SUSTAINABLE HUMAN RESOURCE MANAGEMENT RELATIONSHIP WITH THE HUMAN RESOURCE RISK REDUCTION

Azra Ahmić* iD , Selma Smajlović** iD

Abstract

Being exposed to tempestuous transformations and complexities in environment, contemporary enterprises are characterized by grand extent of suspense, unsteadiness and changeability. Increased number of risks, especially with regard to managing human resources, do not cause only temporarily troubles for standard business activities, but can be much more devastating – calling into question company's survival. The true objective of this paper was to discover if shaping human resource management in a sustainable manner (with long-term perspective) leads to human resource risk reduction. Grounded on the collected data by 65 human resource managers, hierarchical regression approach was employed as the analysis technique. The research outcomes disclosed that sustainable human resource management has a significant and positive relationship with human resource risks reduction. Multitude contributions were made by this study – initially, it validated of the sustainable human resource management research instrument; secondly, it upgraded the literature on sustainable human resource management and human resource risks; and finally, it empirically proved that there is a positive and significant relationship between sustainable human resource management and human resource risks reduction.

Keywords: sustainable human resource management, human resource management, human resource risks

JEL: M14, M54, O15, Q01, D81

1. Introduction

Certainly, the firm's path to transform into a sustainable business starts with applying socially responsible work practices into everyday activities. Ehnert *et al*. (2014) emphasized the social side regarding human resource management (HRM), arguing that as the population ages, occupational health issues become more prevalent, and human resources (HR) become scarce, HRM sustainability turns out to be essential for organizations. The central focus on people is also underlined on a wider scale within 17 sustainable development goals (SDG) adopted by the UN General Assembly in 2015, given that SDG strive to promote suitable policies and settings that encourage economic growth in a sustainable way, an efficient allocation of resources, proper working conditions and prosperous societies (United Nations, General Assembly, 2015). Considering the business aspect, HRM has a crucial role since SDG is designed to create sustainable economies that enhance possibilities for employment – especially for younger generations and women; and to produce on institutional levels productive employees and socially responsible citizens with organizations' missions focus on employees' good education, health, skills fostering and awareness (United Nations, General Assembly, 2015).

Therefore, HRM plays a pivotal role in dealing with constant challenges related to providing sustainable ("economical, social and green") employees' recruitment, efficient development and retainment in the long-run. HRM sustainability has recently faced more difficult challenges due to global economy susceptibility to the COVID-19 pandemic and further socioeconomic perplexity, changeability and dynamism (prompted with the war in Ukraine, increased inflation and migrations), which has exposed organizations to numerous serious risks. Even though it has been more than two decades since the management literature extensively explored risk management, risks related to human resources have not received as much attention (Melhem, 2016, p. 1). Additionally, it is demonstrated that since the COVID-19 crisis began, the societal risks have worsened the most – such as "social cohesion

* International University of Sarajevo, Faculty of Business and Administration, Bosnia and Herzegovina, azraahmic30@gmail.com
** University of Tuzla, Faculty of Economics, Bosnia and Herzegovina, selma.smajlovic@untz.ba

erosion, livelihood crises and mental health deterioration" (World Economic Forum, 2022). Furthermore, KPMG survey (2020) showed that 1300 human resource leaders worldwide have been confronting more intensified challenges than ever before as a consequence of the COVID-19 pandemic, which led to modified priorities and skills (almost half (47%) of leaders took measures to protect employee experience and wellbeing; as support to remote working, 38% of HR leaders helped in developing novel leadership/management skills; and 34% of HR leaders further improved/redefined the culture for highlighting agility, virtual working and mindset for digital technology).

One of the most serious risks that Bosnia and Herzegovina (BiH) business sphere copes with is the enlarging "brain-drain phenomenon", pertaining to proficient, qualified and experienced workers leave their home country in search of better possibilities abroad. Apart from the highlighted problem of BiH workers emigrating to foreign lands, there are myriad of inside-firm human resource issues (such as: inadequate employer branding; unsuitable workers qualifications; inefficient selection process; omission of HR department from strategic planning) that require a sustainable approach of HRM. Additionally, in the course of COVID-19, risks rapidly shifted towards human resources. Two particular groups of key stakeholder problems emerged in management with respect to BiH: (1) working from home associated issues and (2) concerns over work security (Ahmić & Skopljak, 2021, p. 156). In light of the present circumstances in BiH, firms need to determine and reduce principal severe risks related to human resources in an effort to attract, develop and retain top workers by means of bettered HR management activities.

Despite the fact that HRM related to sustainability as well as risk management has attracted growing attention in academic circles, a direct empirical relationship has still not been established between sustainable HRM (SHRM) and risk management in HRM (or personnel management systems risks).

A majority of foregoing studies were oriented to HRM discussions regarding risks and its theoretical explanations (Becker & Smidt, 2016), while some studies investigated exploratory relationship between human resource factors (such as: employees' education, experience and skills) on risk management (Melhem, 2016, p. 3), or an influence of green HRM practices on certain sustainability issues (such as: occupational health/safety of workers) (Malik *et al.*, 2020). To fill an existing research gap, this study attempts to gather empirical evidence that SHRM has a significant and positive relationship with human resource risk reduction within enterprises in BiH.

The next section explains literature review concerning SHRM, human resource risks and the relationship between two segments. Additionally, in order to carry out this research, methodologies are outlined, research concept is assembled and hypothesis formulated. Afterwards, pivotal findings are displayed, discussed and coupled with implications both theoretically and practically. In the final compartment, core conclusions, research constraints and guidance for future research are summed up.

2. Literature review

The literature review supplies an underlying research construct on major topics in cross-sectional study, between SHRM and human resource risk reduction.

For achieving business sustainability, it is greatly meaningful to recognize and handle diverse risks related to human resources throughout the company. Real options theory can assist in managing the uncertainties and risks linked to investing in human potential due to the random nature of investing choices (Leiblein, 2003, p. 948).

Furthermore, it is recommended by the real options theory that human resources, as one of the organizational capabilities, should be proactively developed by organizations, so in case of surprising changes firms are capable of quick responding (Kogut and Kulatilaka, 2001, p. 745).

The capabilities described here exemplify "options". By leveraging options, organizations diminish marketplace costs, produce fresh learning opportunities, gain flexibility, and manage risks and uncertainties more effectively (Bhattacharya and Wright, 2005).

2.1 Sustainable HRM

The definition of SHRM can be depicted as: "creating in the long-term socially and economically efficient ways of recruiting, developing, retaining, and disengaging employees" (Zaugg *et al.*, 2001, p. 7). More concisely, the notion SHRM can be depicted as the conceptual design with permanent solutions that is sustainable in its core, pro-socioecologically oriented and economically viable in the long-run regarding all HR business practices – from recruiting, developing to retaining great and needed employees. Organizations should implement pro-sustainable policies, practices, and processes that promote an environmentally friendly workplace for the benefit of employees, the environment, society and the business as a whole. Sustainable recruitment depends on long-term thinking - or in particular, accessibility of human resources in the approaching timeframe, taking into account also their needs and aims for eradicating "hire and fire" procedure (Stankevičiūtė & Savanevičienė, 2018, p. 8). It is essential that sustainable recruitment integrates aspects of sustainability in succeeding parts: policy for recruiting that complies with regulatory rules (Stofkova & Sukalova, 2020, p. 3); employees' contract/job description and intrinsic directing principles (Jepsen & Grob, 2015, p. 170). In the matter of recruiting entry form, Pisarska and Iwko (2021, p. 12) found out that firms with sustainability orientation choose for the next recruitment stage only those candidates whose mission, vision and values are complement with the firm values (like: taking care of natural surroundings and resolving social issues); simultaneously expecting from them to apply business ethics on a daily basis ("honesty, respect for others, loyalty") – addressed on the job offer. Additionally, these authors stressed the significance of boosting reliability by utilizing evaluation tools that are well-accepted and verified; ameliorated decision-making during selection stage; and reduced retesting (Jepsen & Grob, 2015, p. 172). As a part of sustainable HRM, a sustainable recruitment policy needs to further ensure equal chances for employment; strengthen a safe, healthy, more diverse workplace (Järlström *et al.*, 2016). For this purpose, procedures for HRM selection shall involve diversity and evenness in chances for every applicant – and wanted information can be easily gathered from firm's corporate social responsibility list (Berber et. al, 2014, p. 361). The recruitment process should likewise incorporate attraction motivational factors - which influence talents' decision to accept a job offer from a company (such as: "good salary, company goodwill, good job offer with benefits package, strong firm's brand") (Ahmić & Čizmić, 2021, p. 214). From the perspective of job applicants, incorporating corporate social responsibility practices within the company (by providing well-being and taking care of employees, other stakeholders and wider society) also enhances an organization's reputation and attraction as a desirable workplace (Agnihotri & Bhattacharya, 2021). This is particularly true for "the Z generation" where today's youth belong, who regard more attractive employers, who have incorporated eco-social responsibilities into their business concept (Bustamante *et al.*, 2021). Further, firms shall also put as imperative to carry through organization aptly-designed and effectual onboarding practices (Čizmić & Ahmić, 2021, p. 13).

Moreover, efforts should be made to ensure that sustainability goals are connected with effective development/training plans and methods for managers/workers (for instance: taking training sessions/workshops, building forward-looking skills, job rotations, a transfer of experience) (Stankevičiūtė & Savanevičienė, 2018, p. 8). In order to achieve better sustainable (environmental) organizational outcomes, it is crucial to focus on advancing skills, abilities and behavior that is in line with eco-protection (Lo *et al*. 2012, p. 2933). For developing exceptional talents (or sustainable staff in a general sense), the next considerable actions shall be applied, „performance appraisal; talent mapping; development and learning need analysis; implementation of development and learning; and talent review" (Wahyuningtyas, 2015, p. 386). Among other elements, substantial for performing steps intended for environmental protection, Gollan and Xu (2014) addressed lifelong orientation towards education, professional development, trainings on organizational level and implementation of teamwork development procedures. It is also essential to tailor

education and training programs to the individual needs of every company-talented employee, because constant learning broadens beneficial knowledge and skills that are in high demand (Ahmić & Trgo, 2021, p. 39).

When it comes to sustainable employee retention, a largely meaningful feature of HRM goes to employee engagement – perceived through the lens of "better employee satisfaction, employee identification, employee commitment, employee loyalty, and employee performance" (Kumar & Pansari, 2015, p. 68). Besides upgrading employee engagement, managers should also implement moving work motivational elements (like – "comfortable work environment; enough autonomy and creativity in working and deciding; work-life balance; recognition/implementation of employees' ideas") due to their importance in retaining talents (Ahmić & Čizmić, 2021, p. 214). Based on the research of Stankevičiūtė & Savanevičienė (2018, p. 8), there are several additional vital sustainable retention components: employee-managers-employer social dialogue; the participation of workers (the contribution they make to the attainment of organizational goals); and cooperation among employees (incorporating "good relations between managers and workers; and good/efficient teamwork").

2.2 Human resource risks

Human resources, as the extremely delicate, precious and essential driving resources of enterprises, is more susceptible to diverse environmental inner/outer impacts than other resources, producing by this way regular HRM practices and daily business operations diverging from fulfilling anticipating goals. Some of the risks that each enterprise is fraught with regarding managing human resources, can be illustrated as: sudden talent leaving, training fiasco or recruitment/selection unsuccess. Risks associated with human resources can be depicted as the likeliness of disadvantageous happenings or menaces becoming reality on account of bad management ("planning, decision-making, organizing, monitoring"). According to Flouris and Yilmaz (2010, p. 25) risks management linked to human-factor denotes systematical and proactive process of ascertaining and appraising miscellaneous human resources risks (human constraints/capabilities) and afterwards developing appropriate managing HR strategies.

The categories of human resource risks (HR risks) differ according to various authors. Human resource risks may occur on a strategic level concerning issues in maintaining alignment of managing human resources, firm's structure and overall strategy (Taslimi *et al.*, 2013). Strategical HR-related risks can involve: losing personnel (key workers); an absence of organizational coordination-an inability to synergize; deficiencies in communication; and risks associated with non-compliance (Kermani *et al.*, 2021, p. 10). Risks may likewise occur on an operational level as a consequence of unsatisfactory or wrong business systems, employed persons, inner work processes or events outside the organization (Taslimi *et al.*, 2013). Risks connected to human resources can cause manifold costs for an organization such as expenses linked to workers turnover, the claims rules, health/safety costs or moving expenses, which affirms its relations to financial risks (Kermani *et al.*, 2021, p. 10). Additionally, increased costs in talent introducing procedure and their improper development represent serious HR-linked risks (Alashti & Khoshnood, 2012). HR risks also encompass safety/health risks in the workplace, viewed through probability of getting physical injuries due to detrimental happenings in the working environment (Pandey, 2013). One of the examples can be the availability of medical care in the workplace linked to protecting workers from hazards/risks (embracing the biological, chemical or physical ones), which affect them directly or indirectly. Furthermore, Hudáková and Dvorský (2018, p. 550) observed HR risks in a more general way, including: "large worker fluctuation rate, deficiency in employee qualifications, errors made by workers (accidents at work) and discipline/moral decline at work."

## 2.3 Sustainable HRM connection to human resource risks

Although risk management has been extensively discussed in the management

literature over the last two decades, there has been a lack of attention paid to risks associated with human resources (Melhem, 2016, p. 1). Prior studies were primarily oriented towards HRM discussions regarding risks and its theoretical explanations (Becker & Smidt, 2016). Some other studies prospected exploratory relations between HRM factors (such as: managers' education level, experience and skills) on risk management (Saravanakumar & Bhardwaj, 2016, p. 56). The authors uncovered that managers' skills, years of experience, and education (observed through service quality) have a positive impact on risk management (Saravanakumar & Bhardwaj, 2016, p. 56). There is no study yet that explored relationship between SHRM on human resource risk reduction. Some studies explored an impact of green HRM practices on certain sustainability issues, like the one by Malik *et al.* (2020, p. 14) who found out that green recruitment and selection positively affect better occupational health/safety of workers. This study seeks to fill a research gap by gathering empirical evidence that there is a significant and positive relation between SHRM and human resource risk reduction in BiH firms.

3. Conceptual construction and research hypotheses

Throughout this paper, we aimed to investigate the relationship between SHRM and human resource risk reduction within the BiH business context. Using the main aims as a guide, a cross-sectional conceptual construction was formed as a groundwork for the empirical examination (Figure 1.).

Figure 1. *Conceptual construction*
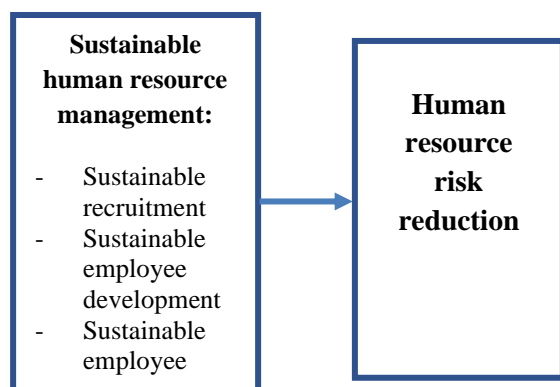
Source: Authors' work

Basically, the conceptual construction is composed of two segments: SHRM (as independent variable) and its relation to diverse human resource risks (as dependent variable). The three central parts of SHRM according to Ahmić (2022, p. 41) are: "sustainable recruitment; sustainable employee development; and sustainable employee retention". Concerning human resource risks, diverse HR risks as well as safety risks were included as part of this variable – proposed by Hudáková and Dvorský (2018, p. 550).

Taking into account the conceptual construction outlined above, we forged the next research hypotheses:

The main hypothesis:
H1: There is a positive and significant relationship between SHRM and human resource risk reduction within enterprises.

Subsidiary hypotheses:
H1: There is a positive and significant relationship between sustainable recruitment and human resource risk reduction within enterprises.
H2: There is a positive and significant relationship between sustainable employee development and human resource risk reduction within enterprises.
H3: There is a positive and significant relationship between sustainable employee retention and human resource risk reduction within enterprises.

4. Methodology

4.1 Sample description

In this cross-sectional study, an emphasis was placed on human resource managers in BiH companies - which displayed sustainability/green business orientation on their web sites, social media and other marketing activities. The list of companies with sustainable orientation were gathered by assistance of a research marketing agency in Sarajevo, which gave us the list of sustainable firms in BiH for research purposes. We used a questionnaire as the research instrument, which we e-mailed to 90 human resource managers and we received back 65 completed

questionnaires (72.22% rate of response). Following is a table containing an overview of human resource managers' profiles (Table 1.).

Table 1. *Sample depiction*

Variables		Frequency	Percentage
Gender	Female	42	65%
	Male	23	35%
Age	20-30	14	21%
	31-40	29	45%
	41-50	17	26%
	51-60	5	8%
Level of education	Bachelor degree	28	43%
	Master degree	37	57%
Current job experience	1-3 years	15	23%
	4-6 years	27	42%
	> 6 years	23	35%

Source: Authors' work

Females dominated the sample of HR managers (65%), whereas 35% were male HR managers. In relation to the groups based on age, the majority of HR managers were in their 30s (45%), 26% of HR managers belonged to the group of 41-50 years old, 21% of HR managers were in their 20s, and only 8% were in their 50s.

In terms of education, HR managers were all highly educated (57% had a master's degree, while 43% had a bachelor degree).

Concerning the years of current job experience, the greatest number of HR managers had amongst four to six years of experience (42%), 35% of HR managers had more than six years of job experience, whilst 23% had between one and three years of current job experience.

4.2 Reliability and explanation of research instrument

We garnered the data for this study using a questionnaire crafted by the authors, which incorporated three sections.

Section one in this questionnaire comprised information on SHRM aspects: "sustainable recruitment; sustainable employee development; and sustainable employee retention" (Ahmić, 2022, p. 41). Seventeen units of SHRM were formed on the fundament of offered conceptual composition presented by Ahmić (2022, p. 41). Section two of this questionnaire contained information on human resource risks.

Seven units of human resource risks were constructed in total, as a combination of human resource and safety risks proposed by Hudáková and Dvorský (2018, p. 550).

Section three of this questionnaire contained personal and professional information about the respondents (human resource managers).

An assessment of the SHRM units and human resource risks (HR risks) units was carried out utilizing the five-point rating system ("1 – Completely disagree; 5 – Completely agree").

We analyzed gender-related and level of education variables in a binominal way (for instance "1-Female; 2-Male").

Other control variables (age groups and current job experience) were coded applying numbers (to illustrate for age groups – "20-30=1; 31-40=2; 41-50=3; 51-60=4").

Table 2. *An overview of the research instrument*

Constructs	Code	Items
		Independent variable – Sustainable HRM
Sustainable recruitment	SR_1	We are oriented towards determining the accessibility of human resources in the long-run, taking into account their needs as well
	SR_2	We apply recruiting policy compliant with sustainability and regulatory requirements
	SR_3	Our inside-firm instructing principles include sustainability matters
	SR_4	We align contracts for workers and job descriptions with sustainability aims
	SR_5	We provide equal/fair chances for employment and advance diversity, health and safety of employees
	SR_6	We embed sustainability in progressive employee selection, endorsed appraisal tools and through reduction of retesting
	SR_7	We apply attraction motivational factors to attract great workers ("good salary, company goodwill, good firm's offer, company brand, occupational safety")
	SR_8	We implement efficacious and sustainability-aligned onboarding practices
Sustainable employee development	SD_1	We are oriented towards continual trainings/education
	SD_2	We assess employees' performances and map their talents
	SD_3	We analyze future sustainability staff's learning/development needs
	SD_4	We implement learning and development methods for individuals/teams aligned with sustainability aims and develop feedback for applied programs
	SD_5	We utilize tailored sustainability approaches and plans for personnel' development/training (for instance, job rotations, workshops/training programs, transfer of experience)
Sustainable employee retention	RT_1	We strive to improve employees engagement ("employee satisfaction, identification, commitment, loyalty and performance evaluation")
	RT_2	We apply constructive and effective social dialog and communication amongst managers-workers in everyday business
	RT_3	We build good workers' collaborations ("teamwork and their relations with managers")
	RT_4	We apply suitable work motivational factors for personnel ("comfortable work environment; work-life balance; enough autonomy and creativity in working and deciding; flexibility in work; promotion opportunities")
		Dependent variable – Human resource risks
		Since we have been oriented towards sustainability, we have reduced:
Human resource risks	RI_1	Large worker fluctuation rate
	RI_2	Inadequate worker qualifications
	RI_3	Errors made by workers (accidents at work)
	RI_4	Discipline/moral decline at work
	RI_5	Information misuse
	RI_6	Lack of safety ("Safety and health in the workplace")
	RI_7	Property law criminal offences
		Control variables
Gender		Female, Male
Age		"20-30; 31-40; 41-50; 51-60"
Level of education		"Bachelor's degree; Master's degree"
Current job experience		"1-3 years; 4-6 years; More than 6 years"

Source: Authors' work

Predicated on employing Cronbach's alpha instrumentation for testing, a reliability assessment was conducted for each of four scales (Table 3.).

Table 3. *Insights into construct reliability*

Variables	Number of items	Cronbach Alpha
Sustainable recruitment	8	0.855
Sustainable employee development	5	0.842
Sustainable employee retention	4	0.901
Human resource risks	7	0.795

Source: Authors' work

Every construct reliability and intrinsic consistency was satisfactory in the SHRM and human resource risk structures, on the basis of the measured alpha values that overstepped 0.7 margin (table 3.).

5. Results

In order to analyze the gathered data, we applied the following approaches: exploratory factor analysis, confirmatory factor analysis as well as hierarchical regression analysis.

5.1 Exploratory factor analysis

For the purpose of examining the data structure' validity and extracting components of the SHRM structure, varimax rotations were employed as part of an exploratory factor analysis. As indicated by the results of each test, Kaiser-Meyer-Olkin (more than 0.5) along with Bartlett's test (a 1% level of statistical significance), the data proved to be appropriate for carrying out factor analysis. In five iterations in total, Varimax rotation derived three factors of the SHRM structure, showing eigenvalues surpassing one and average variance explicated at 70.15, which were defined as: (1) sustainable recruitment (SR); (2) sustainable employee development (SD); and (3) sustainable employee retention (RT) (table 4.).

Table. 4. *Factor analysis of the SHRM structure*

Dimensions	Variables	Components		
		SR	SD	RT
Sustainable recruitment (SR)	SR_1	0.915		
	SR_2	0.823		
	SR_3	0.844		
	SR_4	0.798		
	SR_5	0.822		
	SR_6	0.775		
	SR_7	0.909		
	SR_8	0.814		
Sustainable employee development (SD)	SD_1		0.881	
	SD_2		0.902	
	SD_3		0.731	
	SD_4		0.766	
	SD_5		0.803	
Sustainable employee retention (RT)	RT_1			0.811
	RT_2			0.783
	RT_3			0.767
	RT_4			0.802
Eigenvalues		3.468	2.354	1.172
% explained variance		34.993	23.407	11.751
Cumulative % explained variance		34.993	58.400	70.151

Source: Authors' work

In view of the fact that every factor relating to the SHRM got values above 0.50, every factor was kept for further exploration.

5.2 Confirmatory factor analysis (CFA) and discriminant validity

As a follow-up to exploratory factor analysis (EFA), confirmatory factor analysis (CFA) aids in identifying the dataset factor structure and in surmounting certain EFA constraints. Commonly, EFA relies on data contingent upon several of subjective judgements that can be initiated by the explorer. As a result of utilizing CFA, explorers can accomplish effective factor structure cross-validation that strengthens and stabilizes factor results. All factors (sustainable recruitment; sustainable employee development; and sustainable employee retention) were merged jointly and afterwards CFA was carried out. The outcomes of CFA involve particular fit indexes. The model fit was tested by employing "Maximum Likelihood Method". Premised on our findings, we selected the following indicators: "normed chi-square (CMIN/df); an absolute fit indicator (RMSEA – root mean square error of approximation); CFI – as comparative fit indicator; and GFI as goodness of fit index". In Table 5, we illustrated the fit indicators for the model. In accordance with the factor structure of the model, there is a good fit since the discovered chi-square/df value is equal to 2.191 (it is less than the upper suggested 3.0 value and fulfills the criterion). Fit indicators: CFI=0.958 (higher than 0.90 value); GFI=0.921 (higher than 0.90 value); and RMSEA=0.05 (less than 0.06) also comply with the specified criterion.

Table 5. *Model fit measurements for CFA*

Fit indicators	Discovered value	Suggested value	Source
CMIN/df	2.191	In between 1 and 3	"Kline (1998)"
CFI	0.958	> 0.90	"Bentler and Bonnet (1980)"
GFI	0.921	≥ 0.90	"Bentler and Bonnet (1980)"
AGFI	0.907	> 0.90	"Hu and Bentler (1999)"
SRMR	0.048	< 0.08	"Hu and Bentler (1999)"
RMSEA	0.05	< 0.06	"Steiger (2007)"

Source: Authors' work

Regarding discriminant validity, it refers to what degree one construct is diverse in comparison to other structures. To test discriminant validity, the average variance extracted (AVE) values are paralleled to each construct's squared correlation; and in the light of the results, every pair of the three dimensions displayed a larger AVE in contrast to its squared correlation (Table 6). Therefore, the scale was found to have a valid discriminant analysis.

Table 6. *Discriminant validity*

Examined variables	1	2	3
Sustainable recruitment (SR)	0.71†		
Sustainable employee development (SD)	0.40	0.70†	
Sustainable employee retention (RT)	0.35	0.42	0.72†

Note: † = The average variance extracted; the remaining entries are matrices of squared correlations.
Source: Authors' work

5.3 Hypotheses testing

Aimed at ascertaining if relations are reliable and statistically significant between independent variables (SHRM components: "sustainable recruitment; sustainable employee development; and sustainable employee retention"), control and dependent variable (human resource risks), the hierarchical regression approach was employed. Founded on the hierarchical regression approach that encompasses two steps, the results are outlined in Table 7. An initial step of the study comprised control variables: "gender, age, level of education and current job experience." Only one variable (current job experience (β=0.225; p<0.05) out of four in total, showed a significant and positive relation with human resource risk reduction. The variation of

human resource risks is clarified by this one factor by 12.5% (R2=0.125).

In the second step, we incorporated three elements of SHRM: "sustainable recruitment; sustainable employee development; and sustainable employee retention". The analysis of the second step uncovered that the SHRM dimensions represent predictors that have a significant and positive relationship with human resource risk reduction (sustainable recruitment (β=0.323; p<0.001); sustainable employee development (β=0.215; p<0.05); and sustainable employee retention (β=0.337; p<0.001)). SHRM factors, as part of the second step, explicated the variation of human resource risk reduction by 41.7% (ΔR2=0.417).

Table 7. *Hierarchical regression approach outcomes on the relationship between SHRM and human resource risk reduction*

Variables	β	R^2	ΔR^2	F	Sig.
Step 1 (Controls)		0.125	0.125	8.283	0.005
Gender	0.033				
Age	0.051				
Level of education	0.101				
Current job experience	0.225**				
Step 2 (SHRM)		0.542	0.417	28.204	0.001
Gender					
Age	0.021				
Level of education	0.042				
Current job experience	0.088				
Sustainable recruitment	0.156				
Sustainable employee development	0.323*** 0.215**				
Sustainable employee retention	0.337***				

Notes: n = 65; ** Statistically significant at 5%; *** Statistically significant at 1%.
Source: Authors' work

On the basis of regression findings we can conclude that sustainable recruitment, sustainable employee development and sustainable employee retention show a positive and significant relationship with human resource risk reduction. Therefore, the main hypothesis is confirmed entirely "There is a positive and significant relationship between SHRM and human resource risk reduction within enterprises."

6. Discussion

Throughout this study, the key aim was to determine whether SHRM has a significant and positive relationship with human resource risk reduction. For analyzing results, hierarchical regression was employed in two steps. In the initial step of the study, the control variable - current job experience displayed a significant and positive relation with human resource risk reduction. Concerning human resource risks,

one predictor (current job experience) explained 12.5% of the variation in human resource risk reduction. More particularly, the longer the current job experience, the lesser are human resource risks within enterprises. Thus, HR managers who accumulated more years of job experience by dealing with diverse cases in managing employees can greatly reduce risks related to human resources. This finding can be put in a relation with the one by Saravanakumar & Bhardwaj (2016, p. 56), who discovered that managers' years of experience and education have a positive impact on risk management. As the second step, we uncovered through hierarchical regression analysis that all three dimensions of SHRM ("sustainable recruitment; sustainable employee development; and sustainable employee retention") display a significant and positive relationship with human resource risk reduction. In terms of variance changes ($\Delta R2=0.417$), SHRM accounts for 41.7% of human resource risk reduction. Thus, HR managers who incorporated sustainability within their recruitment, employee development and retention phase can largely reduce diverse human resource risks within enterprises. Firstly, they influence on worker fluctuation rate ("voluntary turnover") reduction, which represents one of the key performance indicators (KPIs) and the most serious risks every HR department has to deal with (the fear of losing great employees, talents and managers – which brings additional recruiting/training costs). Comparing to other explorations, He *et al.* (2021) uncovered that socially responsible HRM (as narrower perspective on HRM than when it is sustainable) has a negative and significant influence on dismissals in firms during COVID-19. Furthermore, SHRM reduces inadequate worker qualifications (inadequate employees' knowledge and needed skills on the workplace), which also enhances overall organization competitiveness. Additionally, sustainable HR management diminishes errors made by workers (accidents at work), as well as other operational issues – such as lack of safety ("safety and health issues in the workplace"). It is successfully done by embedding efficacious and befitting sustainability health/safety policies and "in place"

measures. Similarly, Yong *et al.* (2019) discovered in their study that green training and green recruitment positively influence on enhancing employees' safety/health at work and reduction of environmental accident fines. Moreover, our study showed that SHRM likewise reduces discipline/moral decline at work, keeping their employees enthusiastic and self-assured in attributed task completion. Other HR-legal-related risks ("information misuse and property law criminal offences") can be likewise greatly decreased by incorporating sustainable system (monitoring and IT support for preventing these issues) into human resource recruitment, employee development, and retention phase.

In more detail, if recruitment phase is aligned with sustainability (by applying for instance: orientation in the long-run towards determining the accessibility of human resources; sustainability compliant recruiting policy, inside-firm instructing principles, job descriptions, equal/fair chances for employment, progressive employee selection, attraction motivational factors, and efficacious onboarding practices), human resource risks can be greatly reduced. Another important element in reducing human resource risks is sustainable employee development (viewed through orientation towards continual trainings/education aligned with sustainability aims; employees' performance assessment; talents mapping; analysis of future sustainability staff learning/development needs; utilization of tailored sustainability approaches and plans for personnel' development/training). Moreover, if employee retention is aligned with sustainability (by focusing on improving employee engagement; applying constructive/effective social dialog and communication amongst managers-workers; building good workers collaborations; applying suitable work motivational factors for personnel), it can significantly reduce human resource risks.

7. Conclusions

The research interests in this study included disclosing if SHRM shows a positive and

significant relationship with human resource risk reduction. In compliance with the study outcomes, companies that apply sustainable recruitment, sustainable employee development, and sustainable employee retention demonstrate a significant and positive relationship with diverse human resource risk reduction. In more detail, SHRM reduces: large worker fluctuation rate; inadequate worker qualification; errors made by workers; discipline/moral decline at work; information misuse; lack of safety; and property law criminal offences.

Besides advancing theory of HRM, an instrument for measuring sustainable human resources management was validated. Furthermore, the findings of this particular research gave empirical approval that SHRM (its every component: sustainable recruitment; sustainable employee development; and sustainable employee retention) has a significant and positive relationship with human resource risk reduction. This further denotes that sustainability brings an enormous value when incorporated into HRM, not only through enhancing human resource management practices, but more importantly by diminishing diverse human resource risks – one of the greatest challenges for every enterprise in contemporary business world, enabling them to thrive – achieve outstanding organizational performances and be competitive in the long-run. In addition, this research is intended to assist as a driving force for managers to begin with upgrading and innovating in a sustainable way their recruiting policy, inside-firm instructing principles, job descriptions, onboarding practices, trainings/educations and motivational factors.

In the future, research could be conducted to encompass a broader sample of human resource managers and specific human resource risks (risks related to legal security or personnel planning/development risks) in diverse countries or certain sectors. In the order to overcome study limitations concerning cross-sectional survey design, other types of risks (operational, financial or market risks) might be put in a relation with SHRM. Besides that, in depth interviews and various qualitative approaches may be utilized to assemble more new measurements concerning SHRM and human resource risks.

References

1. Agnihotri, A. & Bhattacharya, S. (2021) CSR fit and organizational attractiveness for job applicants. *International Journal of Organizational Analysis*. 30(6), pp. 1712-1727.
2. Ahmić, A. (2022) Business Model for Continuous Enterprise Sustainability. *Management and Business Research Quarterly*. 22, pp. 33-50.
3. Ahmić, A. & Čizmić, E. (2021) Motivational factors and retention of talented managers. *Business Systems Research*. 12(2), pp. 200-220.
4. Ahmić, A. & Skopljak, L. (2021) Problems and responses of small and medium enterprises in Bosnia and Herzegovina to COVID-19 related to the management of key stakeholders. *In 21 International Online Conference*. Travnik, 16th and 17th December 2021. Travnik: International University Travnik. pp. 149-159.
5. Ahmić, A. & Trgo, A. (2021) Talents' Learning and Development Impact on their Retention within the Companies in Bosnia and Herzegovina. *Pregled – periodical for social issues*. 62(3), pp. 23-43.
6. Alashti, A. T. & Khoshnood Z. (2012) Pre-Loss Review; Evolution in the principles of liquidity risk management in the shadow of the financial crisis. *Economic News*. 138(10), pp. 122-123.
7. Becker, K. & Smidt, M. (2016) A risk perspective on human resource management: A review and directions for future research. *Human Resource Management Review*. 26(2), pp. 149-165.
8. Bentler, P. M. & Bonnet, D. C. (1980) Significance tests and goodness of fit in the analysis of covariance structures. *Psychological Bulletin*. 88(3), pp. 588-606.
9. Berber, N., Šušnjar, G.Š., Slavic, A. & Baošić, M. (2014) Relationship between Corporate Social Responsibility and Human Resource Management—as New

Management Concepts—in Central and Eastern Europe. *Engineering Economics.* 25(3), pp. 360–369.

10. Bhattacharya, M. & Wright, P. M. (2005) Managing human assets in an uncertain world: applying real options theory to HRM. *International Journal of Human Resource Management.* 16(6), pp. 929-948.

11. Bustamante, S., Ehlscheidt, R., Pelzeter, A., Deckmann, A. & Freudenberger, F. (2021) The Effect of Values on the Attractiveness of Responsible Employers for Young Job Seekers. *Journal of Human Values.* 27(1), pp. 27–48.

12. Čizmić, E. & Ahmić, A. (2021) The major barriers in retaining talents in developing countries – from the perspective of successful managers. *Sarajevo Business and Economics Review.* 39, pp. 8-26.

13. Ehnert, I., Harry, W. & Zink, K.J. (2014) Sustainability and HRM. *In Sustainability and Human Resource Management.* Springer: Berlin/Heidelberg, Germany, pp. 3–32.

14. Flouris, T. & Yilmaz, A. K. (2010) The Risk Management Framework to Strategic Human Resource Management. *International Research Journal of Finance and Economics.* No. 36, pp. 25-45.

15. Gollan, P.J. & Xu, Y. (2014). Fostering corporate sustainability. In *Sustainability and Human Resource Management*; Springer: Berlin/Heidelberg, Germany. pp. 225–245.

16. Hu, L. T. & Bentler, P. M. (1999) Cut-off criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modelling: A Multidisciplinary Journal.* 6(1), pp. 1-55.

17. Hudáková, M. & Dvorský, J. (2018) Assessing the risks and their sources in dependence on the rate of implementing the risk management process in the SMEs. *Equilibrium: Quarterly Journal of Economics and Economic Policy.* 13(3), pp. 543–567.

18. Järlström, M., Saru, E. & Vanhala, S. (2016) Sustainable human resource management with salience of stakeholders: A top management

perspective. *Journal of Business Ethics.* 152, pp. 703–724.

19. Jepsen, D. M. & Grob, S. (2015) Sustainability in Recruitment and Selection: Building a Framework of Practices. *Journal of Education for Sustainable Development.* 9(2), pp. 160–178.

20. Kermani, A. G., Beheshtifar, M., Montazery, M. & Arabpour, A. (2021) Human Resource Risk Management Framework and Factors Influencing It. *Propósitos y Representaciones.* 9 (SPE1), e902, pp. 1-14.

21. Kline, R. B. (1998) Software review: Software programs for structural equation modelling: Amos, EQS, and LISREL. *Journal of Psychoeducational Assessment.* 16(4), pp. 343-364.

22. Kogut, B. & Kulatilaka, N. (2001) Capabilities as real options. *Organization Science.* 12(6), pp. 744-758.

23. KPMG (2020) The Future of HR in the New Reality: It's time to start playing the long game. Available from: https://home.kpmg/xx/en/home/insig hts/2020/10/the-future-of-hr-in-the-new-reality.html

24. Kumar, V. & Pansari, A. (2015) Measuring the Benefits of Employee Engagement. *MIT Sloan Management Review.* 56(4), pp. 66-72.

25. Leiblein, M. J. (2003) The choice of organizational governance form and performance: predictions from transactions cost, resource-based, and real options theories. *Journal of Management.* 29(6), pp. 937-961.

26. Lo, S. H., Peters, G. J. Y. & Kok, G. (2012) A review of determinants of and interventions for proenvironmental behaviors in organizations. *Journal of Applied Social Psychology.* 42(12), pp. 2933-2967.

27. Malik, S. Y., Cao, Y., Mughal, Y. H., Kundi, G. M., Mughal, M. H. & Ramayah, T. (2020) Pathways towards Sustainability in Organizations: Empirical Evidence on the Role of Green Human Resource Management Practices and Green Intellectual Capital. *Sustainability.* 12, pp. 1-24.

28. Melhem, I. I. B. (2016) Impact of the Human Resources on the Risk

Management and the Company Performance. *International Journal of Economics and Management Sciences*. 5(2), pp. 1-5.

29. Pandey B. (2013) Understanding of occupational health and safety risks and participatory practices in small businesses. Doctoral Dissertation. Massey University.

30. Pisarska, A.M. & Iwko, J. (2021) The Aspects of Corporate Social Responsibility in the Job Candidates' Recruitment and Selection Processes in a Teal Organization. *Sustainability*. 13, 13175.

31. Saravanakumar, R. & Bhardwaj, A. (2016) Impact of the human resources on the risk management and competitiveness of the company performance. *International Journal of Advanced Computing and Electronics Technology*. 3(3), pp. 52-58.

32. Stankevičiūtė, Ž. & Savanevičienė, A. (2018) Designing Sustainable HRM: The Core Characteristics of Emerging Field. *Sustainability*. 10, pp. 1-23.

33. Steiger, J. H. (2007) Understanding the limitations of global fit assessment in structural equation modelling. *Personality and Individual Differences*. 42(5), pp. 893-898.

34. Stofkova, Z. & Sukalova, V. (2020) Sustainable Development of Human Resources in Globalization Period. *Sustainability*. 12, pp. 1-14.

35. Taslimi M. & Raei R. & Farzinvash A. & Barghi M. (2013) Designing and explaining the competency model of the national project managers with a focus on risk. *Public administration*. 16(5), pp. 57-78.

36. United Nations, General Assembly (2015) *Transforming Our World: the 2030 Agenda for Sustainable Development*. Available from: http://www.un.org/en/development/d esa/population/migration/generalasse mbly/docs/globalcompact/A_RES_70_1_ E.pdf.

37. Wahyuningtyas, R. (2015) An integrated talent management system: challenges for competitive advantage. *International Business Management*. 9(4), pp. 384-390.

38. World Economic Forum (2022) *The Global Risks Report 2022. 17th Edition*. Available from: https://www3.weforum.org/docs/WEF _The_Global_Risks_Report_2022.pdf

39. Yong, J. Y., Yusliza, M-Y., Ramayah, T., Jabbour, C. J. C., Sehnem, S. & Mani, V. (2019) Pathways towards sustainability in manufacturing organizations: Empirical evidence on the role of green human resource management. *Business Strategy and the Environment*. 29(1), pp. 212-228.

40. Zaugg, R. J., Blum, A., & Thom, N. (2001). *Sustainability in Human Resource Management. Evaluation Report. Survey in European Companies and Institutions*. Berne: IOP Press.