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Strategic Sustainability Orientation Influence on Organizational Resilience: Moderating Effect of Firm Size

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Abstract

Background: Owing to the heaviness of setbacks and shocks companies frequently face from the internal/external business environment, building solid organizational resilience and shifting towards strategic sustainability have become the top demands in today's wavering business world. **Objectives:** This study aimed to determine whether strategic sustainability orientation influences organizational resilience and how this relationship is moderated by firm size. **Methods/Approach:** This study uses a methodology structured around the stakeholder theory and embraces multiple regression analysis grounded on collected data from 124 enterprises in Bosnia and Herzegovina ambience. **Results:** Findings from the research revealed that strategic sustainability orientation significantly and positively influences organizational resilience and its three sub-components: anticipation, coping and adaptation capabilities. Results also uncovered that the Small size firms were significantly diverse from the Large and Medium size firms in terms of the influence of strategic sustainability orientation on three capabilities of organizational resilience. **Conclusions:** In addition to literature enriching in sustainability and organization by supplying empirical evidence of strategic sustainability orientation influence on organizational resilience, this study proposes and validates instruments for measuring strategic sustainability orientation and organizational resilience.

Keywords: organizational resilience; sustainability; strategic sustainability orientation; anticipation capabilities; adaptation capabilities
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Introduction

As an innovative, affirmative and fast-spreading concept, sustainability is continuously gaining momentousness in an increasing number of companies globally by occupying a central place in its business strategies. McKinsey Global research confirms a novel role of sustainability – as a vital aspect of business planning and strategic course, emphasizing that historically, companies sought to reduce costs and enhance their reputations. Still, today they seek to integrate sustainability into their complete business mission, goals and values (Bonini et al., 2014). The prime idea behind the sustainability concept calls for mutual acting, long-term perspective and a mindset adjustment for creating added value to deal with achieving required financial performances, alarming environmental deterioration (such as global warming, depletion of natural resources, rising pollution, etc.) and social issues (like inequity or diverse diseases).

Accordingly, the strategic sustainability orientation (SSO) implies a proactive manner and commitment to integrating three meaningful concerns (economic/financial, environmental, and social worries) into business decisions (Pagell et al., 2009). Strategic economic orientation is a foundation for vindicating a company's existence by focusing its business activities and decisions on boosting demanded profit. However, there is no dilemma that firms in the 21st century also need to adjust their general strategy to encompass two other important directions (good and fair treatment for people; and solid eco-friendly orientation). Firms committed to accomplishing sustainability are likely to spotlight long-term goals while encouraging more socially accountable activities (Mio et al., 2015). McKinsey Sustainability (2020) reports that using a sustainability strategy diminishes energy/water usage and can greatly cut costs and improve profits by 60 percent. By balancing three sustainability aspects within manifold financial and non-financial objectives, companies strive to reach the point where the interests of shareholders and essential stakeholders collide. There is an intensely close link between business strategy (in other words – vision for strategic business operations, comprehensive mission, making plans and goals); and sustainability concerns. This research paper was structured around the stakeholder theory, which considers the range of interests of core stakeholders in making important company decisions.

Considering that companies operate in an ambiguous and rapidly-changing environment, which makes them extremely fragile and overly sensitive, the real question is - if strategic sustainability orientation leads to overall organizational resilience. Typically, firms encounter intensified competition, troubles with outward core stakeholders' and numerous issues within the firm. Furthermore, they have been dealing increasingly with much wider economic issues, unfavorably transformed political schemes, social/environmental pressures and horrifying pandemic disorders (such as COVID-19). During COVID-19, four distinct concerns in managing core stakeholders distinguished: (1) issues related to working from home (like the accelerated transition to hybrid work options); (2) security concerns (such as - requirements to provide customers with safer shopping conditions in stores); (3) value chain concerns (logistic issues; termination of contracts by large customers; suppliers distance from whom the products are procured); and (4) issues associated with digitization and IT (for example - novel ways of connecting/communicating with core stakeholders) (Ahmić et al., 2021). Despite multiform hardships and threats, whether they are produced by men or nature, every organization tries to overcome them and adapt to further bloom (Stephenson et al., 2010). Resilience observed in the organizational context, as the relatively newish notion, is gradually gaining speed for coping with contemporary risks and changes. This concept is not only related to

rapidly adapting and leaping over the immense spectrum of harsh crises, but likewise, resilience encompasses the anticipating capability of critical future occurrences emerging from progressive trends (Williams et al., 2017). Summarily, Duchek (2020) defined organizational resilience as "an organization's ability to anticipate potential threats, to cope effectively with adverse events, and to adapt to changing conditions".

Even though 90% of top managers globally believe sustainability is meaningful, sustainability strategy is present in merely 60% of firms (MIT Sloan & BCG, 2016). In Bosnia and Herzegovina (B&H), research findings on top managers with pronounced success records showed that their values are aligned with sustainability (especially social sustainability, demonstrating focus on contributing to others' welfare rather than their own), despite highly present conservatism value (Ahmić et al., 2016). The sustainability topics have become progressively substantial on a wider state-level, as well as for various types of companies in B&H. Correspondingly, the United Nations signed together with B&H authorities a cooperation framework for achieving targeted, sustainable development goals in 2021. - 2025. Likewise, organizational resilience occupies an increasingly valuable place worldwide and more and more in B&H. The available data on blocked enterprise accounts in B&H are far from encouraging, where 100.301 firms were blocked in January 2022. (Central Bank of B&H, 2022), what is more than the aggregated number of active enterprises and entrepreneurs in B&H? The year 2020. was the most affected by COVID-19 regarding export, industrial production and tourism in B&H, while the improvements were made in 2021. concerning all three categories (for example, export raised by 35.7% compared to 2020.) (Agency for Statistics – BHAS, 2022a). Recent inflation growth added challenges for enterprises and its key stakeholders in B&H, which influenced the comparing to the same month in 2020. (Agency for Statistics – BHAS, 2022b).

Although sustainability has garnered increasing interest among academics, the direct empirical linkage between strategic sustainability orientation and overall organizational resilience in developing countries has not been explored yet. To address the gap in research, this study aspires to collect empirical evidence that leaders' strategic sustainability orientation impacts positively and significantly on overall organizational resilience in Bosnia and Herzegovina context; and moderating effects of firm size on the connection between strategic sustainability orientation and organizational resilience dimensions. More specifically, this study aims to provide an answer to two research questions: (1) "Does leaders' strategic sustainability orientation positively and significantly impact overall organizational resilience (observed through anticipation, coping and adaptation capabilities)?"; and (2) "Do significant distinctions exist in an influence of strategic sustainability orientation on organizational resilience comparing firms of different sizes?".

Accordingly, the next section is covered with a literature review explanation regarding stakeholder theoretical background, strategic sustainability orientation, organizational resilience dimensions and the relationship between mentioned constructs. Further steps include formulating a research framework, development of hypotheses and methodologies presentation. Following the presentation of research results, key findings are discussed, including their implications for theory and practice. A summary of core conclusions, together with study constraints and insights for further research, are provided as a final step.

Literature Review

The literature review provides an underpinning construct for research on top topics of strategic sustainability orientation and organizational resilience.

This research paper was shaped by stakeholder theory, which considers various interests of core stakeholders in the company's value-creation process. Authors Savage et al. (2010) described stakeholders as individuals/groups with a pronounced and justified interest in organization actions which can influence a firm's practices in direct and indirect ways. Furthermore, Benn et al. (2016) revealed that managers view stakeholders in a reciprocal manner – where both parties benefit through performances; while the stakeholders depicted themselves as "someone who is connected to the firm by a vested interest" or "whose provided service is crucial for firm and them". Regarding essential stakeholders, Tantalo et al. (2016) consider five types as core: "workers, customers, owners (shareholders), suppliers and the community".

Landrum (2018) emphasized that a company's sustainability practices parallel stakeholder preferences for sustainable matters. To enhance the probability of achieving competitive, sustainable positioning and firm success in the long run, it is greatly meaningful to balance interrelating and competing for major stakeholders' interests (Edgeman et al., 2014). Laudal (2011) argues that a company must be strategic in its sustainability approach to be successful, which implies the involvement of the whole supply chain. Following stakeholder theory, three main hypotheses were developed by setting a positive link of strategic sustainability orientation with each organizational resilience component (anticipation, coping and adaptation capabilities – observed as three models).

Strategic sustainability orientation

Strategic sustainability orientation (SSO) refers to the magnitude of a firm's proactive and continuous dedication toward the integration of not merely economic priorities but also environmental and social imperatives into business decisions (Pagell et al., 2009). Authors supported mentioned SSO concept by presenting its four pillars: 1) proper alignment of economic sustainability goals with the other two (social & environmental); 2) daily communication about sustainability; 3) implementation of sustainability guiding values in the whole business model; and 4) distribution of accountability for sustainability in every department, including all firm's employees and main supply chain members (Pagell et al., 2009). Enterprises, which are sustainability-oriented, actually endeavor to align the strategic level of key stakeholders' worries related to the environment/society next to the firm's economic targets. Furthermore, environmental and social components need to be integrated into the firm's vision, core values, mission, diverse policies and strategic plans to make strategic management and company self-sustainable, while particular environmental and social objectives must be in regular manner measured and evaluated (Fülöp et al., 2014).

Sustainable economic orientation generally involves a firm's active engagement and consideration of sustainability matters in financial plans/decisions and markets (Emamisaleh et al., 2017). Sustainable social orientation encompasses the company's internal social strategy orientation (such as employees' health, safety and human rights protection, their involvement in the decision-making process, and customer information protection) and external social strategy orientation, focused on providing values for its key stakeholders within the supply chain and broader society (Baumgartner, 2010). Organizations can use the environmental orientation as a tool to, for example, reduce damaging emissions, minimize consumption/forestall spilling of natural resources and recycle waste. Therefore, firms must incorporate environmental concerns into their strategic direction (Linnenluecke et al., 2009). By including environmental issues, firms can considerably reduce their costs in the long-

term, contribute positively to the natural environment and enhance people's lives. In conclusion, sustainability orientation shall constitute strategic orientation at the company level. Its needs to be embedded in the company's philosophy to serve as a basis for operational planning, clear activities and programs (Roxas et al., 2012, p. 464).

Organizational resilience

In highly challenging and changeable times that increasingly characterize today's business environment, organizations need to be capable of predicting, facing and adaptably withstanding unfavorable and unexpected external and internal events and difficult situations. Continuance of business operations can be endangered by various unforeseen natural disasters, financial/economic crises, pandemic diseases (such as covid-19), terrorist attacks, sudden issues with key stakeholders, industrial problems and errors caused by employees or managers. When faced with catastrophic threatening situations, diverse companies react differently – some of them victoriously adjust and keep growing while others show deficiency of right responses and ultimately close down. Organizations, to be and become even more resilient, prepare and plan how to not just survive but continue with great work and prosper in the future.

Many authors have provided diverse concepts and definitions when it comes to defining and determining the complex term of organizational resilience and its core components. Various authors illustrated resilience as an organizational ability:

- Resilience is "the ability to adapt and strengthen in the face of challenge, trauma, or stress" (Gallos, 2008);
- Led by process-based research studies, Duchek (2020) defined organizational resilience as "an organization's ability to anticipate potential threats, to cope effectively with adverse events, and to adapt to changing conditions".

The focus of this research paper was on the organizational resilience concept proposed by Duchek (2020), which consists of three dimensions:

1. Anticipation capabilities (comprise three distinctive capabilities: an observation ability of inner/outer changes; being able to pinpoint prospective threats or developments of vital weight; and preparing ability, to the fullest extent, for unforeseen occurrences);
2. Coping capabilities (it is tightly connected to managing crisis and includes two subcategories: the ability to accept to have troubles; and being able to solutions developing/implementing); and
3. Adaptation capabilities (it embraces two capabilities types: "reflection and learning; and organizational change capabilities").

Regarding adaptation capabilities, this dimension was expanded for this paper by including not only abilities but simultaneously adaptation capacity. According to Richtnér et al. (2014), parallel with capability explanation, viewed as a compound of ability and capacity.

Anticipation capabilities

An initial stage of organizational resilience refers to the anticipation, which depicts preventive and proactive steps and actions linked to turbulences, crises and disturbances that might appear inside the company or in its environment. The aforementioned does not denote that if the organization is resilient, it can simultaneously prevent or avoid all failures, damages or potential crises. Crises frequently surprise the business world with their sudden appearance. Companies differ in their ability to predict, see and react to unannounced tumultuous events - some

foresee it faster and more accurately than others and react to it straightway. At the same time, other firms just wait to see what will happen. Weick et al. (2008) viewed anticipation ability as predicting the ability of possible unrestrained and unwanted impacts that are grounded on little distinctions.

Duchek (2020) proposed three particular capabilities as components of anticipation capabilities: an observation ability of inner/outer changes; pinpointing prospective threats or developments of vital weight; and preparing ability, to the fullest extent, for unforeseen occurrences. Regarding observation and identification capabilities, author Duchek (2020) considers them closely related and thus unites them together. The starting point for every organization is to observe and recognize the initial earliest signals of an upcoming crisis and to respond accordingly as quickly as possible, thus, evading its expansion. These capabilities are also depicted in the literature as the acquisition of weak signals (or information on emerging issues) and environmental scanning as an activity of searching for weak signals (Day et al., 2005; Ilmola et al., 2006).

On the other hand, authors Van Trijp et al. (2012) utilized the notion of situation awareness, which they evaluated by six measures: (1) degree of advanced awareness of expectancies, obligations and constraints concerning interested parties, equally inner (employees) and outer (consultants, suppliers, customers etc.); (2) capability to keep an eye out for favorable occasions and prospective crises; (3) degree of growing resource attainability awareness – equally inwardly/outwardly; (4) capability of precisely determining crises and their effects; (5) degree of advanced comprehending what triggers crises; and (6) degree of advanced comprehending of required minimums for operations in terms of recovery.

On top of the ability to observe and identify current internal/external changes and forthcoming crises, it is highly significant for companies to focus on possible future developments. Hillmann et al. (2018) claim that scenario planning practices can help companies consider diverse futures (including what is unrealistic and unthinkable) and ways to manage them. When it comes to preparation capabilities, it is not characteristic only for highly-risky organizations but also for every resilient organization. Organizations are prepared if they are fitted out to handle unannounced disasters and are prepared to benefit from sudden chances (Lengnick-Hall et al., 2009). Preparation capabilities help develop necessary resources during crisis time – such as effective relationships, befitting plans for recovery and joint comprehending (Duchek, 2020). Emergency planning, managing risks and management for business continuity can serve as meaningful insights into the firm's preparation capabilities. Therefore, planning is closely related to the preparation phase, viewed through having manifold competitive action options for responding/adapting to different situations. Through simulation/rehearsal practices, the aims of this kind of plan can be successfully attained (Gibb et al., 2006). Additionally, Chopra et al. (2004) emphasized customer diversification, redundancy in the supplier base and aggregate demand as effective preventive actions.

Coping capabilities

Along with anticipation capabilities, resilience encompasses the organization's abilities to cope, which are substantial for the thriving management of unforeseen critical events (incidents or crises) after they become evident. Coping capabilities are divided into "the ability to accept an existing problem and the ability to develop and implement solutions" (Duchek, 2020). These capabilities involve the application of straightaway or rapid decisions and actions as the right answers to surprising acute events. Problem acceptance is present not merely in an individual's case (individual

resilience in the face of the real world) but in an organizational context, viewed as "the cognitive confrontation" which enables difficult-facing situations and quickly acting. An organization's timely reaction by being the first to release crisis information can reduce negative perceptions and accelerate acceptance (Claeys et al., 2012).

Respond strategies to the crisis can include functional actions and communication; placement of information-oriented toward helping employees and other key stakeholders to avoid damage; and management of the firm's public image (Bundy et al., 2015; Coombs, 2015). Solutions that make sense must be rational, responsible, and understandable with constant feedback among understanding and taking action. Many researchers in the resilience domain have highlighted the importance of collective sensemaking in cognitive function as a component of resilience (Lengnick-Hall et al., 2009; Linnenluecke et al., 2012). In addition to the idea creation in developing solutions during the appearance of unexpected events, coordination mechanisms (both formal and informal) are substantial for making prompt decisions when failures could end with dreadful consequences (Faraj et al., 2006). Therefore, companies must balance formal organizational structures, marked with clearly determined responsibilities for prompt decision making and instant response, and informal features – actions characterized by openness to change, flexibility, creativity and more freedom.

Adaptation capabilities

Adapting to unfavorable circumstances and benefiting from alteration comes as the third phase of organizational resilience, which comprises capabilities that come in two forms: "reflection and learning; and capabilities of organizational change" (Duchek, 2020). Adaptive resilience classically appears after the disaster and requires resilient leadership, extrinsic connections, inside cooperation, past experience-based learning and staff well-being (Nilakant et al., 2014). The reflection process on the experienced critical problem requires the firm to thoroughly and seriously interpret, analyze and explain the specificity of the problem and take precise actions toward its solving. Regarding learning, resilient organizations which rely on learning - create learning environments that are highly trustable and safe (Seville et al., 2015), focus on setting goals towards achieving excellent performance, support learning/development (Robb, 2000) and enable learning and development by building needed structures and mechanisms (Lengnick-Hall et al., 2011). Some important learning manners involve: interaction and collaboration for knowledge exchange/learning from failures (Gressgård et al., 2015), learning indirectly from the experienced incidents of similar organizations in a firm's industry (Madsen, 2009) and learning from other industry's failures might be significant learning source (Crichton et al., 2009) – such as their incident reports, alerts and diverse organization stories.

Organizational change, which comes from a raised level of learning or second-order learning (Sørensen, 2002), leads to the development of novel upgraded norms, values and practices (Duchek, 2020). Change management capabilities are required for transferring freshly developed solutions, based on generated new knowledge, to their single parts. It is significant to highlight that many problems or change resistances can emerge from implementing the latest knowledge. "Studies have shown that two out of three change initiatives fail" (Sirkin et al., 2005), wherefore it is crucial for resilience how the change is managed (Ates et al., 2011). Accordingly, adaptation includes building significant change and overcoming change resistance (Dayton, 2004).

Diverse practices in the domain of change management can be applied to surmount the special resistance manifestations, for example - adequate soft

managerial practices (viewed through effective and striking communication/relationships inside the organization) or by engaging "change agents", who follow the whole change/implementation process and apply their intervention methods and helpful options if it is needed (Jones, 2006). In addition to adaptation abilities, it is highly significant to include also organization's adaptive capacity as the meaningful part of adaptation capability (Richtnér et al., 2014), such as innovation and creativity; internal resources' capacity/capability; governing structures, leadership, and management; getting staff involved and engaged; making decisions in a decentralized and responsive way (Lee et al., 2013).

Strategic sustainability orientation and organizational resilience

The research studies on the relationship between strategic sustainability orientation and organizational resilience are extremely scarce and underdeveloped, while the empirical studies between the two categories still don't exist. Sparse research studies have explored the effects of social and environmental constituents of strategic sustainability on adaptive capacity (observed as a part of organizational resilience). Charrois et al. (2020) found out through interviews and focus groups that some organizations' strategic sustainability development journeys affected their adaptive capacity (viewed as an organizational resilience aspect), moving from a condition of reactivity to a more thoughtful and proactive one that benefits them in manifold modes. Three adaptation capacity elements - trust, continuous learning and common meaning (observed as the force of a shared vision) stood out as the most fostered by strategic sustainability development, while diversity and self-organization were the least fostered by strategic sustainability (Charrois et al., 2020). Authors further highlighted that the human factor of sustainability practices appeared as a strong determinant of adaptation capacity, as human beings gather in all processes of strategic sustainability development to create an imagined future and to discuss how to get there (Charrois et al., 2020). By having developed the five components of capacity for adaptation, an effective social system may, as a learning organism, adapt more smoothly to changing external conditions (Missimer et al., 2017).

Considering that a huge emptiness exists in exploring the influence of the strategic sustainability orientation dimensions on organizational resilience (based on the wider capabilities concept), this study focuses on discovering if specific dimensions of strategic sustainability orientation impact organizational resilience (anticipation, coping and adaptation capabilities) in developing country, such as Bosnia and Herzegovina.

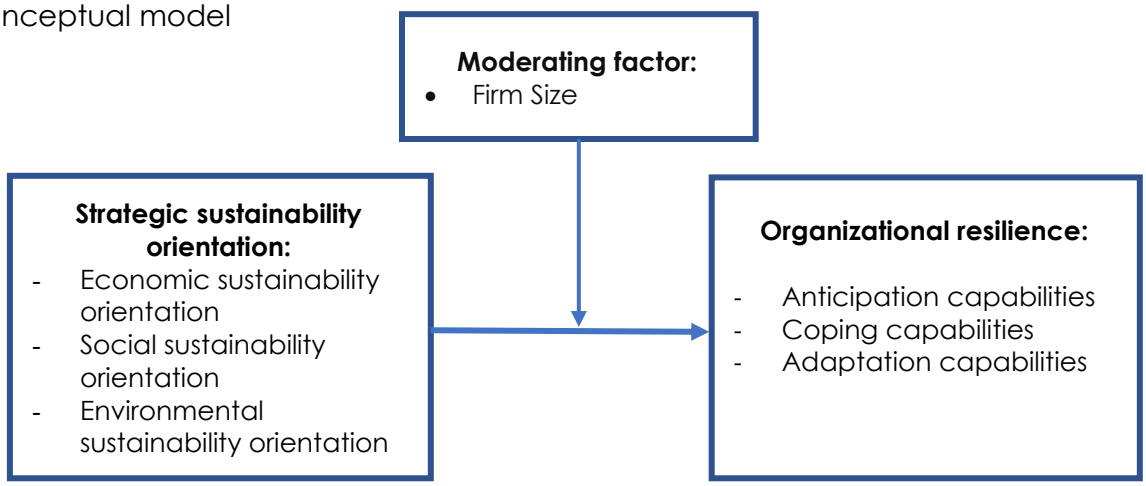
Research framework and research hypotheses

This paper endeavored to explore the influence of strategic sustainability orientation elements on overall organizational resilience and the moderating effect of firm size on this relationship within enterprises in Bosnia and Herzegovina. Following the main objectives, the conceptual model was produced as the empirical research basis.

Figure 1. demonstrates two sections of the proposed conceptual model: strategic sustainability orientation dimensions and its effect on organizational resilience components. Strategic sustainability orientation (SSO), as an independent variable, consists of three orientations: economic, social and environmental sustainability orientations (Pagell et al., 2009). As the dependent variable, organizational resilience encompasses three dimensions introduced by Duchek (2020): anticipation, coping and adaptation capabilities. Regarding adaptation capabilities, this dimension was expanded for this paper by including not only abilities but simultaneously adaptation

capacity, which is following the capability explanation stated by Richtnér et al. (2014), who observed capability as a compound of ability and capacity.

Figure 1
Conceptual model



Source: Author's illustration

Research hypotheses were identified on the foundation of the depicted conceptual model, which is as follows:

Hypothesis (1a): Strategic sustainability orientation positively influences organizational anticipation capabilities.

Hypothesis (1b): Strategic sustainability orientation positively influence organizational coping capabilities.

Hypothesis (1c): Strategic sustainability orientation positively influences organizational adaptation capabilities.

Due to the distinctions between how small and large businesses build and employ their strategic assets, firm size is relevant in analyzing the relationship (Jin et al., 2019). Thus, hypotheses for the influence of firm size on the relationship between strategic sustainability orientation and organizational resilience are as follows:

Hypothesis (2): There are significant distinctions in the influence of strategic sustainability orientation on organizational resilience comparing firms of different sizes.

Methodology

Sample description

Sampling: Enterprises of different sizes based in Bosnia and Herzegovina were the target population in this research study. The primary source to collect information was the list of 400 companies' profiles from Bosnia and Herzegovina that have existed on the business scene for more than five years (have active bank accounts; no blocked accounts), provided by professional consulting provider TRON Systems. The companies were sorted by size (number of employees), using the classification of firm size suggested by the Agency for Statistics of Bosnia and Herzegovina ("0-49 = small firms; 50-249 = medium firms; and >250 = large firms"). Companies' leaders were selected to fill the questionnaire since they deal with strategic matters in companies, which also encompasses strategic sustainability orientation. Leaders or top managers for this research included: directors/CEO/general managers, branch managers, and managers who belong to top management teams and participate in strategic decision-making (Ahmić, 2016).

Data collection: In all, questionnaires were sent to 240 companies by e-mail; and some of the selected firms were contacted face-to-face (by delivering a questionnaire). In addition to the first e-mail, a second e-mail (as a reminder) was sent two weeks later, and a phone call was made as the third reminder. Finally, the research sample in this study included 124 companies of different sizes in Bosnia and Herzegovina (response rate of 51.66%). Respondents' profiles (managers and companies involved) are presented in table 1.

Table 1
Structure of the sample

Sample distribution		Percentage
Respondent profile	Director/CEO/Executives	42%
	Branch managers	37%
	Members of the top management team	21%
	Total	100% (N=124)
Enterprise size (number of employees)	1-49	44%
	51-249	30%
	Over 250	26%
	Total	100% (N=124)
Type of activity sector	Manufacturing sector	27%
	Commerce sector	42%
	Service sector	31%
	Total	100% (N=124)

Source: Author's work

Regarding the respondent profile, most leaders (42%) worked as directors/CEOs/Executives, a large group of leaders worked as branch managers (37%), and 21% of respondents among leaders worked as a member of top management teams.

Regarding company size, the greatest number of organizations belonged to the group of small enterprises (44%); 30% of companies were medium-sized, while 26% referred to large enterprises with more than 250 employees. Concerning the activity sector type, the largest portion of organizations fell under the category of commerce sector (42%), 31% of enterprises were in the service sector, whereas 27% of firms belonged to the manufacturing sector.

Research instrument description and reliability

This survey was based on a questionnaire designed by the author for this research purpose to gather data about strategic sustainability orientation and organizational resilience in enterprises operating in Bosnia and Herzegovina. The questionnaire was divided into three segments. The first questionnaire's segment incorporated information regarding strategic sustainability orientation. The second segment of the questionnaire involved information considering organizational resilience: anticipation, coping and adaptation capabilities. The items for strategic sustainability orientation were formulated as a result of a combination of research conducted by Munoz et al. (2015); Pagell et al. (2009), and Blackburn (2008), while the questions for organizational resilience were created based on theories and similar research by Prayag et al. (2018), Duchek (2020) and Lee et al. (2013). Grounded on a 5-point Likert scale, all items were accordingly measured, where offered numbers indicated (1 –disagree, 5 – absolutely agree). The third segment of the questionnaire comprised basic demographic information about leaders (respondent's age, gender and the present position in the

company) and basic firm information (sector of activity; and firm size). Research instrument details are demonstrated in Table 2.

Table 2
Research instrument details

Constructs	Code	Items
Independent variable – Strategic sustainability orientation		
Economic orientation	EO_1	The mission statement of our firm emphasizes financial performance importance
	EO_2	We are committed to increasing our market share
	EO_3	All employees are informed about the firm's financial priorities
	EO_4	We are committed to increasing return on investment and profitability that improves the lives of everyone connected to our firm
	EO_5	In making operational decisions, we take short-term productivity results into consideration
Environmental orientation	ENO_1	Environmental performance is an important part of our firm's mission statement
	ENO_2	Our company is dedicated to reducing pollution
	ENO_3	We communicate to all employees our firm's ecological priorities
	ENO_4	We assess the impact of operational decisions on the environment
	ENO_5	We must make responsible use of natural resources, regardless of our business nature
Social orientation	SO_1	Our company's mission statement stresses the importance of employee well-being
	SO_2	We support social philanthropy at our firm
	SO_3	We promote the practice of fair, non-discriminatory, non-exploitative and respectful treatment of all employees in hiring/work processes
	SO_4	In our business, we always operate legally and ethically
	SO_5	We evaluate the impact of our operational decisions on society
	SO_6	In our firm, dealing with customers and suppliers fairly is a must
Dependent variable – Organizational resilience		
Anticipation capabilities	ANC_1	We proactively (in advance) monitor what is happening in our sector and inside the company to receive early warnings of upcoming problems
	ANC_2	Our company can detect and recognise future critical developments, potential crises and their consequences
	ANC_3	We actively maintain contacts and connections with other companies and key stakeholders so that we can rely on each other and work together in crises
	ANC_4	We are focused on customer and supplier diversification
	ANC_5	We have prepared formal plans on how to act when various dangers/risks happen
	ANC_6	Our organization is committed to practising and testing its emergency plans to ensure they are effective
Coping capabilities	CC_1	We are successful during the crisis in finding a balance between the existing formal organizational structure and crisis management/communications team inclusion
	CC_2	We quickly ensure smooth business continuity by keeping the workforce and key stakeholders rightly informed about handling emerging problems
	CC_3	Working cooperatively makes it easier to effectively and efficiently manage priorities, resources, and options and to produce fruitful solutions

	CC_4	We provide support to our customers (from an apology for caused inconvenience to affected product replacements/refunds, discounts or new guarantees)
Adaptation capabilities	ADC_1	Our firm's priority is sharing knowledge among employees on how to respond to unexpectedly grown problems
	ADC_2	Our organization maintains reserve stocks and sufficient resources to absorb some sudden changes
	ADC_3	If our company was prevented from operating for several months, the connections we have with suppliers and customers would help us recover quickly
	ADC_4	If key people were unavailable, there are always others who could satisfactorily fill their role
	ADC_5	We are known for our ability to use knowledge in novel ways
	ADC_6	We incorporate the most important lessons from the crisis (its causes, consequences and solutions) into the company's regulations, norms, values and practices

Source: Author's work

Cronbach alpha reliability analysis was conducted to uncover the internal consistency of derived factors (table 3.). Every underlying factor in the strategic sustainability orientation and organizational resilience construct had a Cronbach alpha value greater than 0.7, showing the acceptable level of consistency amongst inner factors and well-reliable constructs (table 3).

Table 3
Constructs' reliability

Variables	Total number of items	Cronbach Alpha
Economic orientation	5	0.891
Environmental orientation	5	0.855
Social orientation	6	0.862
Anticipation capabilities	6	0.901
Coping capabilities	4	0.823
Adaptation capabilities	6	0.851

Source: Author's work

Results

Data in this research were analyzed using exploratory factor analysis, Pearson correlation matrix, and multiple regression analysis.

Exploratory factor analysis

Applying varimax rotations, exploratory factor analysis was performed for examining the validity of data structure and extracting the dimensions of strategic sustainability orientation construct and organizational resilience construct. Both Kaiser-Meyer-Olkin statistical tests (over 0.5) and tests from Bartlett (with a statistical significance of 1%) displayed that further factor analysis was adequate for the data. As an outcome of Varimax rotation, which was converged in five iterations, three factors were extracted as part of the strategic sustainability construct, with eigenvalues higher than one and average variance explained at 70.57, labelled as (1) economic orientation; (2) environmental orientation; and (3) social orientation (Table 4).

Regarding the dependent variable – organizational resilience, three factors were extracted from the Varimax rotation matrix, converged in five iterations, which explained 71.09 per cent of the observed variance (with eigenvalues above one).

Based on the total of 16 items, these three factors of organizational resilience construct were named: (1) anticipation capabilities, (2) coping capabilities, and (3) adaptation capabilities (Table 5).

Table 4
Factor analysis of strategic sustainability orientation construct

Dimensions	Variables	Mean	Components		
			EO	ENO	SO
Economic orientation (EO)	EO_1	4.65	0.901		
	EO_2	3.66	0.865		
	EO_3	3.38	0.773		
	EO_4	4.04	0.874		
	EO_5	3.85	0.832		
Environmental orientation (ENO)	ENO_1	3.02		0.675	
	ENO_2	3.15		0.702	
	ENO_3	2.73		0.606	
	ENO_4	2.95		0.613	
	ENO_5	4.22		0.825	
Social orientation (SO)	SO_1	4.37			0.841
	SO_2	4.31			0.825
	SO_3	4.03			0.782
	SO_4	3.63			0.766
	SO_5	3.54			0.733
	SO_6	4.51			0.857
Eigenvalues			3.473	2.321	1.167
% Explained variance			35.251	23.443	11.877
Cumulative % explained variance			35.251	58.694	70.571

Notes: Extraction method - Normalization of the Principal Components Rotated Method (Varimax with Kaiser)
Source: Authors' work

Table 5
Factor analysis of organizational resilience construct

Dimensions	Variables	Mean	Components		
			ANC	CC	ADC
Anticipation capabilities (ANC)	ANC_1	4.51	0.802		
	ANC_2	3.89	0.715		
	ANC_3	4.05	0.861		
	ANC_4	4.41	0.857		
	ANC_5	3.85	0.625		
	ANC_6	3.44	0.620		
Coping capabilities (CC)	CC_1	4.15		0.755	
	CC_2	4.41		0.723	
	CC_3	4.08		0.714	
	CC_4	4.18		0.718	
Adaptation capabilities (ADC)	ADC_1	4.30			0.814
	ADC_2	4.01			0.761
	ADC_3	3.82			0.752
	ADC_4	4.24			0.713
	ADC_5	3.76			0.688
	ADC_6	3.65			0.634
Eigenvalues			3.236	2.017	1.822
% Explained variance			32.471	20.213	18.408
Cumulative % explained variance			32.471	52.684	71.092

Source: Author's work

Since all extracted factors of strategic sustainability and organizational resilience construct had values greater than 0.50 (Table 5), they were retained for further research.

Main research hypothesis testing

Before testing hypotheses by multiple regression analysis, correlation analysis was conducted, which revealed the existence of a significant correlation between the three orientations towards sustainability (coefficients of correlation varied from 0.451 to 0.702; a 1% and 5% significance level). These results indicated that the regression analysis outcome could be significantly affected by multicollinearity among independent variables. To investigate this possibility, we calculated Variance Inflation Factors (VIFs) in this study. As shown in Table 6., all VIF values are below 4 (the permissible range of VIF), providing evidence that multicollinearities do not interfere with regression outcomes.

To determine if strategic sustainability orientations are associated with organizational resilience, hypotheses testing ("H1a, H1b, and H1c") was done using regression analysis. Three multiple regression models were constructed with three orientations of strategic sustainability as the independent variables: economic, environmental and social orientation, while each model's dependent variables were: anticipation, coping and adaptation capabilities.

As it is summarized in Table 6., the use of strategic sustainability orientation affects organizational resilience statistically significantly in all three multiple regression models. The first multiple regression model represents the influence of strategic sustainability orientation on anticipation capabilities: This regression model's R-square is 0.558, meaning that strategic sustainability orientation components can explain 55.8% of the variance in anticipation capabilities. Two strategic sustainability orientations (economic and social orientation) depict a significant impact on anticipation capabilities at a confidence level of 1%, whilst the environmental orientation also shows a significant impact - but at a confidence level of 5%. Anticipation capabilities are impacted most significantly by economic orientation, posting a beta coefficient of 0.49. The second most impactful component is social orientation, followed by environmental orientation with coefficient values of 0.37 and 0.21.

Table 6

Regression analysis results in the influence of strategic sustainability orientation on organizational resilience

	Organizational resilience			
	Anticipation capabilities	Coping capabilities	Adaptation capabilities	
R	0.747	0.579	0.688	-
R2	0.558	0.335	0.473	-
df	124	124	124	-
Sig.	0.000	0.001	0.000	-
	Coef.	Coef.	Coef.	VIF
Constant	1.082	0.874	1.155	-
Economic orientation	0.496***	0.381**	0.573***	2.643
Environmental orientation	0.212**	0.113	0.242**	2.215
Social orientation	0.378***	0.224**	0.341***	2.441

Notes: n = 124; * Statistically significant at 10%; ** Statistically significant at 5%: *** Statistically significant at 1%

Source: Author's work

The second multiple regression model describes the influence of strategic sustainability orientation on coping capabilities: This regression model's R-square is 0.335, meaning that strategic sustainability orientation components can explain 33.5% of the variance in coping capabilities. Two strategic sustainability orientations (economic and social orientation) depict a significant impact on coping capabilities at a confidence level of 5%, whilst an environmental orientation does not display a statistically significant effect on coping capabilities. Coping capabilities are the most significantly impacted by economic orientation based on the beta coefficient of 0.38; continuing with social orientation – has a beta coefficient of 0.22.

The third multiple regression model illustrates the influence of strategic sustainability orientation on adaptation capabilities: This regression model's R-square is 0.473, meaning that strategic sustainability orientation components can explain 47.3% of the variance in adaptation capabilities. Two strategic sustainability orientations (economic and social orientation) depict a significant impact on adaptation capabilities at a confidence level of 1%, whilst the environmental orientation also shows a significant impact at a confidence level of 5%. Adaptation capabilities are the most significantly impacted by economic orientation based on the beta coefficient of 0.57, continuing with social orientation (with a beta coefficient of 0.34) and environmental orientation (β=0.24).

Summarily, strategic sustainability orientation statistically positively influences organizational resilience, even if the impact varies for different orientations. Accordingly, hypotheses H1a and H1c are completely confirmed, considering a positive and statistically significant influence of strategic sustainability orientation on organizational anticipation and adaptation capabilities. Furthermore, hypothesis H1b was mostly confirmed regarding a positive and statistically significant influence of strategic sustainability orientation on organizational coping capabilities (only environmental orientation didn't show a statistically significant impact).

Testing moderating effects of firm size on the strategic sustainability orientation

Utilizing firm size to analyze the relationship between strategic sustainability orientation and organizational resilience, the H2 hypothesis will be tested in this section.

A regression analysis using pooled samples and dummy variables for medium-sized and large-sized organizations is conducted to make a comparison of the effect of strategic sustainability orientation on organizational resilience among three diverse firm-size groups (Table. 7). Based on the results of the analysis, the Small size firms are significantly diverse from the Large and Medium size firms in terms of the influence of strategic sustainability orientation on anticipation, adaptation and coping capabilities.

Regarding anticipation capabilities, the effect of economic orientation is stronger in Medium and Large firms than in Small ones (with coefficients of 0.482 and 0.538, respectively (at 5% significance)). Moreover, the influence of social orientation on anticipation capabilities is similarly stronger in Medium and Large enterprises than in Small ones (coefficients: 0.226 and 0.324, respectively (at 5% significance)). About coping capabilities, Large enterprises have a weaker effect on environmental (Coefficient: -0.061) and social orientation (Coefficient: -0.153) at 5% of significance in comparison with Small firms.

Regarding adaptation capabilities, Medium firms demonstrate stronger economic orientation (Coefficient: 0.218 at 10% significance) than Small firms. Furthermore, Large

enterprises show a greater effect on economic and social orientation (Coefficients: 0.472 and 0.319, at 5% significance) than Small firms.

Regarding the distinctions in the influence of strategic sustainability strategy on organizational resilience, significant distinctions exist in its impact on three-size enterprises (regarding economic, environmental and social orientation). Based on the presented results, hypothesis H2 is confirmed.

Table 7
Regression analysis among three diverse firm size groups of the influence of strategic sustainability orientation on organizational resilience

	Organizational resilience		
	Anticipation capabilities	Coping capabilities	Adaptation capabilities
R	0.831	0.672	0.815
R2	0.691	0.451	0.664
R2 Adjusted	0.535	0.311	0.453
df	124	124	124
Sig.	0.000	0.002	0.001
	Coef.	Coef.	Coef.
Constant	0.873	1.472	1.125
M	0.718	0.369	0.403
L	1.325	0.114	0.817
Economic orientation	0.371	0.152	0.073
Environmental orientation	0.236	0.062	0.030
Social orientation	0.189	0.147	0.142
M x Economic orientation	0.482**	0.204	0.218*
M x Environmental orientation	0.263	0.121	-0.098
M x Social orientation	0.226**	0.191	0.205
L x Economic orientation	0.538**	0.383	0.472**
L x Environmental orientation	0.441	-0.061*	0.151
L x Social orientation	0.324**	-0.153**	0.319**

Notes: n = 124; * Statistically significant at 10%; ** Statistically significant at 5%: *** Statistically significant at 1%; M-medium sized firms; L-large firms
Source: Authors' work

Discussion

Part one of this research study focused on discovering if the top managers' strategic sustainability orientation affects organizational resilience positively and statistically significant. A regression analysis revealed that strategic sustainability orientation significantly and positively influences organizational resilience and its three sub-components: anticipation, coping and adaptation capabilities. This indicates that top managers must broaden their business orientations to strengthen organizational resilience by involving economic priorities and environmental and social imperatives of sustainability orientations. Concerning previous studies, Murray (2020) revealed in his study that sustainability-focused organizations have a better chance of surviving when faced with a crisis. Therefore, economic, environmental and social orientations must be part of the firm's core mission statement – as the clear purpose of its serious business operations. Secondly, firms must transmit all three strategic sustainability orientations into real and continuous commitment and daily communication between top managers and employees.

Additionally, economic, environmental and social orientations must be incorporated into operational decisions and monitored as key performances to achieve organizational resilience. Even though economic orientation showed a

higher influence on organizational resilience than the other two orientations, social orientation was similarly important to achieving the overall resilience of the organization, emphasizing the importance of key stakeholders' involvement in the firm's strategic orientation. Among the most influential social orientation' variables were: fairly dealing with customers and suppliers, pronouncing employees' well-being as part of the firm's mission and social philanthropy support. Other studies, such as the one by Paulraj (2011), proved that sustainable supply management leads to organizational resilience.

The regression results of this research study displayed that anticipation and adaptation capabilities are more affected by strategic sustainability orientation than coping capabilities. Economic, environmental and social sustainability orientations proved to be more statistically significant for anticipation and adaptation capabilities. Regarding anticipation capabilities, all three sustainability orientations manifested their high importance in observing and recognizing initial earliest signals of forthcoming potential crisis and preparing efficient plans for responding promptly – by evading its expansion. Concerning adaptation capabilities, economic, environmental and social orientations have a statistically significant impact on adapting to unfavorable situations and benefiting from occurring changes. This is especially evident in its effect on sharing knowledge among employees on how to respond to unexpected problems; long-term satisfactorily filled jobs; and maintenance of sufficient resources and reserve stocks to cope with sudden changes. Top managers' strategic sustainability orientation effect is also important concerning three other adaptation capabilities variables: supporting stable connections from suppliers and customers; utilizing knowledge in novel ways; and incorporating meaningful lessons learned from crisis into the company's regulations, norms, values and practices. A research study by Charrois et al. (2020) found that some organizations' strategic sustainability development journeys affected their adaptive capacity (viewed as an organizational resilience aspect), moving from a condition of reactivity to a more thoughtful and proactive one that benefits them in manifold modes.

Concerning coping capabilities, economic and social orientation showed positive and statistically significant influence on coping capabilities. In contrast, environmental orientation impact – even though it was p- wasn't significant for coping capabilities. Accordingly, economic and social orientations proved to be important when a crisis appears – by quickly ensuring smooth business continuity by keeping the workforce and key stakeholders informed about handling emerging problems. Additionally, these two orientations demonstrated their significant impact on providing customer support (from an apology for caused inconvenience to affected product replacements/refunds, discounts or new guarantees); and balancing the existing formal organizational structure and crisis management/communications team inclusion. Economic and social orientations were also meaningful for cooperative work during the crisis, making it easier to effectively and efficiently manage priorities, resources, and options and produce fruitful solutions. Firms' specific priorities may explain the insignificant influence of environmental orientation on coping capabilities for solving urgent problems when faced with a crisis (financial – cutting costs, improving profit; and social focus – on calming and encouraging employees and relationships with other key stakeholders). Another possible explanation is the lack of managers specialized in efficient environmental management who would deal with eco-issues even during a crisis.

Part two of this research study aimed to determine if there are significant distinctions in the influence of strategic sustainability orientation on organizational resilience by

comparing firms of different sizes. Based on the analysis results, the Small size firms were significantly diverse from the Large and Medium size firms in terms of the influence of strategic sustainability orientation on anticipation, adaptation and coping capabilities. More specifically, my research study' regression findings revealed that regarding anticipation capabilities, the effect of economic and social orientations was stronger in Medium and Large firms than in Small ones. It may be explained by Large and Medium firms' greater resources and investment in proactively 'within the firm' and sector monitoring, gathering information on future critical developments and efficient formal plan preparations on how to act when various dangers/risks happen.

Concerning the coping capabilities, the Large enterprises demonstrated a weaker effect of environmental and social orientation than Small firms. The explanations for this finding may be found in the fact that smaller companies are generally more flexible in dealing with organizational change due to their simpler formal organizational structure and better coordination – which allow them to faster implement effective solutions in response to the crisis and achieve wide acceptance. Concerning adaptation capabilities, Large enterprises showed a greater effect on economic and social orientation than Small firms. A large organization's abilities, greater reserve stocks and resources may justify the former. Similarly, the Medium firms also demonstrated stronger economic orientation than Small firms.

Conclusions

The present study examined the effects of strategic sustainability orientation on organizational resilience and how this relationship is moderated by firm size. The hypotheses were tested using multiple regression techniques, which revealed that strategic sustainability orientation (which encompassed economic, environmental and social orientation) significantly and positively influences organizational resilience. Its three sub-components are anticipation, coping and adaptation capabilities. This indicates that top managers must broaden their business orientations to strengthen organizational resilience by involving economic priorities and environmental and social imperatives of sustainability orientations.

In anticipation capabilities, all three sustainability orientations stressed their importance in observing early signs of potential crisis, recognizing them, and preparing efficient plans for proper response. Regarding adaptation to unfavorable situations and taking advantage of change occurrences, strategic sustainability orientation also showed a significant statistical impact. Moreover, about coping capabilities (when a crisis appears), economic and social orientation demonstrated a positive and statistically significant impact on it. In contrast, environmental orientation had a positive impact but was not statistically significant. The second part of this study assessed whether firms of different sizes differ from the impact of strategic sustainability orientation on overall organizational resilience. Results of the analysis uncovered that the Small size firms were significantly diverse from the Large and Medium size firms in terms of the influence of strategic sustainability orientation on anticipation, adaptation and coping capabilities.

In addition to enriching sustainability and organizational literature, this study proposes and validates instruments for measuring strategic sustainability orientation and organizational resilience. Furthermore, this study provides evidence of the empirical relationship between strategic sustainability orientation and organizational resilience from the developing country's perspective. For organizations, managers and stakeholders, this means reconsidering and reshaping their strategic sustainable way of doing business to strengthen resilience capabilities by including economic and

applicable social and environmental directions. This demonstrates the possibilities of designing high-capability resilient organizational systems.

In this study, the core limitation is linked to the relatively slight size of the sample regarding gathered data, as the research is in the early development stages. Therefore, future research possibilities could explore a larger sample in diverse countries by involving specific industries or aspects of future sustainability matters or organizational resilience in greater detail than presented here. Another future research proposal investigates the influence of digitalization and artificial intelligence on enhancing the resilience and sustainability of enterprises.

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