"How do commitment-based HRM practices and a developmental culture interact to foster open innovation in SMEs?"

AUTHORS	Elona Cera fo Roland Subashi fo				
ARTICLE INFO	Elona Cera and Roland Subashi (2024). How do commitment-based HRM practices and a developmental culture interact to foster open innovation in SMEs?. <i>Problems and Perspectives in Management</i> , <i>22</i> (1), 231-243. doi:10.21511/ppm.22(1).2024.20				
DOI	http://dx.doi.org/10.21511/ppm.22(1).2024.20				
RELEASED ON	Monday, 22 January 2024				
RECEIVED ON	Friday, 09 June 2023				
ACCEPTED ON	Thursday, 26 October 2023				
LICENSE	This work is licensed under a Creative Commons Attribution 4.0 International License				
JOURNAL	"Problems and Perspectives in Management"				
ISSN PRINT	1727-7051				
ISSN ONLINE	1810-5467				
PUBLISHER	LLC "Consulting Publishing Company "Business Perspectives"				
FOUNDER	LLC "Consulting Publishing Company "Business Perspectives"				

o P	B	===
NUMBER OF REFERENCES	NUMBER OF FIGURES	NUMBER OF TABLES
66	2	5

[©] The author(s) 2024. This publication is an open access article.





BUSINESS PERSPECTIVES



LLC "CPC "Business Perspectives" Hryhorii Skovoroda lane, 10, Sumy, 40022, Ukraine

www.businessperspectives.org

Received on: 9th of June, 2023 Accepted on: 26th of October, 2023 Published on: 22nd of January, 2024

© Elona Cera, Roland Subashi, 2024

Elona Cera, Ph.D. Candidate, Management and Marketing Department, Faculty of Management and Economics, Tomas Bata University in Zlin, Czech Republic. (Corresponding author)

Roland Subashi, Ph.D., Professor, Administrative Sciences Department, Faculty of Economics, University of Metropolitan Tirana, Albania.

This is an Open Access article, distributed under the terms of the Creative Commons Attribution 4.0 International license, which permits

International license, which permits unrestricted re-use, distribution, and reproduction in any medium, provided the original work is properly cited.

Conflict of interest statement: Author(s) reported no conflict of interest Elona Cera (Czech Republic), Roland Subashi (Albania)

HOW DO COMMITMENT-BASED HRM PRACTICES AND A DEVELOPMENTAL CULTURE INTERACT TO FOSTER OPEN INNOVATION IN SMES?

Abstract

This paper aims to bring new insights into the role of commitment-based human resource management practices in open innovation in small and medium-sized enterprises. Additionally, the goal is to enhance comprehension of the aforementioned interactions by considering the mediating effect of developmental culture. Data were collected from owners and managers of 131 small and medium-sized enterprises operating in the service and manufacturing sectors in Albania. The study employed a quantitative research instrument, namely online surveys. To yield results and extract figures, the study applied partial least squares-structural equation modeling, examining the interrelationships among constructs. The empirical results highlight the direct effects of commitment-based human resource management practices and developmental culture on open innovation. Specifically, the study reveals that commitment-based human resource management practices have a significant role in promoting open innovation (O = 0.598, t = 10.057, p = 0.000). Additionally, the findings indicate that developmental culture serves as a complementary factor by mediating the connection between commitment-based human resource management practices and open innovation (O = 0.136, t = 1.789, p = 0.037). This study draws the attention of business owners and strategy developers circumnavigating the Albanian small and medium-sized enterprises environment. Barring certain limitations, it enthralls their propensity toward innovation, aligning it with an enabling business culture.

Keywords human resource management practices, organizational

culture, open innovation, SMEs, country in

development, Albania

JEL Classification O36, O32, M10

INTRODUCTION

Globalization, competition, and rapid technological advancements force companies to revise their strategies. External sources of knowledge have become instrumental in innovation management. Chesbrough (2003) asserts that the innovation process has the tendency to go beyond organizational boundaries concerning evolving innovation. Moreover, organizations must implement an "open innovation" framework, which entails leveraging diverse external actors and resources to establish a viable innovation environment (Engelsberger et al., 2022; Naqshbandi et al., 2023; Zheng et al., 2020). According to Bogers et al. (2018), one of the main factors influencing an organization's ability to innovate is its access to outside information. In this regard, SMEs have received little attention (Hossain & Kauranen, 2016; Popa et al., 2017; Usman et al., 2018; Van De Vrande et al., 2009). Although smaller companies are less engaged in open innovation, it is crucial not to overlook their external knowledge acquisition processes (Spithoven et al., 2013) due to the effect of open innovation on

enhancing organizational outcomes and competitive advantage (Carrasco-Carvajal et al., 2023; Tsai et al., 2022). For instance, Usman et al. (2018) suggest that open innovation is vital to overcoming barriers to scarce resources and to adapt with market demands. Therefore, effective management of open innovation can result in improved growth for SMEs (Skordoulis et al., 2020). According to Scaliza et al. (2022), fostering an "open innovation mindset" strengthens the link between HRM practices and open innovation. Therefore, Skordoulis et al. (2020) assert that future research considering high-involvement HRM practices should foster an organizational culture that encourages an open innovation approach.

Existing research acknowledges the influence of HRM practices on open innovation (Engelsberger et al., 2022, 2023; Hong et al., 2019; Remneland Wikhamn et al., 2023; West & Bogers, 2017; Zheng et al., 2020). Nevertheless, Podmetina et al. (2013) and Naqshbandi et al. (2023) call for future researchers to consider other mediators between HRM and open innovation. Consequently, to respond to these calls for future research, this study analyzes developmental culture as a mediator regarding the association between commitment-based HRM (C-HRM) practices and open innovation in the SME context. A culture focused on development and change emerges as an essential component in bridging the link between HRM and organizational results, including innovation (Lau & Ngo, 2004). The phenomenon under consideration can be interpreted as a mediating incorporation, as elaborated by Delery (1998). Moreover, research on the connection between HRM and open innovation has been conducted primarily in developed countries (T. Le & P. Le, 2023; Sikandar & Abdul Kohar, 2022; Usman et al., 2018). Nevertheless, such research is scarce in developing nations that should be considered because of the generalization of the data and the cultural differences (Sikandar & Abdul Kohar, 2022).

In accordance with the research calls to explore HRM and open innovation in SMEs operating in different contexts, this study is conducted in Albania. SMEs are pivotal in boosting sustainable economic growth in Albania (OECD, 2022). Nevertheless, additional practices and policies need to be developed and implemented to foster business growth (Çera et al., 2019) and boost SMEs' innovation capacity (OECD, 2022). Hence, empowering SMEs to develop enterprise capabilities through competent and skilled human resources is essential to boost innovation (World Bank, 2021). Moreover, collaboration between different entities, including public, private, and other relevant stakeholders operating in the country, is imperative to foster competitiveness and innovation. As a result, this study reacts to SMEs operating in Albania to enhance innovation capabilities.

1. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

Drawing upon the resource-based view, this paper analyzes how SMEs use their internal strategic resources to gain competitive advantage through open innovation. With the development of the resource-based view, one can identify the earliest efforts to recognize the importance of internal resources, such as human resources, in the competitiveness of firms (Wright et al., 2001). In order to compete in the market, create value, and increase business performance, firms should invest in resources that are valuable, rare, and inimitable, such as human resources (Barney, 1991; Peteraf, 1993) and organizational culture (Barney, 1991). This approach will increase the

production of innovative products and services that influence customer satisfaction (Hitt et al., 2016) and market competitiveness (Barney, 1991; Barney et al., 2001). The business environment is always changing, necessitating the development of new capabilities in order to adapt in a dynamic context (Teece et al., 1997). Human resources, however, are not the only factor that has a direct impact on organizational innovativeness (products or processes) (Wright et al., 2001). Core competencies are primarily centered on human skills and knowledge, although they are not limited to human beings. Thus, human and social capital (i.e., internal/external interactions and exchanges) are included (Wright & McMahan, 1992). Therefore, the study deduces that managing internal resources (human resources, culture) is an essential factor that shapes organizational strategy toward an open innovation approach.

Numerous researchers have investigated the complex interplay between the determinants of HRM practices and innovation (Alosani et al., 2021; Lau & Ngo, 2004; Lockhart et al., 2020). For instance, Alosani et al. (2021) have found a positive impact of HRM practices on service innovation. Moreover, they pinpoint the relevance of aligning HRM practices with the requirements of innovation activities, considering the intense competition and the need for innovative services that prioritize client satisfaction while minimizing resource usage. These concur with previous research by Fernández-Esquinas et al. (2017), Guan and Frenkel (2020), and Hansen et al. (2019).

Lau and Ngo (2004), exploring such a relationship in an earlier study conducted among Hong Kong firms, reveal that HRM practices are essential in fostering an innovation culture within organizations, enhancing creativity, bridging collaboration, and forging a reliable work environment. Additionally, Alosani et al. (2021) and Lau and Ngo (2004) emphasize that as commitment is improved due to fostering culture, the quest for innovation is expanded (Lockhart et al., 2020), drawing upon a larger pool of services and techniques, therefore leading to accelerated processes and approaches characterized as open innovation. Moreover, Song et al. (2019) have found that commitment-based HRM practices that can encourage a fostering culture include three types of practices: skills-enhancing, intrinsic motivation-enhancing, and employees-empowering. Furthermore, according to Lockhart et al. (2020), another determinant of such a coalescing mixture of factors that create an enabling environment for innovation includes establishing HRM functional areas such as reward management and promotion structure that are fully compliant with such a culture. Therefore, according to Song et al. (2019) and Lockhart et al. (2020), creativity-oriented HRM practices and systems have the potential to drive innovation through their environment-fostering properties.

Firm innovation is positively impacted by commitment-based human resource management practices (Collins & Smith, 2006). These HR practices boost trust, knowledge sharing, teamwork, job security, collaboration, knowledge exchange, and social interaction (Collins & Smith, 2006; Zhou et

al., 2013). Therefore, the implementation of commitment-based HRM practices contributes to the development of a harmonious work environment that nurtures employee support. Consequently, employees are more inclined to collaborate with external entities and actively participate in open innovation initiatives (Obradović et al., 2021). Moreover, Ceylan (2013) has analyzed innovation from a two-perspective approach: exploratory and exploitative. He found that exploratory innovation had the potential to lead to improved innovation performance, whereas exploitative innovation could decrease it. However, balancing exploratory and exploitative innovation processes and practices is necessary to yield the best innovation performance output (Ceylan, 2013). Conclusively, findings imply that businesses should spend in both categories of innovative activities while carefully balancing them. However, Zhou et al. (2013) have stated that organizations that participate in exploratory innovation have a greater association between commitment-based HRM strategies and innovation performance. This implies that commitment-based HRM procedures may be crucial for businesses that prioritize exploratory innovation despite the importance of exploitative processes (Ceylan, 2013; Collins & Smith, 2006; Remneland Wikhamn et al., 2023).

High-performance work systems have been defined by Bendickson et al. (2017) and Messersmith and Wales (2013) as highly efficient for a multitude of organizational structures, including well-established corporates, conventional businesses, startups, and early-stage enterprises. Such systems include various practices, such as flexible recruitment processes, promotion, and evaluation based on deliverable outcomes, diverse training programs, flexible work hours, and the implementation of various forms of performance-reward-oriented strategies (Hormiga & García-Almeida, 2016). Jebali and Meschitti (2021) and Amabile and Pratt (2016) have predominantly focused on high-performance work systems as a catalyst for HRM development in SMEs. They have advocated for a proactive approach to implementing such systems in SMEs and startups during their initial growth phases. According to their perspective, aggressively prioritizing HR development and talent acquisition in the early stages may not result in significant upfront costs compared to investments

in technology and logistics, which can deplete financial resources rapidly. Consequently, they contend that allocating more resources to HR systems and policy development during the early stages could have a relatively minor impact on overall company resources. This viewpoint stems from the belief that investing in hiring talent strategies and implementing robust HRM policies that foster employee motivation and retention yield long-term benefits for firm performance and productivity (Engelsberger et al., 2022; Jebali & Meschitti, 2021; Nagshbandi et al., 2023).

Additionally, stemming from the discussion above and in a somewhat "reverse" fashion, an environment that is favorable to innovation can be fostered by an encouraging organizational culture (Ceylan, 2013; Lau & Ngo, 2004; Zhou et al., 2013) that promotes experimentation, risk-taking, and learning from failure (Naqshbandi et al., 2023). Barjak and Heimsch (2023) explored the connection between corporate culture and inbound open innovation. They emphasized the importance of developing a more comprehensive definition of culture. To examine this relationship, they utilized Quinn and Rohrbaugh's (1983) competing values framework and assessed the influence of internal and external control variables on five indicators of inbound open innovation, such as product innovation, process innovation, and the acquisition of innovative activities. The outcomes indicated that the specific market environments in which the firms operated impacted the results. These findings suggested that the observed inbound open innovation initiatives were driven by external pressures, particularly in response to significant disruptions. Lau and Ngo (2004) and Naqshbandi et al. (2023) have also highlighted the influence of external factors. Organizations that encounter such difficulties often resort to the adoption of planning and rule-oriented (formal) cultures as a strategy to implement process innovations aimed at reducing costs.

However, in terms of having a distinct strategy, promoting open and honest communication, introducing suitable systems of rewards and support, adapting organizational structures and procedures, and establishing and formalizing any required modifications, this study aligns with prior investigations regarding the influence of these fac-

tors on cultivating a culture that fosters innovation (Barjak & Heimsch, 2023; Scaliza et al., 2022). These characteristics are especially crucial when swift responses and adaptability to varying levels of openness are necessary (Barjak & Heimsch, 2023). Organizations can improve their innovation skills and produce better results by incentivizing human resource practices (Alosani et al., 2021; Engelsberger et al., 2023; Gielnik et al., 2017; Haar et al., 2022) that enhance commitment, developing a positive learning culture (Lau & Ngo, 2004; Naqshbandi et al., 2023) and putting in place efficient knowledge exchange systems, which cumulatively comprise open innovation. It is, therefore, imperative for firms leveraging on open innovation to ensure such an interplay is attained within their structures at an optimum level (Engelsberger et al., 2022; Podmetina et al., 2013, 2018; Van De Vrande et al., 2009).

Alqudah et al. (2022), Karim et al. (2020), and Kerdpitak and Jermsittiparsert (2020) have examined the correlation between organizational culture, employee commitment, innovation, and HRM practices in different contexts. Employing perceived organizational support as a mediator, Kerdpitak and Jermsittiparsert (2020) have found that organizational culture positively influences employee commitment, which correspondingly affects innovation and organizational citizenship behavior. Additionally, Alqudah et al. (2022), Gielnik et al. (2017), and Karim et al. (2020) have argued that HRM practices positively impact employee commitment. Most importantly, the mediating role of developmental culture is pinpointed, suggesting that it mediates the relationship between HRM practices and product innovation (Lau & Ngo, 2004). It is imperative to highlight the significance of cultivating a supportive organizational culture and implementing effective HRM practices to enhance employee commitment and closed or open innovation (Gielnik et al., 2017; Kerdpitak & Jermsittiparsert, 2020; Lau & Ngo, 2004; Naqshbandi et al., 2023).

Therefore, this study aims to analyze commitment-based HRM practices in open innovation through the mediation effect of developmental culture. Hence, this line of discussions and identified research gaps lead to the following hypotheses (Figure 1):

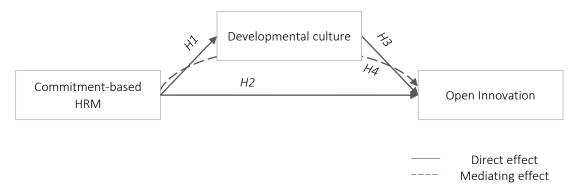


Figure 1. Conceptual framework

- H1: Commitment-based HRM practices positively impact developmental culture.
- H2: Commitment-based HRM practices positively impact open innovation.
- H3: Developmental culture positively impacts open innovation.
- H4: Developmental culture mediates the relation between commitment-based HRM practices and open innovation.

2. METHODOLOGY

A cross-sectional design was utilized to develop this investigation. In addition, the study employed a quantitative approach owing to its ability to infer the characteristics, attitudes, and/or behaviors of a population from a limited sample size (J. W. Creswell & J. D. Creswell, 2017). To conduct this investigation, a methodology grounded in the survey is employed. Saunders et al. (2009) propose that the research strategy involves conducting extensive quantitative research and examining the relationships among multiple variables within a given research framework. Furthermore, it is widely recognized that this research methodology has a significant potential for data generalization.

The analysis was based on responses from a sample of 131 SMEs in the service and manufacturing sectors. Stratification based on business sector and business size was used to choose the units. Specifically, the main business activities that SMEs were operating were as follows: hospitality and food service activities 2.3%; banking 6.1%;

ICT 13.7%; manufacturing 29 %; service 38.9%; others 9.9%. The size of the target population is already known. Thus, respondents (SMEs) are chosen at random from a spreadsheet created in Microsoft Excel by using the Randbetween function first, followed by the sort command. General Directorate of Taxation in Albania assessed the companies' database. The sample size met the minimum requirement outlined by Bagozzi and Yi (2012). The research methodology employed in this study aligns with previous studies on HRM and innovation within SMEs (Haar et al., 2022; Popa et al., 2017). The study utilizes firm-level data to investigate the association between various constructs. The participants selected for the study must hold the position of owner or manager in order to guarantee their possession of a comprehensive understanding of the organization's circumstances. Of the individuals involved in the study, 58% were identified as owners of SMEs, while the remaining 42% were classified as managers. Furthermore, the study revealed that 41% of the participants were male, while 59% were female.

The paper went through the following steps to make the questionnaire: 1) Going through the literature to find research gaps and ways to measure constructs; 2) Making the first draft of the questionnaire; 3) A pilot test with 15 managers and business owners from SMEs. In the final sample, there are no results from the pilot phase. A small-scale pilot survey shows patterns in the answers and any problems with the questionnaire to ensure the content is good and the measurements are accurate; 4) Development of the final questionnaire. All of the measures were graded using five-point Likert scales that went from "strongly disagree" to "strongly agree."

The study measured the first construct of commitment-based HRM by 10 items (Collins & Smith, 2006). A sample item is "Internal candidates are given consideration over external candidates." Concerning data analysis, item C_HRM1 – "Internal candidates are given consideration over external candidates" has been removed in order to only take those items with a high consistency on their answers and increase Alpha.

Mediating variable (developmental culture) was measured using a 4-item construct adopted from Lau and Ngo (2004). A sample item is "Our firm is a very dynamic and entrepreneurial place." Concerning data analysis, items DC1 – "Our firm is a very dynamic and entrepreneurial place" and "DC2 – "The head of our firm is generally considered to be an entrepreneur, an innovator, or a risk-taker" have been removed to increase construct consistency.

Open innovation was assessed using an adapted 11-item scale derived from (Laursen & Salter, 2006). The participants were requested to assess the extent to which the company engaged in knowl-

edge acquisition from external resources, including "1) Consumers, 2) Dealers, 3) Competitors, 4) Consultants, 5) Universities and other research institutions, 6) Technology intermediary organizations, 7) Intellectual property organizations, 8) Venture capital enterprises, 9) Trade associations, 10) Relevant government departments". However, to enhance construct consistency in the analysis of the data, item OI9 – "News media" was excluded.

3. RESULTS

The Harman single-factor analysis revealed that the data are around 26% unique, eliminating out the possibility of a bias due to a common method bias. Although the VIF scores are lower than 3, as illustrated in Table 1, collinearity does not appear to be a serious problem (Diamantopoulos & Siguaw, 2006).

As per Henseler et al. (2015), discriminant validity (HTMT) was verified by the heterotrait-monotrait ratio (Table 2). Table 3 demonstrates that each HTMT ratio exceeded the most restrictive limit of 0.85.

Table 1. Measurement model

Constructs	Indicator	Indicator Factor Loadings		Rho_A	CR	CA
				0.928	0.929	0.914
	C-HRM2	0.720	2.221			
	C-HRM3	0.851	2.045			
	C-HRM4	0.821	1.889			
commitment-based HRM	C-HRM5	0.601	1.924			
(C-HRM)	C-HRM6	0.768	2.528			
	C-HRM7	0.693	1.992			
	C-HRM8	0.840	2.759	**************************************		
	C-HRM9	0.829	2.897	• · · · · · · · · · · · · · · · · · · ·		
	C-HRM10	0.788	2.680			
				0.839	0.912	0.808
Developmental Culture (DC)	DC3	0.935	1.853			
(DC)	DC4	0.895	1.855	**************************************	1	
				0.893	0.907	0.887
	OI1	0.704	1.889	**************************************		
	OI2	0.730	2.369	**************************************		
	014	0.689	1.545	•		
Open Innovation	OI5	0.676	2.361			
(OI)	016	0.778	2.431			
	017	0.728	2.661			
	018	0.801	2.529			
	0110	0.737	2.425			
	OI11	0.631	1.789	-		

Note: VIF = Variance Inflation Factor; Rho_A = Dijkstra-Henseler reliability coefficient; CR = Composite Reliability; CA = Cronbach Alpha.

Table 2. Discriminant validity: Fornell-Larcker criterion

	C-HRM	DC	OI
C-HRM	0.772		
DC	0.598	0.915	
OI	0.426	0.401	0.721

Note: C-HRM = commitment-based HRM; DC = developmental culture; OI = open innovation.

Table 3. Discriminant validity: Heterotrait-monotrait ratio (HTMT)

	C-HRM	DC	OI
C-HRM	-		
DC	0.677		
OI	0.412	0.433	

Note: C-HRM = commitment-based HRM; DC = developmental culture; OI = open innovation.

The significance of the parameter was assessed by employing the bootstrapping technique (5,000 replicates, one-tailed significance). H1: commitment-based HRM (O = 0.598, t = 10.057, p = 0.000) was strongly linked to developmental culture. In addition, H2 was supported by data showing a substantial relationship between commitment-based HRM and open innovation (O = 0.290, t = 2.470, p = 0.007). Also, for H3, developmental culture is positively related to open innovation (O = 0.227, t = 1.874, p = 0.0031).

Table 4 illustrates an analysis of mediation performed to validate hypothesis H4. The findings suggested that the association between commitment-based HRM and open innovation is mediated by developmental culture (O = 0.136, t = 1.789, p = 0.037).

By evaluating R2 of the regression model, the predictability of the study variables was evaluated (Table 5). This coefficient evaluates the possibility of an independent variable to explain a certain degree of variance in the dependent variable. The model R² of the dependent variable, open innovation, (0.271) shows 27% of the total variation of the open innovation, which can be considered for by the cumulative effects of separating variable, commitment-based HRM. While mediation construct, developmental culture, (0.351) shows 35%.

Table 5. Model fit

Fit Index Saturated Model		Estimated Model
SRMR	0.094	0.094
d_ULS	1.846	1.846
d_G	0.720	0.720
Chi_square	497.305	497.305
NFI	0.707	0.707

4. DISCUSSION

Drawing on resource-based view, this study investigates the association between open innovation and several other variables, including commitment-based HRM practices and developmental culture, as well as the intricate mediation effect of developmental culture between commitment-based HRM and open innovation in SME context concerning a developing country. Several correlational setups are highlighted in the literature review. According to one research stream, businesses that support HRM practices yield a favorable influence on open innovation (Engelsberger et al., 2022; Naqshbandi et al., 2023; Zheng et al., 2020). This is also reinforced by this study's findings, which refer to a strong correlational output, measured at H2, between commitment-based HRM practices and open innovation (O = 0.290, t = 2.470, p = 0.007).

Table 4. Results of hypotheses testing (direct and indirect effect)

Relationship	Original Sample (O)	Sample Mean (M)	STDEV	t-value	p-value	Decision
		Direct Effect				,
H1: C-HRM → DC	0.598	0.603	0.059	10.057	0.000	Supported
H2: C-HRM → OI	0.290	0.304	0.118	2.470	0.007	Supported
H3: DC → OI	0.227	0.232	0.121	1.874	0.031	Supported
	Indirec	t Effect (Mediation A	nalysis)			
H4: C-HRM \rightarrow DC \rightarrow OI	0.136	0.140	0.076	1.789	0.037	Supported
Construct	Coefficient of determination (R²)		Adjusted R ²			
DC	0.356		0.351			
Ol	0.282		0.271			

Note: C-HRM = commitment-based HRM; DC = developmental culture; OI = open innovation.

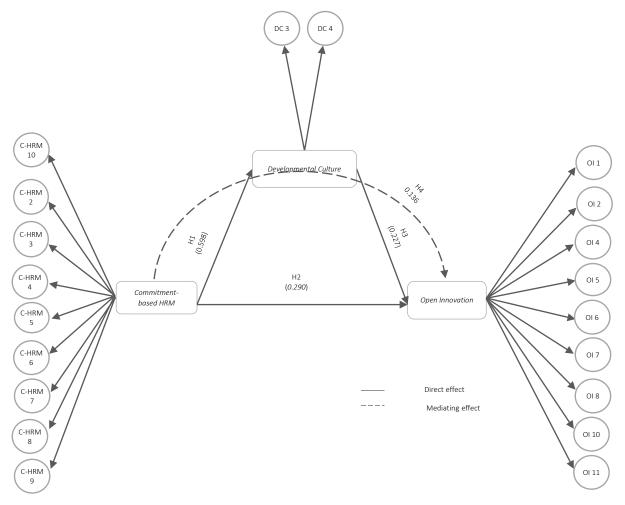


Figure 2. Model (Extracted from SmartPLS 4.0)

Another cluster of studies emphasizes that organizational culture is positively impacted by HRM approaches (Lau & Ngo, 2004; Lockhart et al., 2020). In this regard, this study has found that, indeed, a culture fostering development is positively affected by commitment-based HRM practices, as expressed by the correlation value, H1 (O = 0.598, t = 10.057, p = 0.000).

The practices of HRM have a significant impact on the development and enhancement of an organization's culture (Lau & Ngo, 2004; Lockhart et al., 2020). They also play a crucial role in shaping people's assumptions and beliefs about various aspects such as knowledge sharing, values, and commitment (Suttapong et al., 2014).

To establish an environment that supports open innovation, businesses must cultivate a company culture that supports experimentation, risk-taking, and failure-based learning (Barjak & Heimsch, 2023; Lau & Ngo, 2004). Accordingly, this study shows that a developmental culture that enhances exploration, positive risk assessment, and informed learning shall positively impact open innovation (H3) (O = 0.227, t = 1.874, p = 0.0031). Aquilani et al. (2017) suggest that the lack of a supportive and risk-taking organizational culture influences a lack of openness and trust toward outside collaborators, affecting the company's capacity to effectively utilize externally generated or transferred knowledge. In support, Spath et al. (2018) argue that implementing open innovation in SMEs is affected by adopting an externally oriented culture and change-oriented organizational mindset. Organizational cultural setup and attributes that foster commitment play a significant role. According to Palumbo et al. (2022), in the food processing industry, businesses that place a high value on collaboration, knowledge sharing, and positive risk aversion

will have a better chance of embracing open innovation strategies. A successful open innovation approach is described as requiring strong internal and external partnerships as well as excellent communication and trust (Palumbo et al., 2022), which again emphasizes the role of a permitting culture in all of the above (Spath et al., 2018). Sharing know-how and the creation of clear communication channels prove inter-beneficiary.

Finally, the study cross-validates the affirmation of H4, adding that developmental culture could mediate an already positive relation between commitment-based HRM and open innovation (O = 0.136, t = 1.789, p = 0.037). The results are similar to Barjak and Heimsch (2023) and Lau and Ngo (2004). In the same vein, Alosani et al. (2021) assert that HRM practices, which influence service innovation, are significantly shaped by an organization's disposition toward change and novelty.

The results of this study hold significant ramifications for practical applications. Consistent with prior research, this inquiry establishes a positive correlation between HRM practices that are based on commitment and open innovation within the context of small and medium-sized enterprises. The study's findings are noteworthy

because they focus on researching open innovation in developing economies, where limited studies exist. Furthermore, the literature finds the contribution of developmental culture's mediation effect intriguing. Consequently, conducting an empirical inquiry into the mediation between commitment-based HRM practices and open innovation would be of great worth in emerging economies like Albania.

This study's primary contribution lies in its innovative approach to examining HRM practices in the context of open innovation within SMEs, with a particular emphasis on Albania. This study contributes to the existing literature by indicating that the results of HRM practices are crucial for advancement in open innovation. The findings indicate a pressing need for economies to establish a work environment prioritizing creativity, flexibility, autonomy, trust, and change to foster open innovation. SMEs in Albania must promote endeavors that facilitate the dissemination of knowledge, foster creativity, and cultivate a forward-thinking atmosphere that will aid in developing a culture centered on change and ingenuity. Implementing a developmental culture is expected to foster an environment that stimulates the generation of novel ideas among employees, thereby promoting collaboration, change, and the enhancement of open innovation.

CONCLUSION

Drawing on resource-based view, this study investigated the impact of commitment-based HRM practices in open innovation under the mediating effect of developmental culture. Data were gathered from a total of 131 SMEs located in Albania. The paper showcases that implementing HRM practices based on commitment can incentivize employees to engage in open innovation. This study expands upon the literature on commitment-based HRM and developmental culture in a nascent field. In practical terms, this provides policymakers and leaders with a framework for cultivating a transparent approach to fostering an open innovation approach.

The present study possesses certain limitations. The cross-sectional design utilized in this study may introduce the potential for temporal shifts in the underlying causal association. To address this limitation and enhance the outcome, a longitudinal study might be considered by future researchers. In addition, responses were the opinion of only one respondent for each SME in the position of manager or business owner. In order to mitigate potential research bias and enrich findings, it is recommended that future research considers research designs that allow data collection by various respondents within each firm. Furthermore, it is recommended that other studies consider a larger sample size to improve the quality of their data outcomes and enhance the generalizability of their results.

239

AUTHOR CONTRIBUTIONS

Conceptualization: Elona Cera.

Data curation: Elona Cera, Roland Subashi.

Formal analysis: Elona Cera.

Investigation: Elona Cera, Roland Subashi.

Methodology: Elona Cera.

Project administration: Elona Cera, Roland Subashi.

Resources: Elona Cera, Roland Subashi. Software: Elona Cera, Roland Subashi.

Supervision: Roland Subashi.

Validation: Elona Cera, Roland Subashi. Visualization: Elona Cera, Roland Subashi.

Writing – original draft: Elona Cera, Roland Subashi. Writing – review & editing: Elona Cera, Roland Subashi.

ACKNOWLEDGMENT

This work is supported by Tomas Bata University internal grants, FaME TBU No. IGA/FaME/2023/012 "Closed and open innovation: role of human resource, servant leadership, digitalization, and uncertainty."

REFERENCES

- Alosani, M. S., Al-Dhaafri, H. S., & Awadh Abdulla, A. (2021). Investigating the role of HRM practices on service innovation: Empirical evidence from UAE government agencies. *Management Research Review*, 44(1), 1-24. https://doi. org/10.1108/MRR-03-2020-0141
- 2. Alqudah, I. H. A., Carballo-Penela, A., & Ruzo-Sanmartín, E. (2022). High-performance human resource management practices and readiness for change: An integrative model including affective commitment, employees' performance, and the moderating role of hierarchy culture. European Research on Management and Business Economics, 28(1), 100177. https://doi.org/10.1016/j.iedeen.2021.100177
- Amabile, T. M., & Pratt, M. G. (2016). The dynamic componential model of creativity and innovation in organizations: Making progress, making meaning. Research in Organizational Behavior, 36, 157-183. https://doi.org/10.1016/j. riob.2016.10.001

- Aquilani, B., Abbate, T., & Codini, A. (2017). Overcoming cultural barriers in open innovation processes through intermediaries: A theoretical framework. Knowledge Management Research & Practice, 15(3), 447-459. http:// dx.doi.org/10.1057/s41275-017-0067-5
- Bagozzi, R. P., & Yi, Y. (2012). Specification, evaluation, and interpretation of structural equation models. *Journal of* the Academy of Marketing Science, 40(1), 8-34. https://doi. org/10.1007/s11747-011-0278-x
- Barjak, F., & Heimsch, F. (2023). Understanding the relationship between organizational culture and inbound open innovation. European Journal of Innovation Management, 26(3), 773-797. https://doi.org/10.1108/EJIM-03-2021-0139
- 7. Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of Management,* 17(1), 99-120. https://doi. org/10.1177/014920639101700108
- 8. Barney, J., Wright, M., & Ketchen Jr, D. J. (2001). The resource-

- based view of the firm: Ten years after 1991. *Journal of Management*, 27(6), 625-641. https://doi.org/10.1016/S0149-2063(01)00114-3
- 9. Bendickson, J. S., Muldoon, J., Liguori, E. W., & Midgett, C. (2017). High performance work systems: A necessity for startups. *Journal of Small Business Strategy*, 27(2), 1-12. Retrieved from https://libjournals.mtsu.edu/index. php/jsbs/article/view/611
- Bogers, M., Foss, N. J., & Lyngsie, J. (2018). The "human side" of open innovation: The role of employee diversity in firm-level openness. *Research Policy*, 47(1), 218-231. https://doi.org/10.1016/j. respol.2017.10.012
- Carrasco-Carvajal, O., Castillo-Vergara, M., & García-Pérez-de-Lema, D. (2023). Measuring open innovation in SMEs: An overview of current research. *Review of Managerial Science*, 17(2), 397-442. https://doi.org/10.1007/s11846-022-00533-9
- Çera, G., Breckova, P., Çera, E., & Rozsa, Z. (2019). The effect of business enabling policies,

- tax treatment, corruption and political connections on business climate. *Acta Polytechnica Hungarica*, 16(4), 113-132. Retrieved from http://acta.uni-obuda.hu/Cera_Breckova_Cera_Rozsa_91.pdf
- 13. Ceylan, C. (2013). Commitment-based HR practices, different types of innovation activities and firm innovation performance. *The International Journal of Human Resource Management*, 24(1), 208-226. https://doi.org/10.1080/09585192.2012.680601
- 14. Chesbrough, H. W. (2003). Open innovation: The new imperative for creating and profiting from technology. Harvard Business Press
- Collins, C. J., & Smith, K. G. (2006). Knowledge exchange and combination: The role of human resource practices in the performance of high-technology firms. Academy of Management Journal, 49(3), 544-560. https://doi. org/10.5465/amj.2006.21794671
- Creswell, J.W., & Creswell, J.D. (2017). Research design: Qualitative, quantitative, and mixed methods approaches. Sage Publications.
- 17. Delery, J. E. (1998). Issues of fit in strategic human resource management: Implications for research. *Human Resource Management Review*, 8(3), 289-309. https://doi.org/10.1016/S1053-4822(98)90006-7
- Diamantopoulos, A., & Siguaw, J. A. (2006). Formative versus reflective indicators in organizational measure development: A comparison and empirical illustration. *British Journal of Management*, 17(4), 263-282. https://doi.org/10.1111/j.1467-8551.2006.00500.x
- Engelsberger, A., Bartram, T., Cavanagh, J., Halvorsen, B., & Bogers, M. (2023). The role of collaborative human resource management in supporting open innovation: A multi-level model. *Human Resource Management Review*, 33(2), 100942. https://doi. org/10.1016/j.hrmr.2022.100942

- Engelsberger, A., Halvorsen, B., Cavanagh, J., & Bartram, T. (2022). Human resources management and open innovation: The role of open innovation mindset. *Asia Pacific Journal of Human Resources*, 60(1), 194-212. https://doi. org/10.1111/1744-7941.12281
- Fernández-Esquinas, M., van Oostrom, M., & Pinto, H. (2017). Key issues on innovation, culture and institutions: Implications for SMEs and micro firms. European Planning Studies, 25(11), 1897-1907. http://dx.doi.org/10.1080/09 654313.2017.1364770
- 22. Gielnik, M. M., Zacher, H., & Schmitt, A. (2017). How small business managers' age and focus on opportunities affect business growth: A mediated moderation growth model. *Journal of Small Business Management*, 55(3), 460-483. https://doi.org/10.1111/jsbm.12253
- Guan, X., & Frenkel, S. (2020).
 Organizational support and employee thriving at work:
 Exploring the underlying mechanisms. *Personnel Review*, 50(3), 935-953. https://doi.org/10.1108/PR-10-2019-0569
- 24. Haar, J., O'Kane, C., & 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*, 33(16), 3324-3352. https://doi.org/10.1080/09585192.2021.1894213
- Hansen, N. K., Güttel, W. H., & Swart, J. (2019). HRM in dynamic environments: Exploitative, exploratory, and ambidextrous HR architectures. The International Journal of Human Resource Management, 30(4), 648-679. https://doi.org/10.1080/09585192. 2016.1270985
- Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variancebased structural equation modeling. *Journal of the Academy* of Marketing Science, 43(1), 115-135. https://doi.org/10.1007/ s11747-014-0403-8

- 27. Hitt, M. A., Xu, K., & Carnes, C. M. (2016). Resource based theory in operations management research. *Journal of Operations Management*, 41(1), 77-94. https://doi.org/10.1016/j.jom.2015.11.002
- Hong, J. F. L., Zhao, X., & Stanley Snell, R. (2019). Collaborative-based HRM practices and open innovation: A conceptual review. *The International Journal of Human Resource Management*, 30(1), 31-62. https://doi.org/10.1080/09585192.2018.1511616
- 29. Hormiga, E., & García-Almeida, D. J. (2016). Accumulated knowledge and innovation as antecedents of reputation in new ventures. *Journal of Small Business and Enterprise Development, 23*(2), 428-452. https://doi.org/10.1108/JSBED-03-2014-0038
- Hossain, M., & Kauranen, I.
 (2016). Open innovation in SMEs: A systematic literature review. *Journal of Strategy and Management*, 9(1), 58-73. https://doi.org/10.1108/JSMA-08-2014-0072
- 31. Jebali, D., & Meschitti, V. (2021). HRM as a catalyst for innovation in startups. *Employee Relations: The International Journal*, 43(2), 555-570. http://dx.doi. org/10.1108/ER-03-2020-0140
- 32. Karim, S., Qamruzzaman, M. D., & Tan, A. W. K. (rev.ed.). (2020). Corporate culture, management commitment, and HRM effect on operation performance: The mediating role of just-in-time. Cogent Business & Management, 7(1), 1786316. https://doi.org/10.1080/23311975.2020.1786316
- 33. Kerdpitak, C., & Jermsittiparsert, K. (2020). The influence of organizational culture, employee commitment and organization citizen behaviour on the HRM practices: Mediating role of perceived organization support. Systematic Review Pharmacy, 11(1), 407-415. Retrieved from https://www.sysrevpharm.org/articles/the-influence-of-organizational-culture-employee-commitment-and-organization-citizen-behaviour-on-the-hrm-practices-medi.pdf

- Lau, C.-M., & Ngo, H.-Y. (2004).
 The HR system, organizational culture, and product innovation. *International Business Review*, 13(6), 685-703. https://doi.org/10.1016/j.ibusrev.2004.08.001
- Laursen, K., & Salter, A. (2006).
 Open for innovation: The role of openness in explaining innovation performance among UK manufacturing firms. Strategic Management Journal, 27(2), 131-150. https://doi.org/10.1002/smj.507
- Le, T. T., & Le, P. B. (2023). Highinvolvement HRM practices stimulate incremental and radical innovation: The roles of knowledge sharing and market turbulence. *Journal of Open Innovation: Technology, Market,* and Complexity, 9(1), 100006. https://doi.org/10.1016/j.joitmc.2023.02.003
- 37. Lockhart, P., Shahani, N. K., & Bhanugopan, R. (2020). Do organisational culture and national culture mediate the relationship between highperformance human resource management practices and organisational citizenship behaviour? *International Journal of Manpower, 41*(8), 1179-1197. https://doi.org/10.1108/IJM-04-2018-0129
- 38. Messersmith, J. G., & Wales, W. J. (2013). Entrepreneurial orientation and performance in young firms: The role of human resource management. *International Small Business Journal*, 31(2), 115-136. https://doi.org/10.1177/0266242611416141
- 39. Naqshbandi, M. M., Meeran, S., & 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*, 53(2), 279-297. https://doi.org/10.1111/radm.12566
- 40. Obradović, T., Vlačić, B., & Dabić, M. (2021). Open innovation in the manufacturing industry: A review and research agenda. *Technovation*, 102, 102221. https://doi.org/10.1016/j.technovation.2021.102221

- 41. OECD. (2022). SME policy index: Western Balkans and Turkey 2022: Assessing the implementation of the small business act for Europe. Paris: OECD Publishing. https://doi.org/10.1787/b47d15f0-en
- Palumbo, R., Manesh, M. F., Pellegrini, M. M., & Flamini, G. (2022). Setting the conditions for open innovation in the food industry: Unravelling the human dimension of open innovation. *British Food Journal*, 124(6), 1786-1809. https://doi.org/10.1108/BFJ-02-2021-0162
- 43. Peteraf, M. A. (1993). The cornerstones of competitive advantage: A resource-based view. *Strategic Management Journal*, 14(3), 179-191. https://doi.org/10.1002/smj.4250140303
- Podmetina, D., Soderquist, K. E., Petraite, M., & Teplov, R. (2018). Developing a competency model for open innovation: From the individual to the organisational level. *Management Decision*, 56(6), 1306-1335. https://doi. org/10.1108/MD-04-2017-0445
- Podmetina, D., Volchek, D., Dąbrowska, J., & Fiegenbaum, I. (2013). Human resource practices and open innovation. *International Journal of Innovation Management*, 17(06), 1340019. https://doi.org/10.1142/ \$1363919613400197
- 46. Popa, S., Soto-Acosta, P., & Martinez-Conesa, I. (2017). Antecedents, moderators, and outcomes of innovation climate and open innovation: An empirical study in SMEs. *Technological Forecasting and Social Change*, 118, 134-142. https://doi.org/10.1016/j.techfore.2017.02.014
- Quinn, R. E., & Rohrbaugh, J. (1983). A Spatial Model of Effectiveness Criteria: Towards a Competing Values Approach to Organizational Analysis. Management Science, 29(3), 363-377. https://doi.org/10.1287/ mnsc.29.3.363
- 48. Remneland Wikhamn, B., Styhre, A., & Wikhamn, W. (2023). HRM work and open innovation: Evidence from a case study. The

- International Journal of Human Resource Management, 34(10), 1940-1972. https://doi.org/10.1080 /09585192.2022.2054285
- 49. Saunders, M., Philip L., & Adrian Th. (2009). *Research methods for business students*. Pearson Education.
- 50. Scaliza, J. A. A., Jugend,
 D., Chiappetta Jabbour, C.
 J., Latan, H., Armellini, F.,
 Twigg, D., & Andrade, D. F.
 (2022). Relationships among
 organizational culture, open
 innovation, innovative ecosystems,
 and performance of firms:
 Evidence from an emerging
 economy context. *Journal of Business Research*, 140, 264279. https://doi.org/10.1016/j.
 jbusres.2021.10.065
- 51. Sikandar, H., & Abdul Kohar, U. H. (2022). A systematic literature review of open innovation in small and medium enterprises in the past decade. *Foresight*, 24(6), 742-756. https://doi.org/10.1108/FS-01-2021-0030
- Skordoulis, M., Ntanos, S.,
 Kyriakopoulos, G. L., Arabatzis,
 G., Galatsidas, S., & Chalikias, M.
 (2020). Environmental innovation,
 open innovation dynamics and
 competitive advantage of medium
 and large-sized firms. *Journal of Open Innovation: Technology, Market, and Complexity, 6*(4),
 195. https://doi.org/10.3390/
 joitmc6040195
- 53. Song, Z., Gu, Q., & Wang, B. (2019). Creativity-oriented HRM and organizational creativity in China: A complementary perspective of innovativeness. *International Journal of Manpower*, 40(5), 834-849. https://doi.org/10.1108/IJM-05-2016-0108
- 54. Spath, D., Nawroth, G., Kurz, L., Keicher, L., & Ohlhausen, P. (2018). Culture-based open innovation approach. A case study of German SME. R&D Management Conference 2018 "R&Designing Innovation: Transformational Challenges for Organizations and Society". Milan, Italy. Retrieved from https://publica-rest.fraunhofer.de/server/api/core/bitstreams/ffb8c790-c693-4b3f-b576-9896e0a2f45a/content

- 55. Spithoven, A., Vanhaverbeke, W., & Roijakkers, N. (2013). Open innovation practices in SMEs and large enterprises. *Small Business Economics*, 41, 537-562. https://doi.org/10.1007/s11187-012-9453-9
- 56. Suttapong, K., Srimai, S., & Pitchayadol, P. (2014). Best practices for building high performance in human resource management. *Global Business and Organizational Excellence*, 33(2), 39-50. https://doi.org/10.1002/joe.21532
- 57. Teece, D. J., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic management. Strategic Management Journal, 18(7), 509-533. https://doi.org/10.1002/(SICI)1097-0266(199708)18:7%3C509::AID-SMJ882%3E3.0.CO;2-Z
- 58. Tsai, F.-S., Cabrilo, S., Chou, H.-H., Hu, F., & Tang, A. D. (2022). Open innovation and SME performance: The roles of reverse knowledge sharing and stakeholder relationships. *Journal of Business Research*, 148, 433-443. https://doi. org/10.1016/j.jbusres.2022.03.051

- 59. Usman, M., Roijakkers, N., Vanhaverbeke, W., & Frattini, F. (2018). A systematic review of the literature on open innovation in SMEs. In W. Vanhaverbeke, F. Frattini, N. Roijakkers, & M. Usman (Eds.), Researching Open Innovation in SMEs (pp. 3-35). World Scientific. http://dx.doi. org/10.1142/9789813230972_0001
- Van De Vrande, V., De Jong, J. P. J., Vanhaverbeke, W., & De Rochemont, M. (2009). Open innovation in SMEs: Trends, motives and management challenges. *Technovation*, 29(6-7), 423-437. https://doi.org/10.1016/j.technovation.2008.10.001
- 61. West, J., & Bogers, M. (2017).

 Open innovation: Current status and research opportunities.

 Innovation, 19(1), 43-50. https://doi.org/10.1080/14479338.2016.1 258995
- 62. World Bank. (2021). Albania:
 Country economic memorandum:
 Background note on supporting
 an adaptive and resilient labor
 force (Report No: AUS0002602).
 World Bank Group. Retrieved
 from https://documents1.
 worldbank.org/curated/
 en/099845001312217227/pdf/

- P1752090acdb7604a0918d0aa-310774d0ea.pdf
- 63. Wright, P. M., & McMahan, G. C. (1992). Theoretical perspectives for strategic human resource management. *Journal of Management*, 18(2), 295-320. https://doi. org/10.1177/014920639201800205
- 64. Wright, P. M., Dunford, B. B., & Snell, S. A. (2001). Human resources and the resource based view of the firm. *Journal of Management*, 27(6), 701-721. https://doi.org/10.1177/014920630102700607
- Zheng, J., Liu, H., & Zhou, J. (2020). High-performance work systems and open innovation: Moderating role of IT capability. *Industrial Management & Data* Systems, 120(8), 1441-1457. https://doi.org/10.1108/IMDS-09-2019-0475
- 66. Zhou, Y., Hong, Y., & Liu, J. (2013). Internal commitment or external collaboration? The impact of human resource management systems on firm innovation and performance. *Human Resource Management*, 52(2), 263-288. https://doi.org/10.1002/hrm.21527