

Research Article

Financial Constraints of the Pro-environmentally Oriented Firms in the Covid-19 Crisis

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Abstract.

Environmentally oriented firms are more pressed for resources in general, especially during periods of economic downturn. Since their business plans are frequently more innovative, they are perceived as riskier by financial institutions. Furthermore, the recent global COVID-19 crisis was not primarily related to financial disruptions, and most governments provided generous and widespread support to different segments of their economies. However, the evidence on the degree to which firms were faced with access to finance problems during this crisis is still scarce. This paper aims to explore the extent to which environmentally-oriented firms in post-transition economies are disproportionately affected by the financial constraints related to the market disruptions caused by COVID-19 pandemics compared to non-environmentally oriented firms. The World Bank Enterprise Survey 2019 has been used to investigate this issue. Based on this data source, an indicator of firm environmental proactivity is developed. The firms' financial constraints in the pandemic period are evaluated based on the responses from the three survey rounds of the World Bank COVID-19 follow-up enterprise survey, covering different stages of the pandemic. The post-transition countries in the analysis are heterogeneous, consisting of both EU members (Bulgaria, Croatia, Slovakia, and Slovenia) and EU accession countries (Bosnia and Herzegovina and Serbia). The lowest percentage of firms having an environmental strategy was found in Croatia, while the highest percentage is in Slovenia. Based on the results, it can be concluded that firms adopting environmental strategies in analyzed countries mostly follow regulations and/or chose low-cost measures.

Keywords: financial constraints, pro-environmental orientation, post-transition, COVID-19

Jel CLASSIFICATION codes

L25, P28, Q50

1. INTRODUCTION

Environmental concerns are increasingly getting intertwined with all aspects of human existence. Parallel to the growing general support for the environment, companies warn about increased costs related to the preservation of the environment and firms'

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competitiveness imperative. Subsequently, the open question remains whether the desire for environmental sustainability is economically sustainable.

Research exploring the effects of adopting environmentally friendly procedures in businesses has grown substantially [58]. Due to firms' environmental orientation measurement complexity, there are relatively few research efforts for post-transition economies. This is partially related to the legacy of the previous economic system, predominately oriented towards the manufacturing sector, widely perceived as a substantial polluter. Another concern was that the privatization process in the initial phases of transition seldom incorporated environmental concerns and contributed to the pollution [30]. Additionally, the catching-up process - and the accession to the EU - brought severe pressures to the firms [8], related to adaptation to the environmental regulations and the need to compete successfully in the EU market. Finally, a lack of finances significantly lowers the entrepreneurship potential in post-transition economies [2].

The literature has documented that the level of economic development affects the relationship between the adoption of environmental strategy and firm performance [6]. Relative few studies address the issue of firms' environmental orientation within a multicountry perspective [33]. The paper's main contribution is that - contrary to most of the previous studies [44, 50, 29] - firms' environmental proactivity is addressed from a comparative perspective. There are two specific research questions addressed within this framework. The first is the analysis of firms' environmental proactivity in post-transition economies, while the second is the analysis of financial constraints during the pandemic period, with a specific focus on the potentially more adverse effects for the environmentally orientated firms. The empirical analysis is focused on post-transition countries for which previous empirical evidence is scarce, that is, Bosnia and Herzegovina, Bulgaria, Croatia, Czechia, Serbia, Slovakia and Slovenia. The specific contribution of the paper is that it addresses the issue in the context of COVID-19 crisis, which brought special conditions to the global markets.

The paper adopts the following structure. The next section briefly discusses relevant literature. Section 3 presents the methodological framework, while the results of the analysis are presented and discussed in section 4. The last section brings conclusions.

2. LITERATURE REVIEW

Environmental protection has become an important topic, and both institutional and private stakeholders continuously exert pressure on firms to reduce their potentially

harmful effects on the environment. The response of firms varies within a country, depending on the size and sector of the firm [27], but also between countries, depending on the national legislation. Within a country, a firm's responses to national legislation and pressures from the stakeholders are reflected in management's activities. Extant literature documents different approaches to the management of environmental performance [17, 56, 59, 60]. The pressures from the regulative bodies result in incorporating environmental procedures in management strategies to alleviate the potential risks and costs of mis-compliance [22, 9].

To explain firms' behavior related to the adoption of different environmental strategies, institutional theory, stakeholder theory, and resource-based view theory have been proposed. Institutional theory suggests that the most important stimulus affecting firms' decisions comes from a regulative push [18]. From the firm's perspective, activities incur increased compliance costs and reduced profits.

Stakeholder theory emphasizes that in addition to the government, an important regulating stakeholder, firms' decision to adopt environmental strategy depends on interaction with other stakeholders, customers being the most prominent [20]. If customers demand more environmentally friendly products, adopting an environmental strategy could be associated with significant benefits for the firm. In combination with other corporate social responsibility measures the firm might adopt, such business strategies could enhance the firm's competitive position.

Resource-based view theory suggests that internal factors of the firm are responsible for competitive advantage [26]. Thus, enhanced business performance could occur if a firm aligns its internal resources and processes in a more environmentally sustainable way. In this context, not only the demand from the customers is relevant, but also potential productivity increases stemming from improved management of available resources (such as water, energy, etc.). For example, improved internal processes could be initiated by the firm's employees and lead to productivity improvements, thus enhancing the firm's competitiveness.

Researchers have still not reached a consensus as to why firms differ in terms of their environmental performance [56]. Literature suggests that business owners, as well as managers, differ in their time horizons, strategy expectations, and risk assessment, contributing to firms' adoption of different strategies [15, 54, 57]. Furthermore, firm size and age [14] have been found to be related to environmental proactivity. It is assumed that larger firms have more internal resources available to be devoted to environmental strategies. Firms operating in international markets are more likely to seek efficient ways to control pollution [24]. Firms frequently engage in innovation activities to enhance

their competitive position as well as adopt eco-innovations to improve environmental performance [47].

To respond to "the green imperative", firms are expected to change their existing processes and adopt environmentally sustainable options. The difference between environmental strategy and environmental management practices is sometimes unclear [21]. While strategic orientation is focused on the intention to enhance environmental responsibility, improving environmental performance requires shifting from a responsive approach to the implementation of proactive strategic and organizational changes [55].

The proactivity levels of adopted environmental strategies significantly differ among the firms [35, 45]. Companies often do not recognize that environmental sustainability is not just a mere adaptation to current environmental requirements specified in the regulations [1]. Buysse and Verbeke [10] suggest three groups of environmental strategies - reactive, pollution prevention and environmental leadership. If the firm plans a change in business procedures either to accommodate to regulations or standards created by the leading firms in the industry, then it is adopting a reactive strategy. If the focus of the strategy is on pollution prevention, regardless of the standards adopted by the industry or imposed by the government, the firm is adopting a pollution prevention strategy. Finally, the firm's strategic goal could be to become an environmental leader. Clearly, firms that want to be leaders pursue more environmentally friendly activities and to a greater intensity than those that adopt a reactive strategy.

The proactive approach is associated with specific attempts to minimize pollution [41], contrary to the reactive approach, which is restricted to following environmental rules and guidelines. When firms adopt a proactive environmental strategy, they search for new technologies and innovative business solutions to minimize or eliminate operational waste and pollution and develop new eco-friendly products [52].

The traditional view argues that while catering for environmental concerns, firms are exposed to increased costs related to the increased demand for (external) financing. However, some authors argue that including environmental issues in a firm's management strategies and subsequently activities can also create important benefits. For example, environmental orientation can have intangible effects such as improved corporate image [42, 48]. It can also increase sales when consumers honor the firm's environmentally friendly behavior. It could lead to entering new markets through newly developed products and create a competitive advantage, especially when the firm is a leader in environmentally friendly behavior [4, 47, 48, 46]. Thus, environmental activities can directly affect a firm's financial performance [43, 49] but can also increase access to specific financial resources, such as green credit lines.

Empirical studies have both found a positive relationship between proactive environmental orientation and firm performance indicators [28, 32, 40, 49, 39, 51] as well as no effect [12, 23, 36]. As relevant firm performance indicators, researchers have relied on the market, financial, and environmental outcomes [3, 37, 38, 41]. Empirical evidence is relatively scarce for transition economies, among other things, due to relatively unreliable data sources (even on firm performance indicators) in the early phases of transition. At the same time, studies have documented that it is important to understand the local context of environmental responsibility and the performance in which firms operate [34].

The challenges for the firms to successfully adopt proactive environmental strategies in post-transition economies might be more severe than for firms in developed market economies. Söderholm [53] emphasizes the broad-scale environmental degradation during the communist phase in Central and Eastern Europe. Anderson [5] reported that the economic improvements in the first phases of transition were accompanied by substantial deterioration of the ecological environment in Eastern European countries. However, more recent studies suggest that in some countries, firms do adopt environmental strategies, which in turn has a positive effect on their profitability. Earnhart and Lizal [19] studied air pollutant emissions and the financial performance of the firms in Czechia during the years 1996 and 1998 and documented that environmental procedures reduced firms' costs more than revenues.

Numerous studies have been devoted to the characteristics of firms corresponding to environmental proactivity. Dangelico and Pontrandolfo [13] argue that environmental actions can be linked to three main dimensions: materials, energy, and pollution. The strategic goals of environmental strategy cannot be specified if a firm does not monitor existing pollution levels or materials used. Only if the baseline variables have been assessed, the targets can be set, and monitoring can be attained [61].

The proactivity levels of environmental strategies are related to firms' commitment to environmental activities [45]. Engaging external audits are a sign of even stronger commitment than organizing internal audits, as has been suggested in some previous studies [50]. If a firm is engaging in external monitoring, it is more likely to strive to achieve the goals set in the strategy.

Bakker et al. [7] suggested that "going green" requires firms to address their environmental efforts early in the supply chain, not just within their own business procedures. Involvement of external actors in implementing environmental management practices, as in the case of sustainable supply chains [25], is considered an important sign of proactive firm behavior.

Larger firms with more market experience are more likely to have the necessary resources to develop and implement environmental strategies [49]. Davidson and Freudenburg [16] as well as Zelezny et al. [62], find empirical support for the view that females show higher levels of environmental consciousness. Although pollution from large manufacturing complexes [52, 31] of former socialist countries is usually mentioned as the most important, literature has acknowledged that the service sector also has an important negative environmental impact [11].

These findings from the literature guide the design of the empirical strategy applied in this paper.

3. DATA SOURCES AND EMPIRICAL STRATEGY

The countries in the analysis are heterogeneous, consisting of both EU members (Bulgaria, Croatia, Slovakia and Slovenia) and EU accession countries (Bosnia and Herzegovina and Serbia). The World Bank Enterprise Survey (<https://www.enterprisesurveys.org/>) data is the main data source used for the analysis. Respondents to the Survey are managers of the firms with more than 5 employees and at least 1 percent of private ownership. The latest regular Enterprise Survey was conducted in 2019 and for that year contains the Green Economy Module comprising a set of questions related to the enterprise's environmental impact, environmental policy and regulations. In 2020, World Bank's Enterprise Survey COVID-19 Follow-up (COVID-19 Survey) was developed. COVID-19 Survey is an ongoing project that creates additional panel data set with firms that participated in the Enterprise Survey and includes specific questions related to the firms' experiences during the pandemics.

The first COVID-19 Survey questionnaire was implemented in May 2020, and by June 2021, in most of the countries studied in the present paper, data from 3 survey rounds have been collected. The field collection, which usually lasts for one month for each round, is not uniformly distributed in time across the countries. For example, the first Survey round was deployed in July in Slovenia, in September in Croatia, and in October in Czechia. The third survey round was deployed in May 2021 in Croatia and Slovenia and in June in Czechia. For Serbia and Bosnia and Herzegovina, only one Survey round has been implemented. Therefore, for each respondent, we have a maximum of three observations during the pandemics.

To start the analysis based on the respondents' answers, we explore to what extent the firms in the analyzed countries have adopted environmental strategies. The respondents were specifically asked whether their firm had strategic objectives that mentioned

environmental or climate change issues during the last fiscal year. We assume that a firm has an environmental strategy if there is a positive answer to this question. We average the results on the country level and contrast them to the average proactive environmental strategy indicator that has been developed in accordance with the relevant factors of environmental proactivity discussed in the literature. The designed indicator consists of positive responses to questions in the Green Economy Module questionnaire, when the respondent was asked if the firm:

- has an environmental strategy. This is clearly an initial step in measuring the proactivity of environmental orientation.
- has a manager responsible for the environment, which signals clear internal dedication.
- monitors energy consumption, monitors water usage, monitors CO₂, monitors other pollutants.
- has energy consumption, CO₂, and other pollutant targets. The inclusion of these three variables captures the finding that the proactivity levels of environmental strategies are related to firms' commitment to environmental activities.
- has external audits for energy, water, CO₂ and other pollutants. Engaging external audits is a sign of even stronger commitment. If a firm is engaging external monitoring, it is more likely to strive to achieve the goals set in the strategy.
- monitors CO₂ along the supply chain.

Based on the responses, an indicator of environmental proactivity has been created as an average of all positive answers to the previous question. So, the higher the indicator, the more environmentally proactive a firm is.

We additionally analyze what kind of environmentally friendly measures firms have been implementing in the period 2017-2019. Based on the direct answers from the firm, we can analyze whether the measures are similar or different across the countries.

The Survey also enables a comparative analysis of the main reasons why the firms did not implement any of the environmentally friendly measures in the analyzed period. To explore the financial difficulties the firms have been facing during the pandemics, we explore answers to the following questions:

1. has this firm been overdue on its obligations to any financial institution?
2. has this firm filed for insolvency or bankruptcy?
3. has this firm delayed payments to suppliers?
4. has this firm delayed payments to landlords?

5. has this firm delayed payments to tax authorities?

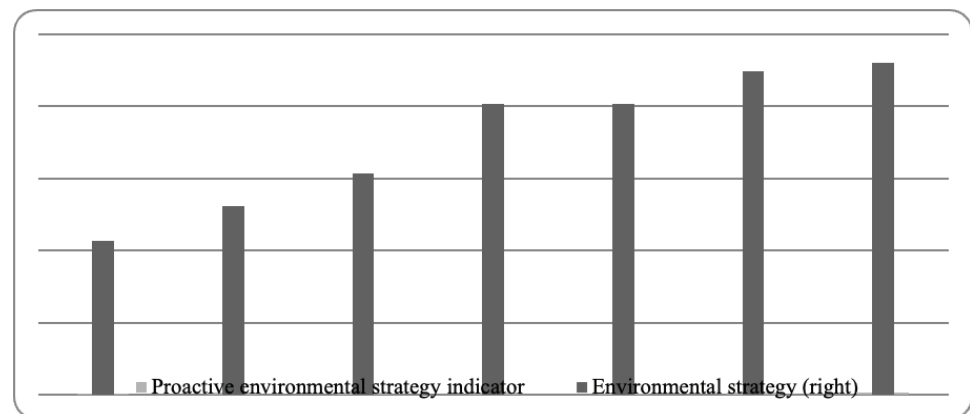
We perform comparative analysis for firms with an environmental strategy in contrast to those lacking such strategic orientation. To further explore whether a firm's pro-environmental orientation affects the financial difficulties faced during the pandemics, we estimate a model with a dependent variable taking value 1 if a firm expressed certain financial difficulty against a set of independent variables, including:

1. Age and size of the firm. Larger firms with more market experience are more likely to have the necessary resources to develop and implement environmental strategy [49]. Age is included as the number of years since the firm started its operations. The size is operationalized through three dummy variables (the medium-sized firm being the reference value): small firms (5-19 employees), medium-sized firms (20-99) and large firms (more than 100).
2. Foreign ownership in the case of transition economies suggests that the enhancement of good management practices can be achieved through the internationalization of ownership structures. A dummy variable taking value 1 if a firm has any percentage of foreign ownership is included in the estimating equation.
3. The economic sector is included to control for different integration in the global value chains.
4. Orientation toward international markets is included based on the assumption that firms highly integrated into global value chains are more likely to be in need of additional financial resources during the pandemics.
5. Innovation activity and output indicators are included based on the argument that innovative firms are more financially constrained, which could be of particular importance in the pandemic. In the case of innovation input, dummy variables capturing internal R&D and external R&D are included. In the case of innovation output, dummy variables capturing whether a firm had product innovation and whether a firm had process innovation.
6. In the case of transition economies, the firms that have secured a business contract with the government could be less financially stressed, so a dummy variable was included to control for this.
7. A previously defined indicator of environmental proactivity is included to assess whether environmentally proactive firms face more financial problems during the pandemics.

In the results, we present and discuss marginal effects after the estimation[?]. The same model is estimated in all the countries. In the case of countries with three pandemic period observations, a pooled probit is estimated. Since in the cases of Serbia and Bosnia and Herzegovina panel component was not available, the results are based on simple probit estimates.

4. RESULTS AND DISCUSSION

We start the analysis by exploring the extent to which firms have an environmental strategy in the analyzed countries and how it corresponds to the proposed indicator of firm environmental proactivity. Average values across the analyzed countries have been presented in Figure 1.



Source: author's own work based on Enterprise Survey data.

Figure 1: Percentage of Firms Having an Environmental Strategy and Average Proactive Environmental Strategy Indicator.

The data shows that the lowest percentage of firms that have adopted environmental strategy in 2019 has been recorded in Croatia among the analyzed economies, while the highest in Slovenia. The environmental proactivity indicator is, on average, the highest in Czechia and again the lowest in Croatia. A relatively low score of Croatia can be attributed to a higher service sector share, particularly tourism. Although tourism is implicitly connected to environmental sustainability, it could be the case that the high percentage of firms operating in tourism have still not explicitly included the environmental concerns in their business strategies.

We next turn attention to the issue of typical environmentally friendly measures firms adopted during the three-year pre-pandemic period. The results are presented in Table 1.

TABLE 1: Percentage of Firms Adopting Specific Environmentally Friendly Measures, 2017-2019.

	<i>Croatia</i>	<i>Serbia</i>	<i>Bulgaria</i>	<i>Czechia</i>	<i>B & H</i>	<i>Slovakia</i>	<i>Slovenia</i>
heating/cooling improvements	30.3	33.9	28.7	46.4	44.0	36.7	49.8
climate-friendly energy generation	5.9	7.3	12.0	6.1	16.7	20.6	17.1
machinery upgrades	30.0	33.2	30.4	58.2	51.7	50.4	50.0
energy management	14.4	19.1	21.7	18.6	26.4	12.1	31.2
waste management	50.5	39.4	31.2	57.2	30.6	56.4	60.4
air pollution control	4.1	10.1	11.8	10.2	15.6	17.4	15.4
water management	5.2	6.0	10.3	15.4	19.6	26.5	20.5
upgrade of vehicles	30.0	31.6	26.3	64.9	46.4	53.7	27.7
lightning improvement	53.3	47.6	27.7	56.4	45.8	39.2	45.3
other measures	5.1	6.9	7.4	6.3	15.3	8.7	7.6
energy efficiency measures	10.9	31.1	28.6	26.9	17.4	26.2	37.5
own EE measures	7.1	21.6	13.8	4.2	8.4	14.9	9.5

Source: Author's estimates based on Enterprise Survey data.

As expected, the intensity of adopted measures differs among the countries, but also the most widely adopted measures differ. In the case of Croatia and Serbia, the countries with the lowest percentages of firms with environmental strategies, firms also adopted the least cost demanding measures (lightning improvements). Upgrade of vehicles is widespread in Czechia and machinery upgrades in Bosnia and Herzegovina. Firms in Bulgaria, Slovakia, and Slovenia focused on waste management measures.

Another interesting question is what the main reasons for not adopting measures are. The results are presented in Table 2.

TABLE 2: Reasons for not Adopting any of the Environmentally Friendly Measures, Percentage.

	<i>Croatia</i>	<i>Serbia</i>	<i>Bulgaria</i>	<i>Czechia</i>	<i>B & H</i>	<i>Slovakia</i>	<i>Slovenia</i>
not a priority	41.4	41.1	38.0	50.2	46.7	46.1	40.0
not profitable	2.6	4.6	4.6	3.2	10.1	9.3	0.5
lack of finance	11.8	7.5	6.1	5.0	7.1	6.6	2.8
regulation uncertainty	6.3	3.9	1.3	1.8	3.0	1.1	-
future prices uncertainty	2.7	1.9	4.3	0.4	3.5	3.9	1.1
operational/ technical risk	2.9	0.6	1.4	3.0	0.1	4.9	0.2

Source: Author's estimates based on BEEPS 2019.

In this case, in all the countries, the firms reported that implementing environmentally enhancing measures was not their priority. This could be attributed to the reactive

strategies most firms tend to apply. This suggests that firms tend to adopt environmentally friendly procedures if regulations require them but, for the most part, do not see potential benefits. For example, in Bosnia and Herzegovina and Slovakia, the second –chosen reason why firms do not adopt environmentally friendly measures is that they do not consider them profitable. Also, it can be noticed that lack of finances is another prominent reason. In this case, it could be assumed that the firms would like to implement measures but have not been able to secure adequate funds. The pandemic period brought severe disruptions to the global markets. Although different government measures were introduced to enable the functioning of the economies, the question remains whether those firms that were environmentally-oriented experienced more problems than those that focused exclusively on their businesses. Comparative analysis is presented in Table 3.

TABLE 3: Financial Difficulties During the Pandemic Period, Percentage.

	<i>Bulgaria</i>	<i>Croatia</i>	<i>Czechia</i>	<i>Slovenia</i>	<i>Slovakia</i>	<i>Serbia</i>	<i>B&H</i>
Environmental strategy							
financial overdue	2.9	7.2	4.0	3.9	1.7	3.3	20.7
insolvency	0.3	0.6	0	0	0.3	0	0
supplier	19.0	21.5	21.2	30.6	17.8	20.0	26.4
landlord	4.0	8.3	7.2	6.8	6.3	5.0	2.3
tax	9.8	5.0	6.9	7.3	2.3	15.0	4.6
No environmental strategy							
financial overdue	4.6	7.7	2.8	7.0	2.1	10.3	11.6
insolvency	0.3	0	0	0	0	0.3	0
supplier	20.0	23.3	21.2	24.4	16.2	24.3	24.0
landlord	5.9	7.8	6.7	7.6	6.2	7.0	2.5
tax	11.9	3.8	3.9	10.3	4.5	24.6	1.8

Source: Author's estimates based the World Bank COVID-19 Follow-up Survey.

There are some similarities between the countries. For example, in all the countries, the highest percentage of firms reported delaying payments to their suppliers due to pandemic conditions. It is interesting to note that in some countries, environmentally oriented firms were more likely to increase their debt to suppliers (Slovenia, Slovakia, Bosnia and Herzegovina), while the opposite has been found in other countries. Although many governments included possibilities to extend payment periods towards the government, the firms also frequently reported additionally extending the deadline for their tax payments. In this case, we identify differences between the firms with respect to their environmental orientation. In some countries, environmentally oriented

firms were more likely to delay payments to tax authorities (Croatia, Czechia, Bosnia and Herzegovina), while the opposite was found in other countries. To further explore whether the environmental proactivity of the firm was linked to the probability that it will have specific financial difficulties, we present estimation results[?] for the case of delayed payment to financial institutions (Table 4) and delayed payments to tax authorities (Table 5).

TABLE 4: Delay Payments to Financial Institutions, Marginal Effects.

	<i>Croatia</i>	<i>Bulgaria</i>	<i>Czechia</i>	<i>Slovenia</i>	<i>Slovakia</i>	<i>Serbia</i>	<i>B&H</i>
time2	-0.119*** (0.022)	-0.025** (0.011)	-0.000 (0.010)	-0.047** (0.021)	-0.031*** (0.010)		
time3	-0.113*** (0.019)	-0.013 (0.010)	-0.020* (0.012)	-0.050** (0.020)	-0.056*** (0.017)		
Small	-0.042* (0.022)	0.005 (0.013)	0.002 (0.013)	0.023 (0.020)	-0.006 (0.011)	-0.037 (0.032)	0.004 (0.045)
Large	-0.015 (0.023)	-0.010 (0.015)	-0.018 (0.025)	-0.042 (0.037)	-0.006 (0.013)	-0.069 (0.042)	0.084* (0.045)
Age	-0.001 (0.001)	0.000 (0.000)	-0.001 (0.000)	-0.000 (0.001)	-0.001 (0.000)	0.003** (0.001)	-0.001 (0.001)
Foreign	-0.026 (0.027)	-0.035 (0.035)	0.008 (0.018)	0.004 (0.029)	-0.019 (0.014)	-0.057 (0.064)	-0.144** (0.065)
manufacturing	0.011 (0.023)	-0.010 (0.011)	0.000 (0.013)	0.036 (0.022)	-0.000 (0.009)	0.014 (0.033)	-0.008 (0.046)
Exporter	-0.021 (0.023)	-0.022 (0.017)	-0.017 (0.012)	-0.021 (0.020)	0.006 (0.010)	0.001 (0.031)	0.009 (0.046)
innov_product	0.019 (0.019)	0.031* (0.017)	0.021* (0.011)	-0.029 (0.021)	0.001 (0.012)	-0.021 (0.035)	0.028 (0.038)
innov_process	0.003 (0.025)	0.004 (0.019)	-0.008 (0.015)	0.035* (0.018)	0.002 (0.014)	-0.030 (0.037)	0.026 (0.040)
RD_internal	0.032 (0.031)	-0.000 (0.023)	0.016 (0.014)	-0.040* (0.023)	-0.043** (0.017)	0.016 (0.037)	0.017 (0.044)
RD_external	-0.047 (0.041)	-0.027 (0.039)	-0.019 (0.017)	0.012 (0.024)	0.034** (0.014)	-0.079 (0.072)	-0.014 (0.049)
state_commerce	-0.017 (0.028)	-0.009 (0.018)	0.007 (0.011)	0.007 (0.020)	0.004 (0.015)	-0.016 (0.032)	-0.052 (0.051)
Proactive	0.048 (0.070)	-0.040 (0.051)	-0.040 (0.047)	-0.011 (0.079)	-0.013 (0.038)	-0.477*** (0.157)	0.055 (0.114)

Source: Author's estimates based the World Bank COVID-19 Follow-up Survey.

The analysis suggests that the factors contributing to firms delaying their payments to financial institutions differ among the analyzed countries, which is highly expected since the countries have adopted different policies to alleviate the effects of the pandemics. When it comes to environmental proactivity, only in Serbia it has been found that the higher the environmental proactivity, the lower the probability that a firm will prolong its financial obligations towards financial institutions. There is also evidence that innovative firms are more likely to face financial difficulties in some

countries (Bulgaria and Czechia). However, it is also interesting to note that those who rely on internal research and development resources are less likely to face financial difficulties (Slovenia and Slovakia), while those relying on external R&D are more likely to be put under pressure by financial obligations (Slovakia).

TABLE 5: Delay Payments to Tax Authorities, Marginal Effects.

	<i>Croatia</i>	<i>Bulgaria</i>	<i>Czechia</i>	<i>Slovenia</i>	<i>Slovakia</i>	<i>Serbia</i>	<i>B&H</i>
time2	-0.096*** (0.021)	-0.036** (0.015)	-0.022* (0.012)	-0.085*** (0.024)	-0.033*** (0.010)		
time3	-0.096*** (0.020)	-0.049*** (0.016)	-0.036*** (0.011)	-0.056** (0.022)	-0.047*** (0.012)		
small	0.007 (0.015)	-0.005 (0.023)	0.017 (0.019)	0.035 (0.028)	-0.000 (0.018)	-0.005 (0.052)	-0.016 (0.021)
large	0.031** (0.015)	-0.041 (0.030)	-0.062* (0.032)	-0.003 (0.041)	-0.014 (0.027)	-0.062 (0.059)	0.0213 (0.019)
Age	-0.000 (0.000)	-0.001 (0.001)	-0.000 (0.000)	-0.001 (0.001)	0.001 (0.001)	0.001 (0.002)	-0.002* (0.001)
foreign	-0.025 (0.022)	-0.078 (0.056)	0.025 (0.030)	0.055 (0.036)	-0.011 (0.024)	0.017 (0.070)	-0.021 (0.027)
manufacturing	0.009 (0.013)	0.041* (0.021)	0.024 (0.019)	-0.020 (0.031)	-0.017 (0.014)	-0.018 (0.055)	0.034 (0.025)
exporter	0.005 (0.013)	-0.015 (0.026)	-0.057*** (0.020)	-0.020 (0.025)	0.030* (0.015)	0.030 (0.049)	-0.014 (0.028)
innov_product	0.014 (0.012)	0.021 (0.029)	0.017 (0.015)	-0.029 (0.028)	-0.009 (0.020)	-0.030 (0.051)	0.036* (0.021)
innov_process	-0.024 (0.019)	-0.027 (0.034)	-0.014 (0.020)	0.019 (0.026)	0.024 (0.019)	-0.026 (0.056)	0.001 (0.019)
RD_internal	-0.034 (0.026)	0.042 (0.036)	0.026 (0.019)	-0.017 (0.032)	-0.015 (0.019)	-0.129** (0.065)	-0.029 (0.025)
RD_external	-0.007 (0.031)	0.037 (0.060)	-0.055* (0.029)	0.002 (0.036)	-0.001 (0.024)	-0.042 (0.086)	0.007 (0.027)
state_commerce	-0.003 (0.016)	-0.016 (0.042)	0.008 (0.016)	-0.002 (0.029)	-0.004 (0.022)	0.009 (0.047)	
proactive	0.072* (0.043)	-0.146** (0.068)	0.037 (0.058)	0.028 (0.099)	-0.045 (0.061)	-0.136 (0.208)	-0.064 (0.059)

Source: Author's estimates based the World Bank COVID-19 Follow-up Survey.

In the case of delaying payments to tax authorities, there are opposite correlations to a firm's pro-environmental orientation. In Croatia (the country with the lowest share of firms having environmental strategy), the higher the environmental orientation of the firm, the higher the probability that it will delay payments to the tax authority during the pandemic crisis. In the case of Bulgaria, there is an opposite relationship. There is also certain evidence that innovative firms are more likely to delay payments (Bosnia and Herzegovina). It is also interesting to note that large firms are more likely to delay payments to the tax authorities in Croatia but less likely in Czechia. In Czechia,

exporters are less likely to delay tax payments, but they are more likely to do so in Slovakia.

The results suggest that the environmental orientation of the firm was not automatically connected to increased financial difficulties during the pandemics in the analyzed countries. This finding is somewhat reassuring since it does not suggest that environmentally oriented firms were disproportionately affected during the pandemics.

5. CONCLUSIONS

The paper focused on analyzing the environmental orientation of the firms and their financial constraints during the pandemics. The analysis has been mainly focused on the post-transition economies because they still lag in environmental performance, and the firm-level evidence for these countries is relatively scarce.

Based on the World Bank Enterprise Survey and COVID-19 Follow-up surveys, firms' environmental orientation has been analyzed in Bosnia and Herzegovina, Bulgaria, Croatia, Czechia, Serbia, Slovakia and Slovenia. It has been identified that the lowest percentage of firms have an environmental strategy in Croatia, while the highest percentage is in Slovenia. While available comparative dataset presents an advantage, it also poses a limitation, since many aspects of firms' environmental orientation could not have been assessed. Thus, future research endeavors should aim to expand the concept of environmental orientation to gain deeper insight of the phenomenon.

Based on the results in this paper, it can be concluded that firms adopting environmental strategies mostly follow regulations and/or choose low-cost measures. Those who do not adopt environmentally friendly measures do not consider them their business priority and do not see potential profit in positioning themselves in the environmentally friendly segment of the market. In order to support environmental orientation of the firms in the analyzed countries, different government support measures should be implemented.

In general, financial difficulties faced by pro-environmentally oriented firms during the pandemics are no higher than those faced by firms not actively opting for environmentally friendly solutions. Thus, although the countries in the sample are still catching up with the environmental leaders, based on the analysis in this paper, it has not been found that the pandemic period disfavored the firm's environmental orientation. Future research endeavors should be directed towards extending the geographical scope of the analysis, to gain deeper insight into the relationship between firm environmental proactivity and financial constraints.

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