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Interplay between CSR and the Digitalisation of Bulgarian Financial Enterprises: HRM Approach and Pandemic Evidence

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Abstract: The study presents the economic, managerial, and societal perspectives on corporate social responsibility (CSR) as a basis for adding value to enterprises. It investigates the interplay between the digitalisation of activities and the management of Bulgarian financial enterprises, with a focus on HRM and CSR initiatives in a pandemic situation. The study tests the hypothesis that, in pandemic conditions, the CSR of Bulgarian financial enterprises is positively correlated with the digitalisation of general and human resource management. To assess the level of engagement of financial enterprises with CSR causes during the pandemic, the study employs a methodology comprising descriptive statistics and ordinal regression. The main conclusion, based on a nationally representative survey of Bulgarian financial enterprises, is that banks and insurers that heavily invest in digitalisation have demonstrated a higher level of commitment to CSR causes during the COVID-19 pandemic, while conservative and less digitally advanced financial enterprises have had limited CSR activity. By adopting fintech and insurtech solutions directed towards societal needs, market demands, and customer satisfaction, financial enterprises increase their efficiency. Our analysis confirms the interplay between the digitalisation of financial enterprises and support for CSR causes.

Keywords: external CSR; internal CSR; financial enterprises digitalisation; COVID-19; HRM digitalisation; ordinal regression



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1. Introduction

By itself, corporate social responsibility (CSR) is a large concept, including aspects such as trust, donations, cooperative norms, etc., and is therefore hard to capture. For this reason, research on CSR focuses mostly either on the concept itself or on the relationship of CSR with various aspects (Gallego-Sosa et al. 2021) like financial or business performance, innovations, human resource management (HRM), and others.

The modern highly competitive environment, globalisation, and the effective regulatory framework placed before enterprises, including financial ones, present the challenge of matching the quest for profitability as an inherent business trait with the need to address issues that are socially significant at a national and international level. This means that they need to successfully introduce managerial, technological, and product innovations and, at the same time, implement CSR policies (FitzGerald and Cormack 2006) that support sustainable social, economic, and environmental development.

Although financial innovations date far back in time, in the last two decades, they have been strongly linked to the technological factor and the digitalisation of business. The introduction of new technologies has enabled financial enterprises (FEs) to reduce operating costs, offer new products and services, improve customer awareness, etc. (Vesić et al. 2020). According to some studies, digital transformation affects financial organisations in two ways: one is customer relations and customer access to services, and the other is human resources (Kitsios et al. 2021).

It is to be noted that in the digitalisation era, an organisation can derive a competitive advantage from many sources—advanced equipment, new technology, good marketing strategies, and many others. However, human resources (HR) is still the most important factor in determining the performance of any business. Within the context of technological advancements in recent years, HR has assumed a key role in helping organisations deal with the fast-changing business environment and the greater demand for quality, digitally competent employees. The efficient management of the changes in the organisational structures, procedures, and processes induced by the possibilities the new technologies offer makes enterprises today more productive and competitive, thus enabling them to create higher added value (Zaharieva et al. 2022). At the same time, societal expectations for entrepreneurs and employers have created a new environment for the development of brand image, reputation, and financial value. In this sense, CSR has opened opportunities for creating value not only for the company but also for the environment and society.

In financial enterprises, the processes of digitalisation in HR management and value creation are parallel, influence, and complement each other. The carrier and the implementation factor are top management and human resources that, thanks to new fintech and insurtech solutions (Zarifis and Cheng 2022), become more efficient and generate higher labour productivity. As these enterprises are users of significant public resources and are respectively expected to be active adopters of CSR causes, it is viable to explore if and to what extent, having improved their efficiency through digitalisation, they behave in a socially responsible manner.

Along with technological solutions for customers and HRM, digital transformation is also associated with the CSR of enterprises (Wu and Shen 2023) by improving communication with consumers and external partners, changing the way of communication with stakeholders through digital media, increasing transparency and control of their activity, and enabling them to better manage their CSR activities and achieve robust results in this aspect (Meng et al. 2022).

Although CSR is a concept originating from the 1950s, the issues related to it find a more pronounced expression in the policies of financial enterprises much later in time. The financial crisis of 2008 had a significant contribution to this process as it raised important issues such as business ethics and trust, on the one hand, as well as accountability and transparency, on the other (Lentner et al. 2015; Tran 2014). The COVID-19 pandemic gave yet another impetus to CSR research (Panagiotopoulos 2021). It questioned the ability of enterprises to implement their CSR programs while facing a number of constraints on the financial condition and the overall activity of businesses (Schwartz and Kay 2023). Despite the constraints, however, several studies have evidence that the pandemic has stimulated the digitalisation of a number of CSR practices (Irawan et al. 2022; Jananani and Gayathri 2019) and of business in general.

In the specific economic and political conditions during the pandemic, the financial sector in Bulgaria was one of the few sectors with a regulatory requirement to operate even in a lockdown situation. In parallel, the BNB implemented a derogation from the ECB rules regarding the loan repayment plans of commercial bank customers (Zaharieva et al. 2020b). As of 31 December 2020, a total of 108,211 claims for liabilities with a gross carrying value of EUR 4.479 billion were submitted under the Procedure for deferral and settlement of liabilities payable to banks and their subsidiaries and financial institutions. Of these, 89,478 claims for EUR 4.128 billion (BNB 2020) were approved. According to data reported by the BNB, the mentioned decisions limited the profit of banks in Bulgaria

to a base of EUR 0.856 billion (2019 = 100), respectively, by 51.4% in 2020 and 16.4% in 2021. During this period, many of the Bulgarian banks and some pension funds made monetary donations to hospitals as well as in-kind donations in the form of equipment, protective clothing, etc. Insurance companies contributed by providing free insurance against the risk of COVID-19 for doctors, health workers, and police forces; by donating medical and hospital equipment, personal protective equipment, as well as computers and communication devices for students in need to support the process of distance learning.

Based on the above considerations, the paper examines the main research question of the relationship between the degree of digitalisation of financial enterprises and their propensity to engage in CSR activities in a pandemic situation. The reasoning for investigating such a relationship is based on prior findings that both factors have a positive impact on competitiveness, efficiency, and productivity, which are the driving forces of profitability. The more profitable FEs will have more resources available for CSR initiatives. Engaging in CSR activities will lead to increased public image and, respectively, market share. However, the logic of our arguments faces significant difficulties in doing research in financial enterprises, where the communication and surveying of senior management need to go through a number of approvals, including the measures for the protection of “bank secrecy”.

We define this analytical perspective and point of view as a research gap, for which we find evidence in the literature in partial or palliative studies of usually bilateral relations (CSR—digitalisation; CSR—HRM; HRM—digitalisation, etc.), but very rarely research of complex, multilateral relations (CSR—digitalisation—HRM—COVID-19) especially targeting the hard-to-reach top-management survey and highly competitive financial sector.

To achieve this purpose, we need to provide a theoretical background for the study by elucidating the concept of CSR as a managerial philosophy and then, in view of the research focus, reviewing the academic literature on CSR in financial enterprises, corporate reputation and philanthropy, corporate management digitalisation, and HRM digitalisation in financial enterprises.

The main contribution of the research is the statistical testing of the relationship between external and internal CSR—digitalisation of Bulgarian financial enterprises in a pandemic situation. The study enriches prior knowledge by analysing the degree of digitalisation of general management—CSR and HRM digitalisation—CSR, as well as by investigating the relationship between the investments in digitalisation of financial enterprises and the desired effects of efficiency, productivity, and competitiveness. The paper is structured as follows. Section 2 reviews the literature and theoretical background of the study. The data description and applied methods are described in Section 3. Section 4 reports and discusses our main empirical results. Section 5 concludes the paper.

2. Theoretical Framework

To build a theoretical framework for investigating the thus formulated research question, namely the relationship between the degree of digitalisation of financial enterprises and their propensity to engage with CSR causes, we need to review past research on our key concepts: digitalisation, HRM, and CSR, and this in the context of financial enterprises. As the specific context of our study is the engagement of financial enterprises in a pandemic situation, we also need to review the academic literature on the key concepts in this area.

2.1. CSR, Corporate Reputation, and Corporate Philanthropy

Corporate social responsibility (CSR) is a broad and evolving concept for which academic literature has yet to offer a unified definition. In general, over its evolutionary path, the understanding of CSR has evolved from being limited to the generation of profit (Kitzmueller and Shimshack 2012) to include a broader set of responsibilities, with the latest belief that the main responsibility of companies should be the generation of shared value (Latapí Agudelo et al. 2019). The European Commission defines CSR as “the responsibility of enterprises for their impacts on society” (EC n.d.). According to ISO 26000: “Guidance

on Social Responsibility” CSR is “the responsibility of an organization for the impacts of its decisions and activities on society and the environment through transparent and ethical behaviour” (ISO 2010). For the United Nations Global Compact, CSR is “a principle-based framework for businesses, stating ten universal principles in the areas of human rights, labour, environment and anti-corruption” (UN Global Compact 2022).

In terms of the stakeholders the social initiatives of a firm are directed towards, academic literature distinguishes between internal and external CSR (Hameed et al. 2016). These are two dimensions of CSR that focus on different aspects of a company’s social and environmental impact (Olanipekun et al. 2021). Internal CSR refers to the responsibility of a company towards its own internal stakeholders, primarily its employees. It involves actions and practices aimed at creating a positive and supportive work environment and promoting the well-being of employees. Key aspects of internal CSR are employee welfare, employee health and safety, work-life balance, ethical practices, equal opportunity, diversity and inclusion, and others. External CSR refers to a company’s responsibilities and initiatives towards external stakeholders, such as the community, customers, suppliers, and the environment. It focuses on the impact a company has beyond its immediate organisational boundaries.

Corporate reputation is closely linked to corporate CSR efforts. It refers to how the company is perceived by stakeholders, including customers, investors, employees, regulators, and the public. Corporate reputation is commonly regarded as an intangible asset that has an influence on the profitability and sustainability of a corporation (Wan Afandi et al. 2021). Several publications in the extant literature evidence that organisations that develop strategies, policies, and practices related to social responsibility have higher levels of perceived reputation (Yan et al. 2022).

The benefits of having a CSR program in terms of corporate reputation can be sought in several aspects. Excellent CSR gives the company a chance to show consistency and win loyalty, which will ultimately translate into customer retention and increased sales. Findings reported by (Dang et al. 2020; Sen Gupta and Wadera 2020) confirm that there is indeed a significant influence of CSR on purchase intention. Customers are also more likely to buy a product from a company that they can align their values with, as well as pay extra for a product if they are buying from a company with a sturdy CSR strategy (Cone Communications 2017). CSR can also reduce the reputational damages from which the company would suffer after an adverse event if it engages in CSR on a continuous, long-term basis and avoids the occurrence of a second negative event (Shiu and Yang 2015). Having a solid reputation helps firms perform better both before and after a crisis (Tao and Song 2020) as a result of built-up social capital and trust through previous CSR activity (Lins et al. 2017).

An interesting issue when considering the influence of CSR on the reputation of the company is corporate philanthropy. According to traditional CSR theory, charitable donation behaviour is not related to a company’s ability to make a profit (Berman et al. 1999). Moreover, it makes sense that, during difficult times, firms should be reluctant to proactively allocate resources to tackle social problems (Chen et al. 2021). And yet, many companies become involved in CSR initiatives such as corporate social marketing, cause-related marketing programs, and other actions of a philanthropic nature, including donations in cash or in kind. In the context of the recent unprecedented COVID-19 crisis (Ivanovic-Djukic et al. 2021), many firms made philanthropic decisions. As financial enterprises are users of considerable public resources, they are expected to actively participate in public giving in times of crisis. However, they were also badly hit by the pandemic and had important decisions to make to survive. In this context, it is viable to investigate the philanthropic decisions of financial enterprises in response to the spread of COVID-19 (Soomro et al. 2023).

2.2. CSR, HRM, and Digitalisation

To perform the purpose of our study, we need to consider three relationships related to the investigated problem—between CSR and digitalisation, CSR and HRM practices, and HRM practices and digitalisation. The first relationship, between CSR and digitalisation, seems to take a prominent position within the field of research interests. This is because corporate social responsibility and digitalisation are considered some of the most important factors for the success and competitiveness of business organisations (Orbik and Zozulakova 2019). It should be noted that there are a considerable number of studies dedicated to corporate social responsibility as a concept and its manifestations, as well as to digitalisation as a factor that influences business models (Viererbl and Koch 2022). In recent years, research interest has increasingly focused on issues related to the relationship between CSR and digitalisation or digital transformation. Practice and theory indicate that digitalisation has a positive impact on the performance of enterprises in many aspects, allowing for process optimisation, cost reduction, and facilitation of access to clients and markets. Similar effects have a positive impact on the CSR performance of enterprises (Jitmaneeroj 2023). At the same time, digitalisation has certain effects that are considered negative, such as job loss, excessive energy consumption, waste generation, and others (Cardinali and De Giovanni 2021; Jiang et al. 2023). Some studies also draw attention to the risks and ethics of implementing digital transformation, particularly in terms of the use of data and AI, which, from a business perspective, also raises the question of management responsibility (Meng et al. 2022; Cardinali and De Giovanni 2021). In addition to the challenges arising from the influence of digital transformation, in the past few years, companies have faced new challenges brought by the COVID-19 pandemic (Carroll 2021). Although it had negative consequences for people and companies, the COVID-19 pandemic created many entrepreneurial opportunities (Mihaylova 2021) and accelerated the process of digitalisation for many businesses (Zaharieva et al. 2022b). This was of particular importance for financial enterprises, which invested significant resources in organising remote work and further digitalising their customer service (Li et al. 2016).

Digitalisation is a process that inevitably affects many corporate aspects, including the management of the most valuable asset people. The transformation of HR management into digital is associated with a change in individual attitudes and organisational culture, the acquisition of new competencies for the efficient use of new technologies, and changes in organisational structures, processes, and procedures in a way that will facilitate the adoption of new systems and solutions (Zaharieva et al. 2022b). The findings of several publications support the idea that there is a positive relationship between digitalisation of HRM practices and organisational efficiency (Diaye Marc-Arthur and Pekovic 2023). This is seen in the reduction of HR staff, cost savings, less administrative burden, and better employee communication (Samson and Agrawal 2020). HRM digitalisation reduces human errors, saves time, and boosts productivity; it enables HR departments to analyse performance, predict employee burnout and turnover (Zaharieva and Sylqa 2020), identify skill gaps, and make better personnel decisions.

On the other hand, human resource management is also thematically related to CSR. The relationship between CSR and HRM has not been extensively researched, although the number of publications has been growing steadily (Voegtlin and Greenwood 2016) (Herrera and de las Heras-Rosas 2020). Often quoted arguments for linking CSR with human resource management are the perception of people as an important factor for the reputation of enterprises, the implementation of corporate policies in the field of corporate social responsibility, as well as the perception of employees of their own organisation.

2.3. CSR and HRM in Financial Enterprises

In general, CSR as a business model is considered an applicable tool at the corporate level, within the general concept of sustainable development (Apostolopoulos et al. 2020). It is associated with creating added value not only for enterprises but also for all stakeholders and society. Financial enterprises by themselves are important for the functioning of the

economy (Roleders et al. 2022), through capital mobilisation, economic resource allocation (Shishmanova 2014), and several other activities. Moreover, as the financial industry uses significant public resources, it is expected that it will behave in a socially responsible manner to a greater extent than any other industry (Wu and Shen 2023). The application of CSR by financial enterprises requires the implementation of processes that simultaneously consider social, environmental, and ethical issues, human rights issues, and consumer protection and integrate them into an overall strategy (Ivanova and Khalifa 2019).

The benefits of having CSR for companies have been confirmed in a number of studies and are associated with the following: increased objectivity of the SWOT analysis (Matsutani et al. 2022); developing the strategy for their own sustainable development (Bui and Le 2023; Bian et al. 2021); improving management systems and internal communication between departments, levels and people (Song and Tao 2022); preventing conflicts with stakeholders; improving communication with the outside world (Ngai and Singh 2021); increasing the reputation and trust of the enterprise among society (Ruiz and Garcia 2021); motivating employees and becoming a desirable employer (Ahmad et al. 2022); increasing customer loyalty to the company and increasing the brand value (Sung and Lee 2023); increasing market share, due to higher loyalty and a more respected brand (Cowan and Guzman 2020); better access to capital and financing at a better price, because of the acquired image (Zhao 2021); and raising the price of the company, attracting and retaining investors (Suteja et al. 2023).

HR management in financial enterprises has its own specifics (Bezgin et al. 2022). First, because of the high dependence of the financial sector on one of the production factors—labour—the success of enterprises that operate in it is highly dependent on efficient HR management. Second, as the sector is characterised by a high degree of responsibility of individual employees in conditions of compliance with “bank secrecy” and numerous anti-money laundering measures at the regional (Prodanov and Naydenov 2020), national (Sabitova et al. 2020), and international level (Zahariev et al. 2020a; Zarkova et al. 2023), each activity of HR management in financial enterprises has its own digitalisation framework. This specific framework is a function of the internal information system, written internal rules for managing processes and paperwork, as well as applicable sectoral regulations at the level of national supervision and *aqui communitare* (Zahariev et al. 2022a). In this sense, HR management activities like planning, recruitment, staff development and retention, cost-control, reporting, etc. possess some specific characteristics that other sectors or enterprises do not exhibit.

In the context of COVID-19, there are several recent publications that provide evidence that, thanks to digitalisation, regulatory exemptions, and corporate social responsibility, financial enterprises provide 24/7 customer service and, in many respects, set an example of support for CSR causes, assisting in overcoming deficiencies in the healthcare sector. However, the research focus in past publications has been mainly on the banking sector (Zahariev et al. 2022c), while insurance companies and pension funds remain relatively less studied (Prodanov et al. 2022).

The above reasoning, based on prior research, allows us to develop and graphically represent the framework of the study, which comprises the complex relationship between CSR and FE digitalisation through the prism of HRM in the conditions of the COVID-19 pandemic (Figure 1).

Based on the above-outlined relationships between CSR, HRM, and digitalisation as well as the presented reasoning in support of the positive effects of digitalisation on the activity of financial enterprises, we can formulate the main research hypothesis as follows: in pandemic conditions, the CSR of Bulgarian financial enterprises is positively correlated with the digitalisation of general and human resource management.

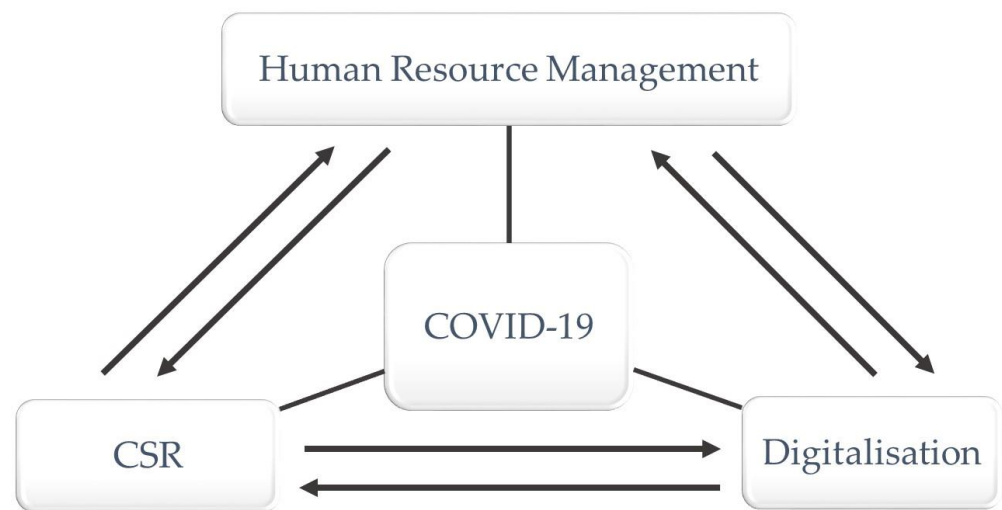


Figure 1. Framework of the interplay between CSR and FE digitalisation through the prism of HRM in the conditions of COVID-19 pandemic. Source: Authors' creation.

3. Research Methodology

3.1. Stratified Sample

The COVID-19 pandemic forced financial enterprises to invest more in digitalising their operations, including customer relations, while also undertaking various actions (largely imposed externally) to ensure a safe work environment, with remote work being the most common expression. In this way, we have found confirmation of the two dimensions of CSR—internal CSR, directed towards employees, leading to the provision of healthy and safe working conditions, and external CSR (Bang et al. 2022), directed towards society to provide essential resources and equipment to support the healthcare system during critical pandemic moments.

The data used in this study were collected through a survey consisting of 64 questions related to the basic characteristics of the sample and those that address digitalisation and human resource management, including in pandemic situations. The survey was sent to the central administrations of the licensed financial enterprises in Bulgaria, including commercial banks (CB), general insurance companies (GIC), and pension insurance companies (PIC). The stratified characteristics of the studied population comprise a total of 50 financial enterprises, including seventeen commercial banks, twenty-three general insurance companies, and ten pension insurance companies.

The first completed survey was received on 7 August 2022, and the last on 19 October 2022, with a total of 50% of the institutions or 25 financial enterprises having completed it, including eight credit institutions (47% of the population of the licensed commercial banks), managing 79.6% of the total assets of banks in Bulgaria; twelve general insurance companies (52.1% of the population of the insurance companies), accounting for 85% of the gross premium income realized by insurers engaged in general insurance at the end of the second quarter of 2022; and five pension insurance companies (50% of the population of pension insurance companies), forming 46% of the total revenue for the first half of 2022.

The survey was completed by executive directors and human resource management directors. For the purposes of the study, the data was entered and analysed using IBM SPSS Statistics. The results evidence that 16% of the financial enterprises are categorised as leading in terms of digitalisation compared to their competitors, 28% are placed in the first quarter in terms of the level of digitalisation in human resource management, 36% in the second quarter, 12% in the third quarter, and 8% in the last quarter of the sample.

3.2. Data Description and Data Processing

Based on the literature review, 15 questions from the survey were initially selected, and their responses were converted into numbers. Twelve of these questions were measured using a bipolar 5-point Likert scale, while three were measured using a graduation scale. The variables were grouped into five main categories, as presented in Table 1. The first category included variables reflecting aspects of CSR; the second category included variables representing certain characteristics of financial enterprises (FE); the third and fourth categories comprised variables related to digitalisation from a general management and HRM perspective; and the last category included variables associated with the financial position and efficiency of the FE.

Due to the specific nature of the sample, for the purposes of the study, the Likert scale was transformed from the standard 5-point scale to a synthesised 3-point scale (Lehmann and Hulbert 1972). The transformation of the Likert scale into a bipolar trichotomous measure does not lead to any significant deleterious effect regarding the reliability and validity of results (Jacoby and Matell 1971). The transition to a three-point Likert scale allows for the data to be brought into a form that more closely meets the requirements for the application of the Chi-Square method in the analysis of data presented on a nominal scale. Thus, the smaller the number of cells, the smaller the number of investigated enterprises (Blalock 1960, p. 220), which in a stratified sample of a limited number of licensed financial enterprises is present as a condition. To investigate the relationship between digitalisation and CSR activities of the FEs using regression analysis, the variables identified as descriptors from the third to the fifth category were aggregated by averaging their values. Subsequently, the variable HRDig was modified to HRDig2, with the exclusion of the HRDig NV3-Q44 factor.

Table 1. Variables of the survey.

Nº	Group	Code	Type of Variable	Source *	Content	Measure	Min-Max
1. Ci	CSR (External and Internal CSR)	CSR NV1-Q59	Dependent	CEO/HRM	In the FE, the working conditions were adapted to the epidemiological situation	Likert scale	(1 ÷ 3)
2. Ce		CSR NV2-Q60	Dependent	CEO/HRM	The FE donated considerable funds for the purchase of various medical items to help various institutions in the fight against the virus	Likert scale	(1 ÷ 3)
3. Ci		CSR NV3-Q64	Dependent	CEO/HRM	The FE has invested considerable funds in digitalisation to provide remote work opportunities in COVID-19 conditions	Likert scale	(1 ÷ 3)
Cov1	Cov (Covariate Variables)	CovDig NV1-Q05	Explanatory	CEO/HRM	According to your management judgment, compared to its competitors in terms of degree of digitalisation in the HR management (HRM), the financial enterprise is	Graduation scale *	(1 ÷ 6)
Cov2		CovDig NV2-Q06	Explanatory	CEO/HRM	The number of employees in your FE is	Graduation scale **	(1 ÷ 3)
Cov3		CovDig NV3-Q09	Explanatory	CEO/HRM	To what extent the overall activity of the FE has been digitalised	Graduation scale ***	(1 ÷ 5)

Table 1. Cont.

Nº	Group	Code	Type of Variable	Source *	Content	Measure	Min-Max
MD1	MDig (General Management)	MDig NV1-Q10	Explanatory	CEO/HRM	The digitalisation transforms the management of the FE	Likert scale	(1 ÷ 3)
MD2		MDig NV2-Q11	Explanatory	CEO/HRM	Digitalisation is part of the overall strategy of the FE	Likert scale	(1 ÷ 3)
MD3		MDig NV3-Q52	Explanatory	CEO/HRM	There is an established electronic and virtual employee communication system in the FE	Likert scale	(1 ÷ 3)
HD1	HRDig (HR Management Digitalisation)	HRDig NV1-Q13	Explanatory	CEO/HRM	The digitalisation in HR management is part of the strategy of the FE	Likert scale	(1 ÷ 3)
HD2		HRDig NV2-Q14	Explanatory	CEO/HRM	The FE invests in the digitalisation in HR management	Likert scale	(1 ÷ 3)
HD3		HRDig NV3-Q44	Explanatory	CEO/HRM	Digitalisation has been changing the organisation of work in the FE	Likert scale	(1 ÷ 3)
FD1	FDig (Finance and Efficiency)	FDig NV1-Q15	Explanatory	CEO/HRM	To what extent do you agree with the statement “The digitalisation in HR management is related to large investments by the company”	Likert scale	(1 ÷ 3)
FD2		FDig NV2-Q16	Explanatory	CEO/HRM	To what extent do you agree with the statement “The digitalisation in HR management increases the competitiveness in the FE”	Likert scale	(1 ÷ 3)
FD3		FDig NV3-Q17	Explanatory	CEO/HRM	To what extent do you agree with the statement “The digitalisation in HR management increases the efficiency and the productivity in the FE”	Likert scale	(1 ÷ 3)

Legend: Likert scale: 1-D (Disagree); 2-U (Undecided); 3-A (Agree). Graduation scale *: 1-not at all; 2-little; 3-relatively high; 4-high; 5-very high; 6-completely/all processes are digitalised. Graduation scale **: 1- fewer than 50 employees (a small FE); 2-between 51 and 250 employees (a medium-sized FE); 3-more than 250 employees (a large-size FE). Graduation scale ***: 1-leading position; 2-first quarter; 3-second quarter; 4-third quarter; 5-fourth quarter. Source: Authors' survey.

3.3. Descriptive and Correlation Analysis

The obtained statistical results using frequencies (Table 2) show that the mean values for six variables, measured on a Likert scale, range from 2.40 (min) to 2.92 (max). The extreme values are observed for variables in the CSR group, indicating a significant divergence among respondents regarding the implementation of CSR activities in a pandemic environment with internal and external directions. The standard deviation falls within the range of 0.34 to 0.76, with the highest value observed for CSR NV2-Q60 (SD = 0.76) and the lowest for MDig (SD = 0.36). The skewness values for CSR NV1-Q59, CSR NV3-Q64, and HRDig indicate substantial non-normality, while MDig and FDig can be considered acceptable, and CSR NV2-Q60 is excellent.

Table 2. Descriptive statistics.

		CovDig NV1-Q05	CovDig NV2-Q06	CovDig NV3-Q09	MDig	HRDig	FDig	CSR NV1-Q59	CSR NV2-Q60	CSR NV3-Q64
N	Valid	25	25	25	25	25	25	25	25	25
	Missing	0	0	0	0	0	0	0	0	0
Mean		3.32	2.36	4.44	2.83	2.77	2.73	2.92	2.40	2.84
Std. Error of Mean		0.23	0.14	0.20	0.07	0.08	0.07	0.08	0.15	0.10
Median		3.00	2.00	5.00	3.00	3.00	3.00	3.00	3.00	3.00
Mode		3.00	3.00	5.00	3.00	3.00	3.00	3.00	3.00	3.00
Std. Deviation		1.15	0.70	1.00	0.34	0.42	0.36	0.40	0.76	0.47
Variance		1.31	0.49	1.01	0.11	0.17	0.13	0.16	0.58	0.22
Skewness		−0.33	−0.64	−0.49	−1.68	−2.20	−1.51	−5.00	−0.85	−3.14
Std. Error of Skewness		0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46
Kurtosis		−0.28	−0.64	0.15	1.39	5.16	2.08	25.00	−0.68	9.97
Std. Error of Kurtosis		0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Range		4.00	2.00	4.00	1.00	1.67	1.33	2.00	2.00	2.00
Minimum		1.00	1.00	2.00	2.00	1.33	1.67	1.00	1.00	1.00
Maximum		5.00	3.00	6.00	3.00	3.00	3.00	3.00	3.00	3.00
Sum		83.00	59.00	111.00	70.67	69.33	68.33	73.00	60.00	71.00
Percentiles	3.00	2.00	4.00	2.83	2.67	2.67	3.00	2.00	3.00	3.00
	3.00	2.00	5.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
	4.00	3.00	5.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00

Source: Authors' calculations.

The value for the kurtosis indicates a distribution that is more peaked than normal for most of the variables except MDig and CSR NV2-Q60. The CSR NV2-Q60 variable is the only one of the six variables with a negative value.

From the values of the correlation coefficients presented in the correlation matrix, it was found that:

- At significance level 0.01 statistically significant is the relationship between: CovDig NV3-Q09 and CovDig NV1-Q05 (0.707), MDig and CovDig NV3-Q09 (0.567), HRDig and CovDig NV1-Q05 (0.508), HRDig and CovDig NV3-Q09 (0.648), HRDig and MDig (0.702), CSR NV1-Q59 and MDig (0.514), CSR NV1-Q59 and HRDig (0.721), CSR NV2-Q60 and CovDig NV3-Q09 (0.522), and CSR NV2-Q60 and MDig (0.608).
- At significance level 0.05 statistically significant is the relationship between: CovDig NV2-Q06 and CovDig NV1-Q05 (0.422), CovDig NV3-Q09 and CovDig NV2-Q06 (0.477), MDig and CovDig NV1-Q05 (0.440), MDig and CovDig NV2-Q06 (0.455), FDig and CovDig NV2-Q06 (0.397), CSR NV1-Q59 and CovDig NV1-Q05 (0.422), CSR NV1-Q59 and CovDig NV2-Q06 (0.405), CSR NV2-Q60 and CovDig NV1-Q05 (0.467), CSR NV2-Q60 and HRDig (0.472), and CSR NV3-Q64 and CSR NV2-Q60 (0.416).
- CSR NV2-Q60 stands out as a variable with the highest number of statistically significant correlation coefficients, which provides a basis for its further analysing as a dependent variable.
- The correlation dependencies are statistically significant, as predictors in the analysis: CovDig NV1-Q05, CovDig NV2-Q06, CovDig NV3-Q09, MDig, HRDig.

The correlation matrix (Table 3) presents different results regarding the statistical significance of the relationships between the internal CSR variables and the explanatory variables. The first investigated variable, CSR NV1-Q59, has a positive relationship with statistical significance to the three independent variables MDig, HRDig, and FDig. Due to the strong dependence of CSR NV1-Q59 on regulations imposed by central health authorities, this measure of the relationship between internal CSR and digitalisation was

not tested further. Based on the non-significant correlations, the relationship between internal CSR (represented by CSR NV3-Q64) and digitalisation were also not further tested.

Table 3. Correlation matrix.

		Correlations								
		CovDig NV1-Q05	CovDig NV2-Q06	CovDig NV3-Q09	MDig	HRDig	FDig	CSR NV1-Q59	CSR NV2-Q60	CSR NV3-Q64
CovDig NV1-Q05	Pearson Correlation	--								
	N	25								
CovDig NV2-Q06	Pearson Correlation	0.422 *	--							
	Sig. (2-tailed)	0.035								
	N	25	25							
CovDig NV3-Q09	Pearson Correlation	0.707 **	0.477 *	--						
	Sig. (2-tailed)	<0.001	0.016							
	N	25	25	25						
MDig	Pearson Correlation	0.440 *	0.455 *	0.567 **	--					
	Sig. (2-tailed)	0.028	0.022	0.003						
	N	25	25	25	25					
HRDig	Pearson Correlation	0.508 **	0.292	0.648 **	0.702 **	--				
	Sig. (2-tailed)	0.009	0.157	<0.001	<0.001					
	N	25	25	25	25	25				
FDig	Pearson Correlation	−0.020	0.397 *	0.031	0.292	0.321	--			
	Sig. (2-tailed)	0.924	0.050	0.884	0.157	0.117				
	N	25	25	25	25	25	25			
CSR NV1-Q59	Pearson Correlation	0.422 *	0.405 *	0.299	0.514 **	0.721 **	0.424 *	--		
	Sig. (2-tailed)	0.035	0.045	0.147	0.009	<0.001	0.035			
	N	25	25	25	25	25	25	25		
CSR NV2-Q60	Pearson Correlation	0.467 *	0.421 *	0.522 **	0.608 **	0.472 *	0.303	0.382	--	
	Sig. (2-tailed)	0.019	0.036	0.007	0.001	0.017	0.141	0.060		
	N	25	25	25	25	25	25	25	25	
CSR NV3-Q64	Pearson Correlation	−0.055	−0.071	0.155	0.256	0.020	−0.098	−0.071	0.416 *	--
	Sig. (2-tailed)	0.792	0.738	0.460	0.216	0.925	0.641	0.738	0.039	
	N	25	25	25	25	25	25	25	25	25

*. Correlation is significant at the 0.05 level (2-tailed). **. Correlation is significant at the 0.01 level (2-tailed). Source: Authors' calculations.

3.4. Ordinal Regression Analysis

Testing the data for the presence of a normal distribution, as well as skewness and kurtosis values, directs us towards Ordinal Regression to investigate the relationship between CSR (CSR NV2-Q60) and the set of factors. The initial model includes the three aggregated variables—MDig, HRDig, and FDig. Due to the low statistical significance (i.e., Sig. > 0.05), FDig was excluded from the model, and HRDig was replaced with a modified version labelled HRDig2, where HRDig NV3-Q44 is excluded from the synthetic indicator.

In the regression model, the external CSR (CSR NV2-Q60) is taken as a dependent variable, and the general management digitalisation (MDig) and HRM digitalisation (HRDig2) variables are taken as predictors.

The Case Processing Summary shows that 56% of the FEs have allocated significant funds to help various institutions in the fight against COVID-19, 16% have not, and 28% are neutral (Table 4).

Table 4. Case Processing Summary (CSR NV2-Q60).

		N	Marginal Percentage
CSR NV2-Q60	D	4	16.0%
	U	7	28.0%
	A	14	56.0%
Valid		25	100.0%
Missing		0	
Total		25	

Source: Authors' calculations.

The results in Model Fitting Information (Table 5) show that there is a significant improvement in the fit of the final model over the null model (Chi-Square = 9.760, $p < 0.05$).

Table 5. Model Fitting Information (CSR NV2-Q60).

Model	−2 Log Likelihood	Chi-Square	df	Sig.
Intercept Only	29.180			
Final	19.421	9.760	2	0.008

Link function: Logit.

Source: Authors' calculations.

The Pearson and Deviance Chi-Square test results also indicate that the model fits the data well (Table 6).

Table 6. Goodness-of-Fit (CSR NV2-Q60).

	Chi-Square	df	Sig.
Pearson	14.295	12	0.282
Deviance	13.537	12	0.331

Link function: Logit.

Source: Authors' calculations.

Based on the McFadden Pseudo-R-Square, we can say that we have a 20% improvement in predicting the outcome based on the predictors compared to the null model.

The presented regression model explains the variance in the behaviour of the dependent variable from the examined predictors—between 32.3% according to Cox and Snell R^2 and 37.7% according to Nagelkerke R^2 (Table 7). The values of these coefficients do not indicate a large percentage of explained variation in CSR (CSR NV2-Q60), but the range cannot be considered small either, which is an assumption for the model to be considered correct and suitable for representing the investigated relationship. In addition, we can say that within the sample, taking into account both its size and the high coverage of financial institutions, the percentage of classified cases is considered acceptable. This provides grounds for confirming the investigated relationship and using the results to predict the expected values of CSR (CSR NV2-Q60) under different changes in the examined predictors.

Table 7. Pseudo R-Square (CSR NV2-Q60).

Cox and Snell	0.323
Nagelkerke	0.377
McFadden	0.200
Link function: Logit.	

Source: Authors' calculations.

The regression coefficients (parameter estimates) for both predictors are positive, but only MDig is statistically significant (Table 8). This means that for every unit increase in the general management digitalisation factor, there is a predicted increase of 3.762 in the log odds of being in a higher category (or a predicted increase in the coefficients for entering a higher category or financial institutions to donate more). The HR Digitalisation factor (HRDig2) is not statistically significant. Therefore, we can say that digitalisation has a positive influence on the external CSR activities of financial institutions, meaning the dependency is positive, and as digitalisation increases in financial institutions, the propensity to allocate more resources for corporate social responsibility, donations, and other similar activities also increases.

Table 8. Parameter Estimates (CSR NV2-Q60).

		Estimate	Odds Ratio	Std. Error	Wald	df	Sig.	95% Confidence Interval	
								Lower Bound	Upper Bound
Threshold	[x60 = 1]	9.685		4.139	5.476	1	0.019	1.573	17.796
	[x60 = 2]	11.797		4.497	6.883	1	0.009	2.984	20.611
Location	HRDig2	0.458	1.581	1.009	0.206	1	0.650	−1.520	2.436
	MDig	3.762	43.034	1.723	4.768	1	0.029	0.385	7.139
		Link function: Logit.							

Source: Authors' calculations.

When doing ordinal regression, we assume that the relationships between the independent variables and the logits are the same for all the logits, which means the results are a set of parallel lines or planes. In this case, the null hypothesis that the location parameters (slope coefficients) are the same across response categories should not be rejected. The data show that the p-value is insignificant because it is greater than 0.05, so the assumption is fulfilled (Table 9).

Table 9. Test of Parallel Lines (CSR NV2-Q60).

Model ^a	−2 Log Likelihood	Chi-Square	df	Sig.
Null Hypothesis	19.421			
General	17.925	1.496	2	0.473

The null hypothesis states that the location parameters (slope coefficients) are the same across response categories.

^a. Link function: Logit. Source: Authors' calculations.

4. Discussions

In a theoretic plan, the study explores the relationships between digitalisation, general management, HRM, and CSR in financial enterprises. The relationship between CSR and digitalisation is outlined through the prism of the effects of digital transformation on society and the environment. The relationship between digitalisation and HRM is investigated. A positive relationship is established between the digitalisation of the management of financial enterprises and their efficiency and competitiveness. The study of the relationship

between HRM in enterprises and CSR ([Herrera and de las Heras-Rosas 2020](#)) assigns a new role to people as an important factor in implementing CSR initiatives. Special emphasis is placed on the characteristics of financial enterprises in terms of the digitalisation of management, their regulatory commitments regarding CSR reporting, and the implemented CSR policies and funding for CSR. The pandemic environment is identified as an accelerating factor for digitalisation, which is particularly relevant to financial enterprises.

To test the formulated hypothesis, a comprehensive methodology was developed and applied, including descriptive statistics and ordinal regression. The data for the study were obtained through a survey conducted in 2022 among a stratified sample of Bulgarian financial enterprises with a significant share (above 80%) of the total industry assets and gross premium income. The institutional response rate was 50%.

The empirical results confirm the hypothesis regarding external CSR, while the relationship between internal CSR and the digitalisation of general management and HRM, in particular, has not been confirmed. When applying individual statistical methods, a positive correlation of various explanatory variables to the CSR descriptors is observed.

The empirical findings can be explained by the fact that CSR policies and their funding depend primarily on decisions made by top management. Similar evidence is confirmed in research in Indonesia ([Irawan et al. 2022](#)), where the implementation of CSR during the pandemic was mainly focused on providing food, medicines, and equipment. Respectively, financial resources for CSR are allotted at managerial discretion. Despite the importance of human resources ([Sarvaiya et al. 2018](#)), they belong to a lower hierarchical level. The proposals and policies formulated by HRM are subject to subsequent approval by top management ([Bhimavarapu et al. 2022](#)).

The absence of a statistically significant relationship between internal CSR and digitalisation can be explained by externally imposed measures by health authorities in the form of mandatory regulations. When creating remote workplaces, financial enterprises in Bulgaria make force majeure investments, both in hardware and software and, last but not least, in protocols for handling confidential client information in compliance with banking secrecy for this group of financial institutions. Providing the possibility to work remotely is in response to government decisions, according to which FEs are to continue operations regardless of lockdown regimes as a measure to counter the pandemic. Last but not least, digitally created remote workplaces in financial enterprises support digitalisation processes and increase the efficiency of the sector. By the end of 2022, the banking sub-sector in Bulgaria had recovered, reporting a 25% higher profit in comparison with pre-epidemic 2019 ([BNB 2022](#)).

For selected covariative factors such as competitive positioning based on the degree of digitalisation, number of employees, and managerial assessment of the degree of digitalisation, a positive correlation is found with external CSR, and no correlation is found with internal CSR, expressed through significant financial investments to enable remote work in a pandemic environment. The latter can also be explained by the traditionally avant-garde role of financial enterprises regarding fintech and insurtech solutions, developed pre-pandemic and successfully employed during the pandemic. However, this does not diminish the fact that internal CSR improves employee satisfaction and leads to better performance ([Abdurachman et al. 2023](#); [Bizri et al. 2021](#)). The very distinction between evidence and the effects of internal and external CSR still needs further research and definition ([Yunis et al. 2018](#)).

The obtained results have their limitations regarding the sample size of the licensed financial enterprises in Bulgaria (especially the subgroup of pension funds) as well as the self-reported nature of the survey data. Additionally, the study focuses specifically on the Bulgarian financial sector, which may limit the generalisability of the findings to other industries or countries. Regardless of the stated limitations, however, the study is pioneering for the Bulgarian financial sector and achieves representative results for the stratified sample of licensed financial enterprises. It confirms the important role of banks and insurance companies in contributing to nationally significant CSR causes. Through

statistical indicators, the study successfully measures the scale of the interplay between CSR and the digitalisation of Bulgarian financial enterprises through the prism of HRM in COVID-19 conditions.

5. Conclusions

As financial enterprises are business entities that seek economic profit, it is logical for them to be reluctant to actively engage in CSR causes, especially philanthropic ones like donations in cash or in kind. This puts to the fore the question about their behaviour, and in our case, the behaviour of the Bulgarian financial enterprises during the recent COVID-19 crisis. Our findings confirm that banks and insurers that more decisively implement digitalisation processes also invest more significant resources in CSR causes. This behaviour can be seen as a direct manifestation of their responsibility towards society and an indirect contribution to enhancing their reputation. The analysis confirms the positive relationship between CSR and the digitalisation of management.

Potential areas for future research on the topic could include extending the study to other industries or countries to examine the relationship between digitalisation and CSR initiatives in different contexts. Additionally, future research could examine the impact of digitalisation on other aspects of CSR, such as environmental sustainability, ethical business practices, regulatory aspects, etc. Finally, future research could explore potential barriers to digitalisation in financial enterprises and strategies to overcome these barriers. Regardless of the significant size of financial resources managed by financial enterprises, regulatory standards limit any attempts to excessively increase budgets for CSR causes. However, the pandemic created a need for support for national CSR causes, with digitalised Bulgarian financial enterprises contributing to overcoming the crisis caused by COVID-19 and to the recovery of all sectors of the economy.

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