accordance with methodological considerations and characteristics.

4.2 Unit of analysis

This thesis concentrates on examining high-performing SMEs engaged in high-tech manufacturing and knowledge-intensive services within the Czech Republic. The data collection process specifically targets deputy managers, general managers, CEOs, or business owners of these SMEs, as they are presumed to possess the most comprehensive knowledge regarding strategic decision-making, company operations, and innovation performance (Rasheed *et al.*, 2017). Following established research methodologies regarding HPWS and innovation within SMEs, this study adopts managers as respondents and utilizes firm-level data to scrutinize the relationships between the variables under investigation (Alkhalaf and Al-Tabbaa, 2024; Chen and Huang, 2009; Popa *et al.*, 2017; Rasheed *et al.*, 2017).

4.3 Questionnaire

The research instrument devised for this thesis was the questionnaire. After reviewing the body of existing literature, the thesis's questionnaire was crafted. The questionnaire was initially formulated in the English language and then translated into the Czech language. Two native-speaking, bilingual professors translated the English questionnaire into Czech and double-checked the translated versions to make sure there was semantic similarity between the English and Czech versions.

4.4 Sampling

The sample is stratified in terms of business sector, business size, and firms' age. The firms selected for this study are Czech SMEs operating in high-tech manufacturing and knowledge-intensive service sector, according to the NACE (Nomenclature of Economic Activities) classification. The study employed a sample size of 1,700 SMEs that were randomly selected from a comprehensive list containing 2,491 SMEs. In the end of the process, a total of 252 valid responses were obtained, resulting in a response rate of 14.8%, which is consistent with previous studies conducted in this field. The sample size met the minimum requirements, as outlined by Hair *et al.* (2011), minimum sample size of 10 times the maximum number of formative indicators. In addition, the sample size met the minimum requirement according to the inverse square root approach recommended by Kock and Hadaya (2018).

4.5 Measure and concepts definitions

Variables	Concepts definitions	Adapted from authors:
High-performance working systems	<i>High-Performance Work System can be defined as “a system of HRM practices designed to enhance employees’ skills, commitment and productivity in such a way that employees become a source of sustainable competitive advantage” (Datta et al., 2005; Fu et al., 2015).</i>	(Mehralian et al., 2021; Sun et al., 2007)
Innovative work behavior	<i>Individuals’ purposeful behaviours to generate and implement new and beneficial ideas explicitly meant to benefit the person, group, or organization are referred to as innovative work behaviours (Bos-Nehles et al., 2017; Farr and Ford, 1990; Leong and Rasli, 2014).</i>	(Kleysen and Street, 2001)
Innovative culture	<i>Innovative culture refers to a “set of shared assumptions, values, beliefs, attitudes, and behaviors of organizational members that could facilitate the creation and development of new product, services, or process innovation” (Ali and Park, 2016).</i>	(Martín-de Castro et al., 2013)
Inbound open innovation	<i>Inbound open innovation refers to how companies exploit others' discoveries and integrate external information within the firm (Brunswick and Vanhaverbeke, 2015; Dahlander and Gann, 2010; Parida et al., 2012).</i>	(Jaworski and Kohli, 1993; Naqshbandi and Jasimuddin, 2018)

4.6 Data analysis

Following data acquisition, an analysis was conducted utilizing SmartPLS 4.0, aiming to fulfill the study goals and assess the hypotheses. The research model encompasses both mediation and moderation effects. In instances where such effects are present, the utilization of PROCESS is warranted to examine the proposed hypotheses (Hayes, 2022). PROCESS serves as a statistical and computational tool integrated within version 4 of SmartPLS (Sarstedt et al., 2020).

4.7 Checking the assumptions

4.7.1 Internal consistency reliability and Convergent validity

Construct	Cronbach's alpha	Composite reliability	Average variance extracted (AVE)
AS	0.838	0.892	0.674
AT	0.855	0.896	0.632
MC	0.720	0.811	0.518
MP	0.840	0.887	0.611
OP	0.842	0.889	0.616
OW	0.717	0.839	0.722
IWB	0.928	0.939	0.606
IC	0.876	0.924	0.801
INOI	0.866	0.902	0.649

Note: AE (AS + AT), Ability-enhancing; ME (MC + MP), Motivation-enhancing; OE (OP + OW), Opportunity-enhancing; IWB, Innovative Work Behaviour; IC, Innovative culture; INOI, Inbound Open Innovation. (Source: author's own)

4.7.2 Discriminant validity

According to Henseler et al. (2015), the heterotrait-monotrait (HTMT) ratio of the correlations is the most appropriate metric for it. “*The (geometric) mean of the average correlations for the items measuring the same construct divided by the mean value of the item correlations across constructs*” is the definition of the HTMT (Hair et al., 2019). The literature claims that when HTMT levels are high, the model has problems with discriminant validity. The 0.85 threshold is the one that is advised.

	AS	AT	MC	MP	OP	OW	IC	INOI
AT	0.738							
MC	0.566	0.797						
MP	0.741	0.769	0.841					
OP	0.530	0.592	0.686	0.670				
OW	0.507	0.438	0.471	0.491	0.846			
IC	0.467	0.363	0.404	0.499	0.779	0.736		
INOI	0.255	0.277	0.203	0.260	0.465	0.524	0.746	
IWB	0.278	0.254	0.312	0.432	0.560	0.505	0.737	0.721

Note: AE (AS + AT), Ability-enhancing; ME (MC + MP), Motivation-enhancing; OE (OP + OW), Opportunity-enhancing; IWB, Innovative Work Behaviour; IC, Innovative culture; INOI, Inbound Open Innovation. (Source: author's own)

5. RESULTS

5.1 Hypothesis testing

As described under *Method* sub-section of the *Methodology* chapter of the thesis, the proposed hypotheses were examined through PROCESS in SmartPLS 4.0 (Hayes, 2022; Ringle *et al.*, 2022).

5.1.1 Direct effect

Hypothesis	Path	Coefficient	T statistic	P value	F square	Supported?
H1a	AE → IWB	-0.062	0.769	0.442	0.007	No
H1b	ME → IWB	0.142	1.686	0.092	0.017	No
H1c	OE → IWB	0.446	6.388	0.000	0.189	Yes
H2a	AE → INOI	0.192	2.909	0.004	0.033	Yes
H2b	ME → INOI	-0.159	2.163	0.031	0.025	No
H2c	OE → INOI	0.023	0.363	0.717	0.004	No
H3	IWB → INOI	0.421	7.550	0.000	0.212	Yes

Note: AE, Ability-enhancing; ME, Motivation-enhancing; OE, Opportunity-enhancing; IWB, Innovative Work Behaviour; INOI, Inbound Open Innovation.

5.1.2 Indirect effects

Hypothesis	Path	Coefficient	T statistic	P value	Supported?
H4a	AE → IWB → INOI	-0.026	0.775	0.438	No
H4b	ME → IWB → INOI	0.060	1.619	0.105	No
H4c	OE → IWB → INOI	0.188	5.263	0.000	Yes

Note: AE, Ability-enhancing; ME, Motivation-enhancing; OE, Opportunity-enhancing; IWB, Innovative Work Behaviour; INOI, Inbound Open Innovation.

5.1.3 Interactive effects

Hypothesis	Path	Coef-ficient	T statistic	P value	F square	Supported?
H5a	IC x AE → INOI	-0.065	0.891	0.373	0.007	No
H5b	IC x ME → INOI	0.115	2.567	0.010	0.019	Yes
H5c	IC x OE → INOI	-0.072	1.529	0.126	0.010	No
H6a	ME x AE → INOI	-0.018	0.347	0.729	0.005	No
H6b	OE x AE → INOI	0.122	2.018	0.044	0.017	Yes
H7	OE x ME x AE → INOI	-0.095	2.541	0.011	0.029	No

Note: AE, Ability-enhancing; ME, Motivation-enhancing; OE, Opportunity-enhancing; IWB, Innovative Work Behaviour; IC, Innovative culture; INOI, Inbound Open Innovation.

6. DISCUSSIONS

6.1. Direct effect

The direct effects of HPWS practices on innovative work behaviour and inbound open innovation.

Regarding the first research question of this study, this thesis analysed the direct effects of ability-enhancing (*staffing and training*)-**H1a**, motivation-enhancing (*compensation and performance appraisal*)-**H1b**, and opportunity-enhancing (*work design and participation*)-**H1c** on innovative work behaviour. Based on social exchange theory arguments, it was expected that ability-enhancing practices (Prieto and Pérez-Santana, 2014) and motivation-enhancing practices (Janssen, 2000), will affect innovative work behaviour. However, contrary to the author's expectations,

the results show that **H1a** ($\beta = -0.062, t = 0.769, p > 0.05$) and **H1b** ($\beta = 0.142, t = 1.686, p > 0.05$) has an insignificant effect on IWB. According to Bos-Nehles and Veenendaal (2019), it is important to establish an innovative climate within the organization that signals the value of training and development activities in order for employees to see the benefits of training and development practices. Employee perceptions of training and development with IWB will therefore not be reciprocated unless an innovative climate exists that evidences the importance of such a behaviour. Additionally, Prieto and Pérez-Santana (2014) and Bos-Nehles and Veenendaal (2019), similarly to this thesis, have found that motivation-enhancing practices do not support innovative behaviour. An explanation might be that in order for reward practices to be converted to innovative behaviour, they should be acknowledged (Prieto and Pérez-Santana, 2014). Another argument comes from Bos-Nehles and Veenendaal (2019). The authors argue that compensation systems motivate only works that are extrinsically motivated. When it comes to performance appraisal, Prieto and Pérez-Santana (2014) argue that these procedures might discourage innovative behaviour because they might be viewed as a form of control and judgment over an individual's actions. On the other side, this study confirms hypothesis **H1c**-opportunity-enhancing positively influence IWB ($\beta = 0.446, t = 6.388, p < 0.001, f^2 = 0.189$). The results are consistent with other studies (Bos-Nehles *et al.*, 2017; Bos-Nehles and Veenendaal, 2019). Drawing on social exchange theory, investment in HRM practices is perceived as a positive investment of the company towards employees; hence, they will reciprocate with an improved innovative behaviour (Bos-Nehles *et al.*, 2017). Work design that emphasizes flexibility, working in team, and job enrichment fosters a sense of responsibility for a successful outcome, and employees are more likely to engage in proactive problem solving and other required tasks and behaviours that go above and beyond what is required. Similarly, participation in decision-making raises levels of engagement at work, collaboration, and increases innovative work behaviours (Prieto and Pérez-Santana, 2014).

Drawing from AMO theory, the results of **H2a** revealed that ability-enhancing practices have a significant effect on SMEs' inbound open innovation ($\beta = 0.192, t = 2.909, p < 0.01, f^2 = 0.033$). The results appear to fit with what had been previously investigated (Naqshbandi *et al.*, 2023). Open innovation is enhanced by hiring the right personnel for the job and concentrating on creating a work environment that

offers employees training and development to encourage knowledge generation and adoption. Therefore, ability-enhancing methods support the development of a skilled workforce and make it easier for staff members to take part in the exchange of knowledge across organizations (Naqshbandi *et al.*, 2023; Remneland Wikhamn *et al.*, 2023). On the other side, contrary to the authors' expectations, the results do not support hypotheses **H2b** ($\beta = -0.159, t = 2.163, p < 0.05$) and **H2c** ($\beta = 0.023, t = 0.363, p > 0.05$). The relation between ME and INOI **-H2b**, is expected to be positive and significant. However, the results show that as motivation-enhancing efforts increase, the level of INOI tends to decrease claims, thus, this thesis rejects the hypothesis. Although rewarding and appraising employee's innovative performance may foster employee willingness to engage in open innovation activities (Ferrarini and Curzi, 2022; Malik *et al.*, 2020), this study's results do not support this argument. Indeed, this conclusion may be explained by the fact that performance appraisal generally has a higher effect on people extrinsically motivated (Bos-Nehles and Veenendaal, 2019), and that occasionally, these practices could be perceived more as controlling rather than managing performance and rewarding employees (Prieto and Pérez-Santana, 2014). Therefore, the implementation of HR policies such as performance-related remuneration can lead to negative effects for employees, including increased stress and burnout, ultimately resulting in a negative influence on performance (Vermeeren, 2017). Han *et al.* (2020) argues that, concerning the AMO framework, motivation-enhancing practices imply that employee motivation can be stimulated by management practices such as performance appraisal and reward systems focused on extrinsic motivation. Having said that, HPWS incentivizes and reinforces extrinsic motivation and neglects intrinsic motivation (Georgellis *et al.*, 2011). Consequently, HPWS overstimulates the extrinsic motivation of employees, which diminishes their performance (e.g., inbound open innovation) (Han *et al.*, 2020). In addition, this thesis failure to prove the influence of OE practices such work design and participation practices on SMEs' inbound open innovation (**H2c**), is not in line with previous works. For instance, Naqshbandi *et al.* (2023) have proved the direct effect of opportunity-enhancing HR practices on inbound open innovation.

Lastly, the results support the positive significant effect of IWB on SME's inbound open innovation **-H3** ($\beta = 0.421, t = 7.550, p < 0.01, f^2 = 0.212$), which is in line with other studies (Fu *et al.*, 2015; Sanz-Valle and Jiménez-Jiménez, 2018; Thneibat

et al., 2022). Innovative work behavior encompasses a series of complex stages, ranging from the generation of ideas to their execution and promotion. These stages play a crucial role in enhancing a firm's innovation. Conversely, inbound open innovation is a source of competitive advantage that relies on outside cooperation and the diffusion of innovation. According to the study, innovation necessitates the enhancement of employees' IWB, which can be achieved through the implementation of HPWS.

6.2. Indirect effects

The mediating effect of innovative work behaviour towards the connections between HPWS practices and SMEs' inbound open innovation.

Regarding the second research question of this study, the mediating effect of innovative work behaviour in the relation between HPWS practices under AMO enhancing bundles and SMEs' inbound open innovation was analysed. This study aims to address the existing research gaps and answer the research queries raised by Sanz-Valle and Jiménez-Jiménez (2018) and Naqshbandi *et al.* (2023). Contrary to the authors' expectations, hypothesis **H4a** ($\beta = -0.026, t = 0.775, p > 0.01$), does not support the idea that IWB mediates the relationship between ability-enhancing practices and inbound open innovation. There is a scarcity of empirical research that specifically examines the connections between each bundle of HPWS and inbound open innovation through the mediation of IWB. However, the findings contradict the claims made by Fu *et al.* (2015) which state that organizational innovation in service firms depends on the application of HPWS, through the mediating role of IWB. From the social exchange theory, it is expected that training and development can be perceived as investment in employees and they will reciprocate with something that will be valuable for the company (Bos-Nehles *et al.*, 2017). Nonetheless, it is argued that employees may not respond in this regard unless employers explicitly communicate the significance of reciprocating with innovative behavior. Therefore, in order for employees to recognize the significance of training and development with regard to innovative work behavior, an innovative climate should be established (Bos-Nehles *et al.*, 2017)

In a similar fashion, the result of **H4b** ($\beta = 0.060, t = 1.619, p > 0.05$), demonstrates that IWB has not a mediating effect between opportunity-enhancing and SMEs' inbound open innovation. According to Bos-Nehles *et al.* (2017), motivation-

enhancing methods are centered on the extrinsic motivation of employees, which may reduce inventive behavior, resulting in a lack of organizational innovation (e.g., open innovation). Bos-Nehles and Veenendaal (2019) claims that “*discretionary efforts, such as IWB, are usually neither anticipated nor rewarded, and thus cannot be assured through compensation systems*”. Therefore, rewarding practices that focuses on external reward techniques might motivate only people who are extrinsically motivated. Having said that, these compensation techniques might reduce or negatively affect innovative behavior, which in turn will decrease innovation (e.g., inbound open innovation) (Bos-Nehles *et al.*, 2017; Bos-Nehles and Veenendaal, 2019). In such situations, other motivation-enhancing practices that can foster intrinsic motivation, such as autonomy, personal development, and acknowledgement, can be employed (Bos-Nehles *et al.*, 2017; Li *et al.*, 2006). On the other side, the results of this study confirm hypothesis **H3c**: IWB mediates the relation between the OE bundle of HPWS practices and INOI ($\beta = 0.188$, $t = 5.263$, $p < 0.01$). This result is aligned with previous works (Sanz-Valle and Jiménez-Jiménez, 2018). They revealed that HPWS affects IWB and, in turn, IWB boosts product innovation.

The moderating effect of innovative culture towards the connections between HPWS practices and SMEs’ inbound open innovation.

The results partially support the suggested hypothesis in response to the highlighted research gap and addressing the research question regarding the moderating effect of innovative culture in the relationship between HPWS and SMEs’ inbound open innovation. The results show a positive significant effect of innovative culture pertaining to the relation between motivation-enhancing and SMEs’ inbound open innovation – **H5b** ($\beta = 0.115$, $t = 2.567$, $p < 0.05$, $f^2 = 0.019$). The results are similar to the work developed by Cera *et al.* (2023), where the authors argue that a culture focused on change, innovation and development, moderate and reinforces the relation between commitment-based HRM practices and inbound open innovation in SMEs context. Contrary to the author’s expectations, the results of **H5a** ($\beta = -0.065$, $t = 0.891$, $p > 0.05$, $f^2 = 0.007$) and **H5c** ($\beta = -0.072$, $t = 1.529$, $p > 0.05$, $f^2 = 0.010$) are not supported. There is a lack of empirical research that specifically examines the moderation effect of innovative culture in the relation between each AMO bundle of HPWS (e.g., ability-enhancing, motivation-enhancing and

opportunity-enhancing) and inbound open innovation. Nevertheless, findings contradict with arguments brought by the social context theory established by Ferris *et al.* (1998), which states that social context components, such as organizational culture, shape the effects HR management systems exercise on organizational performance. However, these results are in the same line with the study conducted by Lau and Ngo (2004). The authors did not find interactive effects between organizational culture and different bundles of SHRM practices on product innovation. The results shown above appear to provide partial support for the developed hypothesis. According to Lau and Ngo (2004), culture is a collective construct that requires involvement and aggregation from many individuals inside the organization. As a result, evaluating culture with a single responder (as in this thesis) may be ineffective. Thus, future study should consider using more than one responder per firm to examine the effects of culture. Furthermore, the country's cultural context influences the design of human resource management practices, company culture, and their interactions on organizational outcomes (Lau and Ngo, 2004, 2001). Hence, further research it is suggested.

6.3. Interactive effects

The interactive effects of HPWS practices on SME's inbound open innovation.

By analysing the interactive effects of HPWS on inbound open innovation, this study responds to existing literature research gaps, as raised by Seeck and Diehl (2017) and Remneland Wikhamn *et al.* (2023). Contrary to the author's expectations, the results of hypothesis **H6a** ($\beta = -0.018$, $t = 0.347$, $p > 0.05$, $f^2 = 0.005$), the two-way interaction between ability-enhancing and motivation-enhancing practices towards inbound open innovation, are not significant. The reason why two-way interactions between ability-enhancing and motivation-enhancing practices and SMEs' inbound open innovation is not significant, it is speculative. However, an answer could be derived from the arguments brought up by Bos-Nehles *et al.* (2023), which suggest that ability-enhancing practices very rarely are used as a moderator in the relationship between AMO-enhancing practices and organizational performance. Conversely, motivation-enhancing practices can act as mediator or moderator, and are inextricably linked to the climate or culture of the organization, its norms, values, and objectives. Having said that, it might be argued that for optimal application of motivation-enhancing practices, a suitable culture must be present, and employees

should show an affective commitment towards firms' value and goals. Having an innovative climate and a proper organizational culture is crucial for SMEs' open innovation (Popa *et al.*, 2017). On the other side, positive significant results have been found; for instance, in the relation to the two-way interaction of ability-enhancing and opportunity-enhancing practices with inbound open innovation **-H6b** ($\beta = 0.122$, $t = 2.018$, $p < 0.05$, $f^2 = 0.017$), Staffing, training, work design, and participation policies should all be implemented simultaneously; thus, organizations must ensure that not only hiring practices and training programs regarding external innovation acquisition are implemented, but also that policies to encourage employees to participate in open innovation activities at work are in place. Regarding the three-way interaction effects and INOI, the hypothesis **H7** is not supported ($\beta = -0.095$, $t = 2.018$, $p < 0.05$, $f^2 = 0.029$). The results show that three-way interactive effects of AMO HPWS on INOI is a significant negative relation, hence do not aligns with this thesis proposed hypothesis. Consequently, the findings are not in line with Blumberg and Pringle (1982), that argues that organizational performance is based on a multiplicative model where all HRM bundles should be present: $P = f(A \times M \times O)$. This conclusion may be explained by the fact that, according to Han *et al.* (2020) when HPWS procedures are misaligned, negative synergies may develop. For example, firms might motivate employees to collaborate but reward them based on individual achievement. This lowers overall level outcomes (individual-unit-firm) and increases conflict (Banks and Kepes, 2015), leading to negative impact of different HPWS practices in organizational outcomes (Han *et al.*, 2020). According to Buller and McEvoy (2012), it is essential to not only ensure that HRM practices are in line with each other and the business strategy, but also that their execution by managers and workers is effective. Inadequate implementation of HRM strategies that involve more than two-way interactive HRM practices can cause confusion and have a negative impact on organizational outcomes (Bello-Pintado, 2015).

7. THEORITICAL AND PRACTICAL CONTRIBUTIONS

7.1 Theoretical contributions

This thesis addresses various research gaps regarding the impact of AMO HPWS practices on SMEs' inbound open innovation and makes numerous significant theoretical contributions to this ongoing debate. First, drawing on the AMO theory and inter-linkages with the social context theory, this thesis explores the role of

HPWS on SMEs' inbound open innovation through the mediation influence of innovative work behaviour. Existing research has been focused on the direct effects of HPWS and innovative work behaviour (Fu *et al.*, 2015; Sanz-Valle and Jiménez-Jiménez, 2018) on open innovation (Engelsberger *et al.*, 2022; Zheng *et al.*, 2020). Despite this, research examining the indirect effects of AMO HPWS practices on inbound open innovation through the mediating effect of innovative work behaviour remains scant. In particular, the results show that opportunity-enhancing practices are important in predicting innovative work behaviour, while the effects of ability-enhancing and motivation-enhancing in innovative work behaviour are not confirmed. Additionally, the results show partial support for the direct effect of HPWS on inbound open innovation. For instance, ability-enhancing practices have a significant effect on inbound open innovation. However, hypotheses H2b and H2c are not supported. The results also indicate partial support for IWB on the connection between HPWS AMO and inbound open innovation. The results show that IWB plays a mediating role between opportunity-enhancing practices and inbound open innovation. Last, drawing on SET, this study answered existing research gaps addressing the contextual effect of innovative culture and its moderating effect on HPWS (e.g., Chaudhary *et al.*, 2022). The results show that IC moderates the connection between motivation-enhancing practices and inbound open innovation.

7.2 Practical contribution

This thesis extends the role of HPWS practices in SMEs, which has a number of practical suggestions for owners and decision-makers in the high-performing SME industry within the Czech Republic. The findings of this thesis can be employed to reinforce firms' implementation of HPWS in their human resource management practices, with the aim of enhancing inbound open innovation. According to Van De Vrande *et al.* (2009) and Albats *et al.* (2023), SMEs suffer from the "liability of smallness"; hence, focusing on HRM practices to support the implementation of an open innovation strategy to innovate it is of a paramount importance (Cera *et al.*, 2023b). Fostering inbound open innovation is a practical strategy to help SMEs achieve their organizational goals in this knowledge-driven era. Previous research shows that HPWS is important to human resource practices that boost open innovation (Engelsberger *et al.*, 2022; Zheng *et al.*, 2020). Additionally, innovative work behaviour (Fu *et al.*, 2015) and organizational culture (e.g. innovative culture) (Cera *et al.*, 2023b) are recognized to have an impact on a firm's ability to innovate.

Hence, focusing on HPWS practices, IWB and IC to foster inbound open innovation, comes as the most effective approach for Czech SMEs.

8. CONCLUSIONS, LIMITATIONS AND FUTURE DIRECTION

8.1 Conclusions

Based on an extensive literature review and consulting with AMO theory, SET and SCT, a conceptual framework analysing the effects of HPWS practices on inbound open innovation was developed. In addition, hypotheses were developed to test the direct, indirect and interactive effects of HPWS practices on inbound open innovation. For instance, this thesis analyses both the direct effects of HPWS on INOI, and the indirect effects of HPWS on INOI, under the mediation influence of IWB and the moderation of IC. Furthermore, the thesis analysed the interactive effects (two-way and three-way effects) of AMO HPWS practices on INOI.

8.2 Limitations and future directions

This thesis has met with few limitations and brings recommendations for prospective research quests by future field authors. Foremost, HPWS practices pursuant to AMO theory were utilized for conducting analyses of inbound open innovation. Nevertheless, in alignment with suggestions provided by Hong et al. (2019) and Engelsberger et al. (2023), HRM approaches and practices that are based on collaboration-intensive models should be taken into account by further studies examining open innovation. Accordingly, additional research has the potential to extend this scientific quest path by navigating the implications of commitment-based HRM practices and open innovation. On another note, this thesis has analysed the only the impact of HPWS on inbound open innovation. Despite, additional research is recommended to further scrutinize the effect of SMEs sector HPWS practices on inbound and outbound open innovation. Thirdly, this research is based on a quantitative research framework. This confines the scope of the study to emphasizing the underlying rationales and operational methodologies governing firms' practices within HRM and OI realms. Consequently, scholars might contemplate undertaking a qualitative inquiry within this domain to dig further into these constructs.

REFERENCES

- Ahn, J.M., Minshall, T. and Mortara, L. (2017), “Understanding the human side of openness: the fit between open innovation modes and CEO characteristics”, *R&D Management*, Vol. 47 No. 5, pp. 727–740, doi: 10.1111/radm.12264.
- Albats, E., Podmetina, D. and Vanhaverbeke, W. (2023), “Open innovation in SMEs: A process view towards business model innovation”, *Journal of Small Business Management*, Vol. 61 No. 6, pp. 2519–2560, doi: 10.1080/00472778.2021.1913595.
- Alerasoul, S.A., Afeltra, G., Hakala, H., Minelli, E. and Strozzi, F. (2022), “Organisational learning, learning organisation, and learning orientation: An integrative review and framework”, *Human Resource Management Review*, Vol. 32 No. 3, p. 100854, doi: 10.1016/j.hrmr.2021.100854.
- Alkhalaf, T. and Al-Tabbaa, O. (2024), “The effect of ability, motivation and opportunity (AMO) on SMEs’ innovation performance”, *Creativity and Innovation Management*, Vol. 33 No. 1, pp. 21–38, doi: 10.1111/caim.12578.
- Antons, D. and Piller, F.T. (2015), “Opening the black box of ‘not invented here’: Attitudes, decision biases, and behavioral consequences”, *Academy of Management Perspectives*, Academy of Management Briarcliff Manor, NY, Vol. 29 No. 2, pp. 193–217.
- Appelbaum, E. (2000), *Manufacturing Advantage: Why High-Performance Work Systems Pay Off*, Cornell University Press.
- Banks, G.C. and Kepes, S. (2015), “The influence of internal HRM activity fit on the dynamics within the ‘black box’”, *Human Resource Management Review*, Vol. 25 No. 4, pp. 352–367, doi: 10.1016/j.hrmr.2015.02.002.
- Barjak, F. and Heimsch, F. (2023), “Understanding the relationship between organizational culture and inbound open innovation”, *European Journal of Innovation Management*, Emerald Publishing Limited, Vol. 26 No. 3, pp. 773–797.
- Barney, J. (1991), “Firm resources and sustained competitive advantage”, *Journal of Management*, Sage Publications Sage CA: Thousand Oaks, CA, Vol. 17 No. 1, pp. 99–120.
- Barney, J.B. (1986), “Organizational Culture: Can It Be a Source of Sustained Competitive Advantage?”, *The Academy of Management Review*, Vol. 11 No. 3, p. 656, doi: 10.2307/258317.
- Barney, J.B. and Clark, D.N. (2007), *Resource-Based Theory: Creating and Sustaining Competitive Advantage*, Oup Oxford.
- Bello-Pintado, A. (2015), “Bundles of HRM practices and performance: empirical evidence from a Latin American context”, *Human Resource Management Journal*, Vol. 25 No. 3, pp. 311–330, doi: 10.1111/1748-8583.12067.
- Bello-Pintado, A. and Garcés-Galdeano, L. (2019), “Bundles of HRM practices in family and non-family firms: the impact on enhancing performance”, *The International Journal of Human Resource Management*, Vol. 30 No. 21, pp. 2971–2992, doi: 10.1080/09585192.2017.1391311.

- Blau, P.M. (1964), “Justice in social exchange”, *Sociological Inquiry*, Wiley Online Library, Vol. 34 No. 2, pp. 193–206.
- Blumberg, M. and Pringle, C.D. (1982), “The Missing Opportunity in Organizational Research: Some Implications for a Theory of Work Performance”, *The Academy of Management Review*, Vol. 7 No. 4, p. 560, doi: 10.2307/257222.
- Bogers, M., Chesbrough, H. and Moedas, C. (2018), “Open innovation: Research, practices, and policies”, *California Management Review*, SAGE Publications Sage CA: Los Angeles, CA, Vol. 60 No. 2, pp. 5–16.
- Bogers, M., Foss, N.J. and Lyngsie, J. (2018), “The ‘human side’ of open innovation: The role of employee diversity in firm-level openness”, *Research Policy*, Elsevier, Vol. 47 No. 1, pp. 218–231.
- Bos-Nehles, A., Renkema, M. and Janssen, M. (2017), “HRM and innovative work behaviour: A systematic literature review”, *Personnel Review*, Emerald Publishing Limited, Vol. 46 No. 7, pp. 1228–1253.
- Bos-Nehles, A., Townsend, K., Cafferkey, K. and Trullen, J. (2023), “Examining the Ability, Motivation and Opportunity (AMO) framework in HRM research: Conceptualization, measurement and interactions”, *International Journal of Management Reviews*, Vol. 25 No. 4, pp. 725–739, doi: 10.1111/ijmr.12332.
- Bos-Nehles, A.C., Van Riemsdijk, M.J. and Kees Looise, J. (2013), “Employee Perceptions of Line Management Performance: Applying the AMO Theory to Explain the Effectiveness of Line Managers’ HRM Implementation”, *Human Resource Management*, Vol. 52 No. 6, pp. 861–877, doi: 10.1002/hrm.21578.
- Bos-Nehles, A.C., Van Riemsdijk, M.J. and Kees Looise, J. (2013), “Employee Perceptions of Line Management Performance: Applying the AMO Theory to Explain the Effectiveness of Line Managers’ HRM Implementation”, *Human Resource Management*, Vol. 52 No. 6, pp. 861–877, doi: 10.1002/hrm.21578.
- Bos-Nehles, Anna.C. and Veenendaal, A.A.R. (2019), “Perceptions of HR practices and innovative work behavior: the moderating effect of an innovative climate”, *The International Journal of Human Resource Management*, Vol. 30 No. 18, pp. 2661–2683, doi: 10.1080/09585192.2017.1380680.
- Boxall, P. (2003), “HR strategy and competitive advantage in the service sector”, *Human Resource Management Journal*, Vol. 13 No. 3, pp. 5–20, doi: 10.1111/j.1748-8583.2003.tb00095.x.
- Buller, P.F. and McEvoy, G.M. (2012), “Strategy, human resource management and performance: Sharpening line of sight”, *Human Resource Management Review*, Vol. 22 No. 1, pp. 43–56, doi: 10.1016/j.hrmr.2011.11.002.
- Cabrales, A., Real, J. and Valle, R. (2011), “Relationships between human resource management practices and organizational learning capability: The mediating role of human capital”, *Personnel Review*, Vol. 40, pp. 344–363, doi: 10.1108/00483481111118658.
- Calantone, R.J. and Stanko, M.A. (2007), “Drivers of outsourced innovation: an exploratory study”, *Journal of Product Innovation Management*, Wiley Online Library, Vol. 24 No. 3, pp. 230–241.

- Camilleri, M.A., Troise, C., Strazzullo, S. and Bresciani, S. (2023), “Creating shared value through open innovation approaches: Opportunities and challenges for corporate sustainability”, *Business Strategy and the Environment*, Vol. 32 No. 7, pp. 4485–4502, doi: 10.1002/bse.3377.
- Cera, E., Cera, G. and Elezi, E. (2023a), “Commitment-based HRM and inbound open innovation in SMEs: the role of organizational trust and developmental culture”, *Journal of Organizational Effectiveness: People and Performance*, doi: 10.1108/JOEPP-05-2023-0203.
- Cera, E., Cera, G. and Elezi, E. (2023b), “Commitment-based HRM and inbound open innovation in SMEs: the role of organizational trust and developmental culture”, *Journal of Organizational Effectiveness: People and Performance*, Vol. ahead-of-print No. ahead-of-print, doi: 10.1108/JOEPP-05-2023-0203.
- Çera, E., Kusaku, A., Matošková, J. and Gregar, A. (2023), “Determining Approaches to Human Resource Management in Start-ups that Foster Innovation and Boost Organizational Performance.”, *Quality-Access to Success*, Vol. 24 No. 193.
- Chaudhary, S., Kaur, P., Talwar, S., Islam, N. and Dhir, A. (2022), “Way off the mark? Open innovation failures: Decoding what really matters to chart the future course of action”, *Journal of Business Research*, Elsevier, Vol. 142, pp. 1010–1025.
- Chen, C.-J. and Huang, J.-W. (2009), “Strategic human resource practices and innovation performance — The mediating role of knowledge management capacity”, *Journal of Business Research*, Vol. 62 No. 1, pp. 104–114, doi: 10.1016/j.jbusres.2007.11.016.
- Chesbrough, H., Vanhaverbeke, W. and West, J. (2006), *Open Innovation: Researching a New Paradigm*, OUP Oxford.
- Chesbrough, H.W. (2003), *Open Innovation: The New Imperative for Creating and Profiting from Technology*, Harvard Business Press.
- Creswell, J.W. and Creswell, J.D. (2017), *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*, Sage publications.
- Cricelli, L., Mauriello, R. and Strazzullo, S. (2023), “Preventing open innovation failures: A managerial framework”, *Technovation*, Elsevier, Vol. 127, p. 102833.
- Cropanzano, R. and Mitchell, M.S. (2005), “Social exchange theory: An interdisciplinary review”, *Journal of Management*, Sage Publications Sage CA: Thousand Oaks, CA, Vol. 31 No. 6, pp. 874–900.
- Dahlander, L. and Gann, D.M. (2010), “How open is innovation?”, *Research Policy*, Elsevier, Vol. 39 No. 6, pp. 699–709.
- Datta, S., Budhwar, P., Agarwal, U.A. and Bhargava, S. (2023), “Impact of HRM practices on innovative behaviour: mediating role of talent development climate in Indian firms”, *The International Journal of Human Resource Management*, Vol. 34 No. 6, pp. 1071–1096, doi: 10.1080/09585192.2021.1973063.
- De Jong, J. and Den Hartog, D. (2010), “Measuring Innovative Work Behaviour”, *Creativity and Innovation Management*, Vol. 19 No. 1, pp. 23–36, doi: 10.1111/j.1467-8691.2010.00547.x.

- De Spiegelaere, S., Van Gyes, G. and Van Hootegem, G. (2014), “Labour flexibility and innovation, complementary or concurrent strategies? A review of the literature”, *Economic and Industrial Democracy*, Sage Publications Sage UK: London, England, Vol. 35 No. 4, pp. 653–666.
- Do, H. and Shipton, H. (2019), “High-performance work systems and innovation in Vietnamese small firms”, *International Small Business Journal*, SAGE Publications Sage UK: London, England, Vol. 37 No. 7, pp. 732–753.
- Engelsberger, A., Bartram, T., Cavanagh, J., Halvorsen, B. and Bogers, M. (2023), “The role of collaborative human resource management in supporting open innovation: A multi-level model”, *Human Resource Management Review*, Vol. 33 No. 2, p. 100942, doi: 10.1016/j.hrmr.2022.100942.
- Engelsberger, A., Halvorsen, B., Cavanagh, J. and Bartram, T. (2022), “Human resources management and open innovation: the role of open innovation mindset”, *Asia Pacific Journal of Human Resources*, Wiley Online Library, Vol. 60 No. 1, pp. 194–215.
- Escribá-Carda, N., Balbastre-Benavent, F. and Teresa Canet-Giner, M. (2017), “Employees’ perceptions of high-performance work systems and innovative behaviour: The role of exploratory learning”, *European Management Journal*, Vol. 35 No. 2, pp. 273–281, doi: 10.1016/j.emj.2016.11.002.
- Farjam, F., Shojaei, P. and Askarifard, K. (2023), “A conceptual model for open innovation risk management based on the capabilities of SMEs: A multi-level fuzzy MADM approach”, *Technovation*, Vol. 127, p. 102844, doi: 10.1016/j.technovation.2023.102844.
- Farr, J.L. and Ford, C.M. (1990), “Individual innovation”, *Innovation and Creativity at Work: Psychological and Organizational Strategies*, John Wiley & Sons, Oxford, England, pp. 63–80.
- Ferrarini, F. and Curzi, Y. (2022), “AMO-enhancing practices, open innovation and organizations’ innovation in the European context: testing a mediation model”, *European Journal of Innovation Management*, Vol. ahead-of-print No. ahead-of-print, doi: 10.1108/EJIM-01-2022-0005.
- Ferris, G.R., Arthur, M.M., Berkson, H.M., Kaplan, D.M., Harrell-Cook, G. and Frink, D.D. (1998), “Toward a social context theory of the human resource management-organization effectiveness relationship”, *Human Resource Management Review*, Elsevier, Vol. 8 No. 3, pp. 235–264.
- Ferris, G.R., Hochwarter, W.A., Buckley, M.R., Harrell-Cook, G. and Frink, D.D. (1999), “Human resources management: Some new directions”, *Journal of Management*, Sage Publications Sage CA: Thousand Oaks, CA, Vol. 25 No. 3, pp. 385–415.
- Fitzgerald, T.H. (1988), “Can change in organizational culture really be managed?”, *Organizational Dynamics*, Elsevier, Vol. 17 No. 2, pp. 5–15.
- Fu, N., Flood, P.C., Bosak, J., Morris, T. and O’Regan, P. (2015), “How do high performance work systems influence organizational innovation in professional service firms?”, *Employee Relations*, Emerald Group Publishing Limited, Vol. 37 No. 2, pp. 209–231, doi: 10.1108/ER-10-2013-0155.

- Georgellis, Y., Iossa, E. and Tabvuma, V. (2011), “Crowding Out Intrinsic Motivation in the Public Sector”, *Journal of Public Administration Research and Theory*, Vol. 21 No. 3, pp. 473–493, doi: 10.1093/jopart/muq073.
- Haar, J., O’Kane, C. and Daellenbach, U. (2022), “High performance work systems and innovation in New Zealand SMEs: testing firm size and competitive environment effects”, *The International Journal of Human Resource Management*, Taylor & Francis, Vol. 33 No. 16, pp. 3324–3352.
- Hair, J.F., Ringle, C.M. and Sarstedt, M. (2011), “PLS-SEM: Indeed a Silver Bullet”, *Journal of Marketing Theory and Practice*, Vol. 19 No. 2, pp. 139–152, doi: 10.2753/MTP1069-6679190202.
- Hair, J.F., Risher, J.J., Sarstedt, M. and Ringle, C.M. (2019), “When to use and how to report the results of PLS-SEM”, *European Business Review*, Vol. 31 No. 1, pp. 2–24, doi: 10.1108/EBR-11-2018-0203.
- Han, J., Sun, J.-M. and Wang, H.-L. (2020), “Do high performance work systems generate negative effects? How and when?”, *Human Resource Management Review*, Vol. 30 No. 2, p. 100699, doi: 10.1016/j.hrmr.2019.100699.
- Hayes, A.F. (2022), *Introduction to Mediation, Moderation, and Conditional Process Analysis: A Regression-Based Approach*, Third edition., The Guilford Press, New York ; London.
- Henseler, J., Ringle, C.M. and Sarstedt, M. (2015), “A new criterion for assessing discriminant validity in variance-based structural equation modeling”, *Journal of the Academy of Marketing Science*, Vol. 43 No. 1, pp. 115–135, doi: 10.1007/s11747-014-0403-8.
- Herzog, P. (2011), *Open and Closed Innovation: Different Cultures for Different Strategies*, Springer Science & Business Media.
- Herzog, P. and Leker, J. (2010), “Open and closed innovation – different innovation cultures for different strategies”, *International Journal of Technology Management*, Vol. 52 No. 3/4, p. 322, doi: 10.1504/IJTM.2010.035979.
- Hong, J.F.L., Zhao, X. and Stanley Snell, R. (2019), “Collaborative-based HRM practices and open innovation: a conceptual review”, *The International Journal of Human Resource Management*, Routledge, Vol. 30 No. 1, pp. 31–62, doi: 10.1080/09585192.2018.1511616.
- Huizingh, E.K. (2011), “Open innovation: State of the art and future perspectives”, *Technovation*, Elsevier, Vol. 31 No. 1, pp. 2–9.
- Jackson, S.E., Schuler, R.S. and Jiang, K. (2014), “An aspirational framework for strategic human resource management”, *Academy of Management Annals*, Routledge, Vol. 8 No. 1, pp. 1–56.
- Janssen, O. (2000), “Job demands, perceptions of effort-reward fairness and innovative work behaviour”, *Journal of Occupational and Organizational Psychology*, Vol. 73 No. 3, pp. 287–302, doi: 10.1348/096317900167038.
- Janssen, O. (2005), “The joint impact of perceived influence and supervisor supportiveness on employee innovative behaviour”, *Journal of Occupational and Organizational Psychology*, Vol. 78 No. 4, pp. 573–579, doi: 10.1348/096317905X25823.

- Jaworski, B.J. and Kohli, A.K. (1993), "Market Orientation: Antecedents and Consequences", *Journal of Marketing*, American Marketing Association, Vol. 57 No. 3, pp. 53–70, doi: 10.2307/1251854.
- Jiang, K., Lepak, D.P., Hu, J. and Baer, J.C. (2012), "How Does Human Resource Management Influence Organizational Outcomes? A Meta-Analytic Investigation of Mediating Mechanisms", *The Academy of Management Journal*, Academy of Management, Vol. 55 No. 6, pp. 1264–1294.
- Karin, S., Matthijs, M., Nicole, T., Sandra, G. and Claudia, G. (2010), "How to support innovative behaviour? The role of LMX and satisfaction with HR practices", *Technology and Investment*, Scientific Research Publishing, Vol. 2010.
- Katou, A.A., Budhwar, P.S. and Patel, C. (2014), "Content vs. Process in the HRM-Performance Relationship: An Empirical Examination", *Human Resource Management*, Vol. 53 No. 4, pp. 527–544, doi: 10.1002/hrm.21606.
- Kaushik, D. and Mukherjee, U. (2021), "High-performance work system: a systematic review of literature", *International Journal of Organizational Analysis*, Emerald Publishing Limited, Vol. 30 No. 6, pp. 1624–1643, doi: 10.1108/IJOA-07-2020-2282.
- Kim, K.Y., Pathak, S. and Werner, S. (2015), "When do international human capital enhancing practices benefit the bottom line? An ability, motivation, and opportunity perspective", *Journal of International Business Studies*, Vol. 46 No. 7, pp. 784–805, doi: 10.1057/jibs.2015.10.
- Kirschbaum, R. (2005), "Open Innovation In Practice", *Research-Technology Management*, Vol. 48 No. 4, pp. 24–28, doi: 10.1080/08956308.2005.11657321.
- Kleysen, R.F. and Street, C.T. (2001), "Toward a multi-dimensional measure of individual innovative behavior", *Journal of Intellectual Capital*, MCB UP Ltd, Vol. 2 No. 3, pp. 284–296.
- Kock, N. and Hadaya, P. (2018), "Minimum sample size estimation in PLS-SEM: The inverse square root and gamma-exponential methods", *Information Systems Journal*, Vol. 28 No. 1, pp. 227–261, doi: 10.1111/isj.12131.
- Kratzer, J., Meissner, D. and Roud, V. (2017), "Open innovation and company culture: Internal openness makes the difference", *Technological Forecasting and Social Change*, Elsevier, Vol. 119, pp. 128–138.
- Lau, C. and Ngo, H. (2004), "The HR system, organizational culture, and product innovation", *International Business Review*, Vol. 13 No. 6, pp. 685–703, doi: 10.1016/j.ibusrev.2004.08.001.
- Lau, C.-M. and Ngo, H.-Y. (2001), "Organization Development and Firm Performance: A Comparison of Multinational and Local Firms", *Journal of International Business Studies*, Palgrave Macmillan Journals, Vol. 32 No. 1, pp. 95–114.
- Laursen, K. and Foss, N.J. (2003), "New human resource management practices, complementarities and the impact on innovation performance", *Cambridge Journal of Economics*, Oxford University Press, Vol. 27 No. 2, pp. 243–263.

- Lazzarotti, V., Manzini, R. and Pellegrini, L. (2015), “Is your open-innovation successful? The mediating role of a firm’s organizational and social context”, *The International Journal of Human Resource Management*, Taylor & Francis, Vol. 26 No. 19, pp. 2453–2485.
- Li, Y., Zhao, Y. and Liu, Y. (2006), “The relationship between HRM, technology innovation and performance in China”, *International Journal of Manpower*, Emerald Group Publishing Limited, Vol. 27 No. 7, pp. 679–697, doi: 10.1108/01437720610708284.
- Lichtenthaler, U. (2009), “Absorptive capacity, environmental turbulence, and the complementarity of organizational learning processes”, *Academy of Management Journal*, Academy of Management Briarcliff Manor, NY, Vol. 52 No. 4, pp. 822–846.
- Lichtenthaler, U. (2011), “Open innovation: Past research, current debates, and future directions”, *Academy of Management Perspectives*, Academy of Management Briarcliff Manor, NY, Vol. 25 No. 1, pp. 75–93.
- Macky, K. and Boxall, P. (2007), “The relationship between ‘high-performance work practices’ and employee attitudes: an investigation of additive and interaction effects”, *The International Journal of Human Resource Management*, Routledge, Vol. 18 No. 4, pp. 537–567, doi: 10.1080/09585190601178745.
- Majchrzak, A., Bogers, M.L., Chesbrough, H. and Holgersson, M. (2023), “Creating and Capturing Value from Open Innovation: Humans, Firms, Platforms, and Ecosystems”, *California Management Review*, SAGE Publications Sage CA: Los Angeles, CA, Vol. 65 No. 2, pp. 5–21.
- Malik, A., Froese, F.J. and Sharma, P. (2020), “Role of HRM in knowledge integration: Towards a conceptual framework”, *Journal of Business Research*, Elsevier, Vol. 109, pp. 524–535.
- Martín-de Castro, G., Delgado-Verde, M., Navas-López, J.E. and Cruz-González, J. (2013), “The moderating role of innovation culture in the relationship between knowledge assets and product innovation”, *Technological Forecasting and Social Change*, Elsevier, Vol. 80 No. 2, pp. 351–363.
- Martinez-Conesa, I., Soto-Acosta, P. and Carayannis, E.G. (2017), “On the path towards open innovation: Assessing the role of knowledge management capability and environmental dynamism in SMEs”, *Journal of Knowledge Management*, Emerald Publishing Limited, Vol. 21 No. 3, pp. 553–570.
- Mehralian, G., Moradi, M. and Babapour, J. (2021), “How do high-performance work systems affect innovation performance? The organizational learning perspective”, *Personnel Review*, Emerald Publishing Limited, Vol. 51 No. 9, pp. 2081–2102, doi: 10.1108/PR-08-2020-0617.
- Naqshbandi, M.M. and Jasimuddin, S.M. (2018), “Knowledge-oriented leadership and open innovation: Role of knowledge management capability in France-based multinationals”, *International Business Review*, Elsevier, Vol. 27 No. 3, pp. 701–713.
- Naqshbandi, M.M., Meeran, S. and Wilkinson, A. (2023), “On the soft side of open innovation: the role of human resource practices, organizational learning culture and knowledge sharing”, *R&D Management*, Wiley Online Library, Vol. 53 No. 2, pp. 279–297.

- Obeidat, S.M. (2021), “DO HIGH-PERFORMANCE WORK PRACTICES INDUCE INNOVATIVE WORK BEHAVIOUR? THE CASE OF THE QATARI BANKING SECTOR”, *International Journal of Innovation Management*, Vol. 25 No. 01, p. 2150003, doi: 10.1142/S1363919621500031.
- Park, Y.K., Song, J.H., Yoon, S.W. and Kim, J. (2014), “Learning organization and innovative behavior: The mediating effect of work engagement”, *European Journal of Training and Development*, Emerald Group Publishing Limited, Vol. 38 No. 1/2, pp. 75–94.
- Peteraf, M.A. (1993), “The cornerstones of competitive advantage: a resource-based view”, *Strategic Management Journal*, Wiley Online Library, Vol. 14 No. 3, pp. 179–191.
- Pinarello, G., Trabucchi, D., Frattini, F. and Manfredi Latilla, V. (2022), “How firms use inbound Open Innovation practices over time: evidence from an exploratory multiple case study analysis”, *R&D Management*, Vol. 52 No. 3, pp. 548–563, doi: 10.1111/radm.12500.
- Podmetina, D., Volchek, D., Dąbrowska, J. and Fiegenbaum, I. (2013), “Human resource practices and open innovation”, *International Journal of Innovation Management*, World Scientific, Vol. 17 No. 06, p. 1340019.
- Popa, S., Soto-Acosta, P. and Martinez-Conesa, I. (2017), “Antecedents, moderators, and outcomes of innovation climate and open innovation: An empirical study in SMEs”, *Technological Forecasting and Social Change*, Elsevier, Vol. 118, pp. 134–142.
- Prieto, I.M. and Pérez-Santana, M.P. (2014), “Managing innovative work behavior: the role of human resource practices”, *Personnel Review*, Emerald Group Publishing Limited, Vol. 43 No. 2, pp. 184–208.
- Rasheed, M.A., Shahzad, K., Conroy, C., Nadeem, S. and Siddique, M.U. (2017), “Exploring the role of employee voice between high-performance work system and organizational innovation in small and medium enterprises”, *Journal of Small Business and Enterprise Development*, Emerald Publishing Limited, Vol. 24 No. 4, pp. 670–688, doi: 10.1108/JSBED-11-2016-0185.
- Remneland Wikhamn, B., Styhre, A. and Wikhamn, W. (2023), “HRM work and open innovation: evidence from a case study”, *The International Journal of Human Resource Management*, Vol. 34 No. 10, pp. 1940–1972, doi: 10.1080/09585192.2022.2054285.
- Ringle, C.M., Wende, S. and Becker, J.-M. (2022), “SmartPLS 4”, SmartPLS GmbH, Oststeinbek.
- Sanz-Valle, R. and Jiménez-Jiménez, D. (2018), “HRM and product innovation: does innovative work behaviour mediate that relationship?”, *Management Decision*, Emerald Publishing Limited, Vol. 56 No. 6, pp. 1417–1429, doi: 10.1108/MD-04-2017-0404.
- Seeck, H. and Diehl, M.-R. (2017), “A literature review on HRM and innovation – taking stock and future directions”, *The International Journal of Human Resource Management*, Routledge, Vol. 28 No. 6, pp. 913–944, doi: 10.1080/09585192.2016.1143862.
- Sun, L.-Y., Aryee, S. and Law, K.S. (2007), “High-Performance Human Resource Practices, Citizenship Behavior, and Organizational Performance: A Relational Perspective”, *Academy of Management Journal*, Vol. 50 No. 3, pp. 558–577, doi: 10.5465/amj.2007.25525821.

- Thneibat, M., Obeidat, A., Obeidat, Z., Al-dweeri, R. and Thneibat, M. (2022), “Promoting Radical Innovation Through Performance-Based Rewards: The Mediating Role of Knowledge Acquisition and Innovative Work Behavior”, *International Journal of Innovation and Technology Management*, doi: 10.1142/S0219877022500055.
- Van De Vrande, V., De Jong, J.P.J., Vanhaverbeke, W. and De Rochemont, M. (2009), “Open innovation in SMEs: Trends, motives and management challenges”, *Technovation*, Vol. 29 No. 6–7, pp. 423–437, doi: 10.1016/j.technovation.2008.10.001.
- Vermeeren, B. (2017), “Influencing public sector performance: studying the impact of ability-, motivation- and opportunity-enhancing human resources practices on various performance outcomes in the public sector”, *International Review of Administrative Sciences*, SAGE Publications Ltd, Vol. 83 No. 4, pp. 717–737, doi: 10.1177/0020852315591642.
- West, J. and Gallagher, S. (2006), “Challenges of open innovation: the paradox of firm investment in open-source software”, *R&d Management*, Wiley Online Library, Vol. 36 No. 3, pp. 319–331.
- Wright, P.M. and McMahan, G.C. (1992), “Theoretical perspectives for strategic human resource management”, *Journal of Management*, Sage Publications Sage CA: Thousand Oaks, CA, Vol. 18 No. 2, pp. 295–320.
- Xu, Z., Yang, F., Yuan, Y. and Jia, D. (2023), “Perceived innovation-oriented human resource system and innovative work behavior: the chain mediating role of innovative culture and intrinsic motivation”, *Journal of Managerial Psychology*, Emerald Publishing Limited, Vol. 38 No. 6, pp. 434–448, doi: 10.1108/JMP-10-2021-0538.
- Zheng, J., Liu, H. and Zhou, J. (2020), “High-performance work systems and open innovation: moderating role of IT capability”, *Industrial Management & Data Systems*, Emerald Publishing Limited, Vol. 120 No. 8, pp. 1441–1457, doi: 10.1108/IMDS-09-2019-0475.

LIST OF PUBLICATIONS

Peer-reviewed journal articles (SCOPUS or Web of Science)

Published articles:

1. **Cera, E.**, Cera, G., & Elezi, E. (2023). Commitment-based HRM and inbound open innovation in SMEs: the role of organizational trust and developmental culture. *Journal of Organizational Effectiveness: People and Performance*. doi: <https://doi.org/10.1108/JOEPP-05-2023-0203>
2. **Çera, E.**, Kusaku, A., Matošková, J., & Gregar, A. (2023). Determining Approaches to Human Resource Management in Start-ups that Foster Innovation and Boost Organizational Performance. *Quality-Access to Success*, 24(193). doi: 10.47750/QAS/24.193.37
3. Abbas, Z., Smaliukienė, R., Zámečník, R., Kalsoom, G., & **Cera, E.** (2023). How does green HRM influence environmental and social sustainability in hotels? *Problems and Perspectives in Management*. doi: 10.21511/ppm.21(1).2023.22

4. Çera, E., Ndreca, P., Çera, G., Asamoah, C. A., & Matošková, J. (2023). Does Generation Cohort Matter for Teleworking? Diving into Challenges and Advantages of Teleworking Concerning Gen Y and Gen Z. *Journal of East-West Business*, 1-29.
5. Abbas, Z., Smaliukienė, R., Zámečník, R., Kalsoom, G., & Cera, E. (2023). How does green HRM influence environmental and social sustainability in hotels?. *Problems and Perspectives in Management*.

Papers accepted for publishing:

1. Merkuri, A., Cera, E., Youth labor market opportunities and challenges in Albania: successful transition from education to employment. *Journal: Quality-Access to Success*;

Papers under review:

1. Risk Management System and Employee Knowledge Sharing: Unravelling the Role of Chosen Company Attributes for Organizational Resilience. *Journal: Journal of Knowledge Management*;
2. Fostering Inbound Open Innovation in SMEs: The Crucial Role of High-Performance Working Systems and the mediating influence of Innovative Work Behaviour. *Journal: Journal of Knowledge Management*;

Conference papers (indexed in Web of Science or SCOPUS):




1. Cera, E., & Abbas, Z. (2023, November). Transformational Leadership Fostering Open Innovation: A Dynamic Capabilities Perspective. In *18th European Conference on Management, Leadership and Governance*. Academic Conferences and publishing limited.
2. Asad, A. I., Çera, E., Pavelková, D., & Matošková, J. (2021). THE MANAGEMENT OF GREEN TECHNOLOGY INNOVATION: A COMPARATIVE ANALYSIS OF THE GLOBAL WEST AND THE V4 ECONOMIES. In *17 th Annual International Bata Conference for Ph. D. Students and Young Researchers* (p. 30).
3. Çera, E., Kusaku, A., Matošková, J., & Kapo, K. (2022). BENEFITS OF VIRTUAL WORK FROM THE PERSPECTIVE OF A DEVELOPING COUNTRY: CASE OF ALBANIA. In *Conference Proceedings DOKBAT 2022 18th International Bata Conference for Ph. D. Students and Young Researchers* (p. 54).
4. ÇERA, E., GREGAR, A., MATOŠKOVÁ, J., & ABBAS, Z. Responsible Competitiveness Factors And Competitive Advantage: A Socially Responsible-Hrm Perspective. 15th INTERNATIONAL MANAGEMENT CONFERENCE, “Managing People and Organizations in a Global Crisis” 4th-5th November, 2021, BUCHAREST, ROMANIA

5. ÇERA, E. "Collaborative HRM and open innovation" World Open Innovation Conference -WOIC2023: 10th Edition "Bringing Together Stakeholders for Joint Value Creation" Bilbao, Spain, 9-10 October 2023.

Conference papers accepted for participation:

1. Elona Çera , Valentina Ndou, Jana Matošková, Comfort Adebisi Asamoah, *Role of developmental culture in inbound open innovation: mediation role of Commitment based HRM practices*, Translating Knowledge into Innovation Dynamics,14-14 June, Madrid, Spain: <https://www.ifkad.org/>

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Nurturing inbound open innovation: exploring the interplay of High-Performance Work Systems, Innovative Work Behaviour and Innovative Culture

Podpora příchozích otevřených inovací: zkoumání vzájemného působení vysoce výkonných pracovních systémů, inovativního pracovního chování a inovativní kultury

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