LAND MANAGEMENT, ENVIRONMENT & SOLID-WASTE: INSIDE EDUCATION AND BUSINESS IN CENTRAL ASIA
ERASMUS-EDU-2023-CBHE Project Number: 101129032

MICRO-CREDENTIAL

CIRCULAR ECONOMY FOR LAND AND WASTE MANAGEMENT

12.- Economic and Social Dimensions

Reading: Circular business models and green jobs

Co-funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the European Education and Culture Executive Agency (EACEA). Neither the European Union nor EACEA can be held responsible for them.

Check for updates

Received: 21 November 2021 | Revised: 1 February 2022 | Accepted: 14 February 2022

DOI: 10.1002/csr.2261

RESEARCH ARTICLE

Corporate Social Responsibility and Environmental Management

WILEY

Sustainable development—Direct and indirect effects between economic, social, and environmental dimensions in business practices

Svante Andersson[1] | Göran Svensson[2] | Francisco-Jose Molina-Castillo[3] | Carmen Otero-Neira[4] | John Lindgren[1] | Niklas P. E. Karlsson[1] | Hélène Laurell[1]

[1]Halmstad University, Halmstad, Sweden

[2]Kristiania University College, Oslo, Norway

[3]University of Murcia, Murcia, Spain

[4]University of Vigo, Vigo, Spain

Correspondence
Svante Andersson, Halmstad University, Box 823 S-301 18, Halmstad, Sweden.
Email: svante.andersson@hh.se

Abstract

This study investigates the direct and indirect effects between economic, social and environmental dimensions of triple bottom line (TBL), based on a questionnaire survey and cross-industrial sample in Sweden. The analyses apply partial least squares structural equation models. The study tests the direct and indirect effects between economic, social, and environmental dimensions of TBL and offers additional validity and reliability to establish the measurement and structural properties between the dimensions of TBL. The study extends earlier findings by explicitly discussing how the three TBL goals relate to each other and shows how the dynamic capability view can be a fruitful lens to investigate business sustainability. Some differences in sustainability business practices caused by differences in national cultures are identified. Sustainability reporting in a strong uncertainty avoidance (UA) country happens in accordance with regulations and laws. Conversely, for weak UA cultures, reporting and compliance with regulations are ways to build trust with stakeholders. That is, reporting is more transparent and widespread in weak UA countries. The study also provides a foundation to guide companies' actions of business sustainability. The model shows companies how to establish the order of actions undertaken across economic, social, and environmental dimensions. In addition, it clarifies that the economic dimension exerts an effect on the social and environmental dimensions. The model also grasps long-term economic performance by including competitiveness and brand value, while earlier research mainly has focused on more short-term measurements as return on assets.

KEYWORDS

business sustainability, economic, social and environmental sustainability, sustainable development, Sweden, triple bottom line

1 | INTRODUCTION

The interest in sustainability has increased drastically in the past decades, and politicians, managers, journalists, activists, and companies are now dealing with sustainability on a daily basis (Bansal, 2019). The concern of preserving natural resources for the future has been and still is fundamental for humans to survive on Earth. However, the interest in sustainability increased after the presentation of the Brundtland

This is an open access article under the terms of the Creative Commons Attribution License, which permits use, distribution and reproduction in any medium, provided the original work is properly cited.
© 2022 The Authors. *Corporate Social Responsibility and Environmental Management* published by ERP Environment and John Wiley & Sons Ltd.

Report at the World Commission on Environment and Development in 1987 (World Commission on Environment and Development, 1987), which defined sustainability as a societal (implicitly sustainable) development that "meets the needs of the present without compromising the ability of future generations to meet their own needs" (p. 41).

This definition addresses sustainability on a societal level, but the same logic can represent the organizational level as well, with business sustainability defined as "the ability of firms to respond to their short-term financial needs without compromising their (or others') ability to meet their future needs" (Bansal & DesJardine, 2014, p. 71). Thus, business sustainability deals with firms' actions regarding economic, social, and environmental impact on the market and society (Svensson et al., 2016). In a business context, this is called the triple bottom line (TBL). TBL focuses on reporting progress within fundamental dimensions (also labeled as profit, people, and planet) that must be harmonized and balanced for corporate success (Elkington, 1998; Loviscek, 2020). TBL reporting addresses the importance of stakeholder relationships in business practices (Painter-Morland, 2006).

Business sustainability has been studied from instrumental and integrative perspectives (Gao & Bansal, 2013). The instrumental perspective sees social and environmental investments mainly as a cost that is forced by external stakeholders that lower the financial results. The integrative perspective acknowledges that there are trade-offs between ecological, social and financial goals. However, especially in a long-term perspective the integrative perspective also acknowledge that the different goals affect each other in a positive way (Gao & Bansal, 2013; Porter & Kramer, 2011; Ullah et al., 2021). Few studies have comprehensively addressed the interdependencies between the dimensions of TBL (Gao & Bansal, 2013; Solovida & Latan, 2021). One study dealing with this issue is that of Svensson et al. (2018), who focus on effects of the economic, social, and environmental dimensions of business sustainability. They undertake studies in Norway and Spain and find that the economic dimension has a direct effect on the environmental dimension, with the social dimension mediating this effect. Their study shows that dimensions are interrelated, and thus additional studies in other contexts are required to further validate their results.

Business research has been criticized for the inflation of models and concepts, in which researchers build and promote their own models, but studies that consider both validation and replication in different contexts and in different times to develop findings that are generalizable are lacking (Crew, 2015).

Retesting and validating previous findings can therefore help generate such a valid and reliable theory useful across contexts and through time to gain generalizability. Previous research (e.g., Del Mar Miras-Rodríguez et al., 2015; Farooq et al., 2019; Karlsson et al., 2018; Laurell et al., 2019) shows that the practice of business sustainability is context dependent, which is why it is relevant to test the applicability of theoretical models dealing with business sustainability developed in a specific business context in other business contexts across countries.

As a consequence, the aim of this study is to test the direct and indirect effects among economic, social, and environmental dimensions of TBL in a new context (Sweden). To do so, this study revisits and retests Svensson et al.'s (2018) results by assessing the relationships among the economic, social, and environmental dimensions in both different and similar contexts.

The study contributes to existing theory and extends previous studies by testing the relationships among the three TBL dimensions in an additional context with different socioeconomic characteristics (Sweden). Our theoretical base is the dynamic capability view (Teece, 2007) that proclaims that firms that can adapt to a changing environment and orchestrate internal and external resources in a way that creates value for the firms as well as other stakeholders will achieve sustainable competitive advantage (Teece, 2007). In this study, we merge the dynamic capability view with the TBL framework and show how economic, environmental and social goals are interrelated and leads to sustainable competitive advantage. With today's complex interaction between businesses' economic, environmental and social dimensions in an increasingly changing environment, dynamic capabilities have shown to be of great significance to achieve sustainable competitive advantage (Qiu et al., 2020). In line with the above discussion, we argue that high performance in economic goals (e.g., profitability, competitiveness) positively influence the environmental and social the social dimension of the TBL. This study highlight the importance of the social dimension, that have been underrepresented in earlier studies on business sustainability (Solovida & Latan, 2021; Tate & Bals, 2018).

By testing the results from the earlier study in a new context (Svensson et al., 2018), we deal with concerns of too little validation in business research, as a study carried out in one context cannot provides definitive results and other contexts (Open Science Collaboration, 2015), and we offer evidence of the results' validity and reliability in different contexts (e.g., Hair et al., 2011; Lai, 2007; Wasti et al., 2006).

2 | LITERATURE REVIEW

2.1 | Business sustainability

The external pressure on companies to reduce their negative environmental impact and contribute to sustainable value creation (i.e., value that benefits the natural environment and stakeholders beyond company boundaries) is increasing (Schaltegger et al., 2019). The fundamental principle behind business sustainability is that companies should address value creation from not only a social and environmental perspective but also an economic one to contribute to sustainable development (e.g., Garcia et al., 2016; Lozano, 2015).

Each TBL dimension is a necessary condition for achieving sustainability. However, if a company does not support all three dimensions, it is not acting in a sustainable way (Evans et al., 2017). Consequently, the three TBL dimensions interact, overlap, and occasionally conflict as a company carries out its various business actions.

15353966, 2022, 5, Downloaded from https://onlinelibrary.wiley.com/doi/10.1002/csr.2261 by NICE, National Institute for Health and Care Excellence, Wiley Online Library on [13/05/2026]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

Business actions play a crucial role in companies' sustainable development, as they can both directly (e.g., harmful production processes) and indirectly (e.g., lobbying, marketing) contribute to environmental degradation (Rode et al., 2020). As many companies today claim to embrace business sustainability, they are more frequently questioning structures and actions related to shareholder profitability as the ultimate goal of a company (Weidner et al., 2021). For example, the investment and implementation of more sustainability-oriented manufacturing processes may not be profitable in the short run; however, when established, they can provide improved competitiveness and long-term profitability through enhanced production efficiency and sustainability performance (Braccini & Margherita, 2019; Salzmann et al., 2005). As such, business sustainability can be interpreted as a long-term, profit-driven corporate strategy that companies adopt in an attempt to create value by reducing the negative social and environmental effects of their business actions (Morioka et al., 2017).

Existing theory and previous studies present several arguments in favor of business sustainability. Our theoretical base is the dynamic capability view; we argue that firms that can adapt to a changing environment and orchestrate internal and external resources in a way that creates value for the firm as well as other stakeholders will achieve sustainable competitive advantage (Teece, 2007, 2014). This view has its base in the resource-based view, which proclaims that competitive advantage is based on firm's non-tradable, inimitable, and rare resources (Barney, 1991; Wernerfelt, 1984). The dynamic capability view focus on "doing the right things" (Teece, 2014), including sensing opportunities, mobilize resources, capture value from opportunities and orchestrate activities to a changing environment. By merging the dynamic capability view with the TBL framework we argue that firms that has integrated economic, environmental, and social goals achieve sustainable competitive advantage (Lin & Chen, 2017).

First, companies with a clear strategy of sustainability can produce greater competitive advantage and have more long-term viability than companies operating with a "business-as-usual" logic and exclusively prioritizing profit (Kashmanian et al., 2010). Moreover, because business sustainability requires anticipating, planning, and initiating actions, it provides a more proactive, more practical, and less costly approach than a reactive approach to social and environmental issues (Barnett, 2007). For example, with a proactive strategy, future government interventions in social and environmental issues can be acted on as business opportunities rather than being viewed as burdens and barriers that hinder the execution of traditional business actions. In addition, the public generally supports sustainable value creation, as many members believe a company should take more responsibility for its employees, communities, and other stakeholders even if that means sacrificing some profit (Carroll & Shabana, 2010).

2.2 | Impact of culture on sustainable business practices

Previous studies have shown that cultural characteristics, such as shared values and norms that influence how members perceive and interact with each other and the environment, are important for the development of a sustainable organization (e.g., Baird et al., 2018; Farooq et al., 2019; Gallego-Álvarez & Ortas, 2017; Richardson & Boyd, 2005). More specifically, different cultures can explain a variety of organizational phenomena, and the values and ethics embedded within a culture can be particularly important for supporting and influencing how people and organizations perceive, interpret, and implement the meanings of sustainability and sustainable business practices (Caprar & Neville, 2012; Del Mar Miras-Rodríguez et al., 2015; Laurell et al., 2019).

Hofstede's (1980, 1983, 2001) national culture model is widely accepted and applied in the literature (e.g., Gallego-Álvarez & Ortas, 2017). Although scholars have developed several models since Hofstede's pioneer work on national culture, his cultural dimensions are still considered valid (e.g., Correa da Cunha, 2019; Deephouse et al., 2016). Several researchers argue that there are overlaps in the many national culture theoretical models developed (Clark, 1990; Soares et al., 2007; Steenkamp, 2001) and that, despite the different wording and number of dimensions, House et al.'s (2004) and Schwartz's (1992, 1994) national culture models have conceptual and theoretical similarities to Hofstede's model (Correa da Cunha, 2019).

Not only does national culture influence business sustainability practices, but so too does organizational culture. Dyck et al. (2019) formulate four main types of organizational culture with respect to TBL. A *hierarchy* culture focuses on stability and the organization's internal environment and prioritizes financial well-being. A *clan* culture also focuses on the internal environment but in a more flexible way, while putting the greatest emphasis on social well-being. The *market* culture focuses on stability and the external environment and prioritizes ecological well-being. Last, an *adhocracy* culture values flexibility and focuses on the external environment in an attempt to generate holistic well-being by integrating the three dimensions of TBL.

The cultural and institutional indicators of Sweden, Norway, and Spain are both similar and different (Hofstede, 1983) (Table 1). All three countries are market economies, but while Spain and Sweden are European Union members, Norway is a not. Norway and Spain are North Atlantic Treaty Organization members, but Sweden is not. In addition, Norway and Sweden have a protestant heritage, while Spain is catholic. Furthermore, the all three countries are so called developed economies, but Spain is by has in total the largest gross domestic product (GDP). All three countries have a market-oriented economic system. Norway GDP per capita is the highest, followed by Sweden and Spain. Norway and Sweden have small populations while Spain has a larger one.

Sweden, Norway, and Spain were among the countries (Hofstede, 1983; Hofstede & Minkov, 2010) explored to develop the dimensions of national culture, as shown in Table 1: (1) individualism versus collectivism (IC), (2) large versus small power distance (PD), (3) masculinity versus femininity (MF), and (4) strong versus weak uncertainty avoidance (UA). Hofstede (1983) developed these four dimension in his original study and then later added a fifth dimension (Hofstede, 2001; Hofstede & Minkov, 2010) called "long-term orientation" (LTO), based on Confucian thinking. Table 1 shows both similarities and differences across the dimensions of the three national cultures.

15353966, 2022, 5, Downloaded from https://onlinelibrary.wiley.com/doi/10.1002/csr.2261 by NICE, National Institute for Health and Care Excellence, Wiley Online Library on [13/05/2026]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

TABLE 1 Dimensions of national culture

Country	PD	IC	MF	UA	LTO
Norway	31	69	8	50	35
Spain	57	51	42	86	48
Sweden	31	71	5	29	53

Note: Adapted from Hofstede, 1983; Hofstede & Minkov, 2010; Hofstede Insights, 2021.
Abbreviations: LTO, long-term orientation; IC, individualism versus collectivism; MF, masculinity versus femininity; PD, power distance; UA, uncertainty avoidance.

Research shows that national culture influences how firms deal with sustainability issues (Gallego-Álvarez & Ortas, 2017). Tata and Prasad (2015) report that cultures high in collectivism, femininity, and LTO but low in PD tend to consider sustainability an important aspect. By contrast, cultures high in individualism, masculinity, short-term orientation, and UA tend to view sustainability as inconvenient and less important to address. Consequently, in cultures in which sustainability is considered important, organizations are more likely to implement sustainability initiatives than organizations in cultures in which sustainability is deemed an inconvenience.

3 | RESEARCH MODEL OF BUSINESS SUSTAINABILITY

As indicated, business sustainability rests on three dimensions (i.e., economic, social, and environmental) known as TBL (Carter & Rogers, 2008; Elkington, 1994, 1997, 1998). The underlying aspect of TBL is that business sustainability and related actions need to create economic value by balancing profits through the design of social and environmental strategies (Evans & Sawyer, 2010; Hubbard, 2009; Janjua et al., 2021; Svensson & Wagner, 2015). To reach long-term competitive advantages through sustainability, companies need to focus on the three dimensions simultaneously (Bocken et al., 2014; Glavas & Mish, 2015; Lee & Lee Lam, 2012).

3.1 | Economic dimension (profit)

A sustainable company needs to maximize its performance, and the economic dimension of TBL explicitly accounts for performance (Carter & Easton, 2011; Elkington, 1998). Accordingly, the economic (or profit) dimension involves a company's capacity to grow economically to achieve financial performance (Bocken et al., 2014; Carter & Rogers, 2008). Indeed, Alhaddi (2015), p. 8 indicates that this dimension ties the company's own economic growth to its contribution to the economy, as "it focuses on the economic value provided by the organization to the surrounding system in a way that prospers it and promotes for its capability to support future generations" (see also Amos & Uniamikogbo, 2016).

3.2 | Social dimension (people)

A socially sustainable organization is one that operates under fair business practices in terms of its labor, human capital, and community and focuses on social justice (Elkington, 1997). The social dimension involves people and implies that companies undertaking issues addressing the public welfare or social justice in their business practices (Elkington, 2004) "give back to the community" (Amos & Uniamikogbo, 2016, p. 104).

Thus, the social concerns in boosting sustainability involve companies actively considering people and society in their decision-making or strategic development. Recently, Nursimloo et al. (2020), p. 768 argued that this dimension "concerns the applications of actions that would be beneficial to human capital and the society." By engaging in fair-minded business and social practices, sustainable-oriented companies provide value for the community in which they operate, their workforce, and society overall (Alhaddi, 2015; Farooq et al., 2021; Lichtenstein et al., 2004).

3.3 | Environmental dimension (planet)

The environmental dimension considers the environmental footprint of business actions. It refers to companies' sustainable business practices that do not compromise environmental resources for future generations (Amos & Uniamikogbo, 2016; Carter & Easton, 2011; Elkington, 1998). The major goal of this dimension "is to preserve the environment" (Nursimloo et al., 2020, p. 767), which implies that companies confront issues such as climate change, environmental degradation, preservation of future resources, and their ecological footprint as a path to reach sustainability in daily actions (Goel, 2010).

TBL explicitly integrates these three dimensions into a company's principles and policies (Rodríguez et al., 2020) by giving them equal attention (Alhaddi, 2015; Epstein, 2008; Hussain et al., 2018). Indeed, the TBL concept can be understood as the managerial framework of sustainability (Goel, 2010; Hubbard, 2009; Rogers & Hudson, 2011) integrating economic, social, and environmental dimensions (Gao & Bansal, 2013; Linnenluecke et al., 2009; Tseng et al., 2020). Moreover, TBL encompasses the three key dimensions of business sustainability through a multidimensional approach (Svensson et al., 2016, 2018; Svensson & Wagner, 2015).

Therefore, TBL implies that companies balance the three dimensions to address sustainability (Goh et al., 2020; Janjua et al., 2021), as "economic development occurs in relation to people and planet" (Laurell et al., 2019, p. 522). Thus, linking and integrating the three dimensions (vs. a single one) is an effective way for firms to accomplish sustainability (Gao & Bansal, 2013; Linnenluecke et al., 2009; Svensson et al., 2016; Tseng et al., 2020). Nevertheless, in the literature, these three dimensions "are … rarely assessed simultaneously" (Svensson & Wagner, 2015, p. 197), thus "ignoring the full scope of interrelationships between the TBL elements linked to business sustainability efforts" (Svensson et al., 2018, p. 979).

15353966, 2022, 5, Downloaded from https://onlinelibrary.wiley.com/doi/10.1002/csr.2261 by NICE, National Institute for Health and Care Excellence, Wiley Online Library on [13/05/2026]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

The basic premise is that the economic, social, and environmental dimensions should be treated differently (Brown et al., 2006) but appear together in the same framework (Svensson & Wagner, 2015) to assess their interrelationships, which can include direct and indirect effects (Svensson et al., 2018). In line with the dynamic capability view (Teece, 2007, 2014), we argue that high performance in economic goals positively influence the environmental and social dimension of the TBL. Indeed, according to Svensson and Wagner (2015), the economic dimension is the driving force for business sustainability, while the environmental dimension depends on the social dimension. Moreover, the social dimension mediates the effect between the economic and environmental dimensions (Svensson et al., 2018; Tseng et al., 2020). Indeed, Svensson et al. (2018) probe these direct and indirect relationships in a cross-industrial study in a Norwegian and Spanish context. In line with previous studies, the current study assesses a research model consisting of the direct and indirect effects among the TBL dimensions, as shown in Figure 1.

Figure 1 specifies four hypotheses for the three dimensions of TBL:

Hypothesis 1. *The economic dimension relates positively to the social dimension (i.e., direct effect).*

Hypothesis 2. *The economic dimension relates positively to the environmental dimension (i.e., direct effect).*

Hypothesis 3. *The social dimension relates positively to the environmental dimension (i.e., direct effect).*

Hypothesis 4. *The social dimension mediates the effect between the economic and environmental dimensions (i.e., indirect effect).*

As the figure shows, the economic dimension is the input to the social and environmental dimensions for business sustainability, while the environmental dimension depends on the social dimension. Furthermore, the social dimension acts as an intermediary between the economic input and the environmental output.

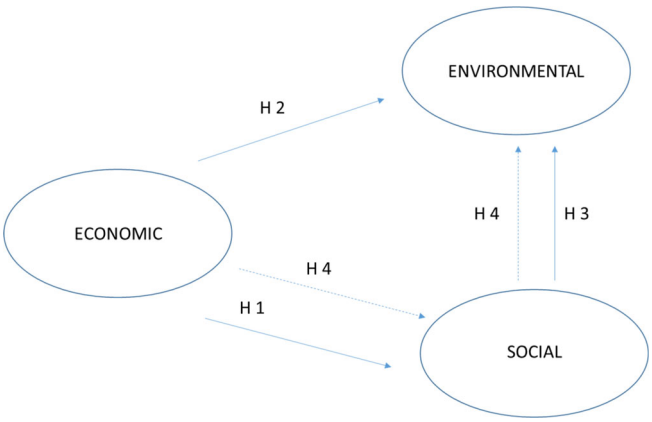

FIGURE 1 Research model with direct and indirect effects among economic, social, and environmental dimensions [Colour figure can be viewed at wileyonlinelibrary.com]

4 | METHODOLOGY

4.1 | Sample

We have chosen to carry out our study in Sweden as business sustainability has a large spread among Swedish companies. Sweden ranks eight out of 180 countries, pursuant to the Environmental Performance Index (Hsu, 2016). This rank increases the probability of finding relevant companies and knowledgeable respondents. The dataset also consists of large firms because large firms are likely to have resources for implementing sustainable business practices. Consequently, this study is based on a broad spectrum of businesses reflecting a cross-industry sample of large firms in corporate Sweden.

The initial sample, which came from Statistics Sweden (http://www.scb.se), include 400 large firms in Sweden; of these, we excluded 106 because they were no longer in business, were duplicates, or respondents indicated that business sustainability was irrelevant to their companies' business operations. We excluded another 187 firms because of they were not interested to take part in the study, over-commitment, or a corporate policy against participation in this type of surveys. In the end, we received questionnaire responses from 107 firms (36.5% response rate). Table 2 provides further details of the sample. The data collection was undertaken during 6 months and finalized before the pandemic began in 2020.

TABLE 2 Sample description

Nature of business	Count
Accommodation, café, or restaurant	1
Agriculture, forest, or fishing	3
Communication services	2
Construction	2
Cultural or recreational services	1
Electricity, gas, or water	3
Finance and/or insurance	6
Govt admin or defense	4
Health and community services	7
Manufacturing	32
Personal and other services	1
Property and business services	2
Retail trade	10
Transport and storage	16
Wholesale trade	3
Other	20
Total	107

15353966, 2022, 5, Downloaded from https://onlinelibrary.wiley.com/doi/10.1002/csr.2261 by NICE, National Institute for Health and Care Excellence, Wiley Online Library on [13/05/2026]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

4.2 | Common method bias

Common method bias can occur in studies (Malhotra et al., 2006) that collect data from a single informant within the company (Podsakoff & Organ, 1986). In addition to the theoretical checks we made, Podsakoff et al. (2003) recommend various procedures to assess the risk of this type of bias.

We followed Frazier et al. (2009) and first employed Harmon's one-factor test. This entailed entering all the items for our latent variables into a single factor. If the results obtained by a single factor were statistically better than a solution with multiple factors, this would pose a common method risk. This did not happen in our case, as the multi-factor solution proved to be better than the single-factor solution. As a second method, we employed single-factor factor confirmation. The results were similar to those obtained with the exploratory single-factor method. As a more rigorous approach, following Podsakoff et al. (2003), we compared the confirmatory factor model with another model in which each of the factors was simultaneously linked to a common factor. The results obtained were not statistically better, so the multi-factor solution offered in our model is not only consistent but also absent of any common method bias.

TABLE 3 Economic higher-order dimension of TBL and its lower-order dimensions'/items' univariate statistics, internal consistency, and convergent and discriminant validity estimates. *N* (number of observations); M (mean); SD (standard deviation); AVE (average variance extracted)

Economic dimension: Our sustainable business practices…							
Lower order dimensions and items	**Loadings**	***N***	**M**	**SD**	**AVE**	**Rho$_a$**	**Cronbach's alpha**
Profitability							
(a) …are profit-oriented	0.794	105	3.62	1.03	0.567	0.797	0.795
(b) …are about making money for all stakeholders involved	0.720	105	4.12	1.02			
(c) …are business driven (e.g., based on company objectives)	0.744	105	4.12	0.906			
Cost reduction							
(a) …contribute to cost reduction	0.857	106	3.52	0.907	0.681	0.865	0.862
(b) …improve cost-efficiency	0.852	106	3.60	0.912			
(c) …reduce the company's expenses	0.764	104	3.13	0.996			
Competitiveness							
(a) …improve the competitive position of the company	0.861	106	4.39	0.811	0.653	0.849	0.845
(b) …create a competitive advantage for the company	0.814	106	4.25	0.829			
(c) …are believed to be an important key success factor	0.745	105	4.16	0.856			
Brand value							
(a) …enhance the company's image in the market	0.902	105	4.32	0.727	0.789	0.918	0.917
(b) …improve the corporate reputation of the company	0.910	105	4.28	0.791			
(c) …positively influence the company's profile communicated to stakeholders	0.851	104	4.48	0.668			
Spin-offs							
(a) …generate unexpected opportunities for the company	0.864	104	3.57	0.953	0.653	0.848	0.839
(b) …provide unexpected benefits for the company	0.849	105	3.56	0.919			
(c) …contribute positively to other aspects of the company's business operations	0.700	104	4.06	0.810			
Trade-off							
(a) …imply that non-economic aspects influence the company's decisions	0.660	103	3.60	0.911	0.518	0.677	0.661
(b) …lead to the reallocation of resources	0.726	102	3.18	0.948			
(c) …require the company to make economic trade-offs (e.g., price and quality)	0.532	103	2.72	1.15			
Finance							
(a) …improve operational finances	0.835	103	3.38	0.919	0.727	0.888	0.888
(b) …generate financial benefits to the company	0.873	103	3.62	0.919			
(c) …add to the financial performance of the company	0.847	104	3.63	0.966			

15353966, 2022, 5, Downloaded from https://onlinelibrary.wiley.com/doi/10.1002/csr.2261 by NICE, National Institute for Health and Care Excellence, Wiley Online Library on [13/05/2026]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

TABLE 4 Social higher-order dimension of TBL and its lower-order dimensions'/items' univariate statistics, internal consistency, and convergent and discriminant validity estimates. *N* (number of observations); M (mean); SD (standard deviation); AVE (average variance extracted)

Social dimension: Our sustainable business practices…							
Lower order dimensions and items	**Loadings**	***N***	**M**	**SD**	**AVE**	**Rho$_a$**	**Cronbach's alpha**
Whole business network							
(a) …need to be the united ambition with the company's whole business network	0.851	103	3.55	1.045	0.636	0.839	0.832
(b) …require to be the common ambition of the company's whole business network	0.825	100	3.55	1.048			
(c) …require that all direct business partners are engaged in such practices	0.708	104	3.67	0.950			
Organizational support							
(a) …are superficial without support from all staff	0.635	104	3.65	1.041	0.453	0.698	0.697
(b) …are insignificant without the corporate leadership support	0.683	104	3.88	1.046			
(c) …need top management guidance	0.659	105	4.08	0.863			
Corporate culture							
(a) …mirror corporate norms	0.868	104	4.08	0.982	0.664	0.855	0.850
(b) …reflect corporate values	0.831	104	4.29	0.832			
(c) …are based on corporate principles	0.739	104	4.16	0.925			
Commitment and dedication							
(a) …require a great deal of corporate efforts	0.655	103	3.68	0.866	0.405	0.671	0.669
(b) …need substantial investment from the company	0.658	103	3.52	1.028			
(c) …are based on corporate dedication	0.594	103	4.24	0.720			
Longevity of perspective and consistency							
(a) …require consistency of corporate decisions over time	0.647	104	4.43	0.635	0.507	0.755	0.750
(b) …take a long time to implement	0.750	104	4.42	0.733			
(c) …require a great deal corporate efforts	0.735	103	4.31	0.780			
Reporting							
(a) …are not hidden from public scrutiny	0.883	103	4.33	0.964	0.740	0.895	0.893
(b) …are transparent to all those interested	0.887	103	4.23	0.982			
(c) …are widely reported	0.807	104	3.83	1.258			

4.3 | Measures

The measures used in our work come from previous research on the subject area. We distinguish between first- and second-order constructs and group them according to the dimensions identified by Svensson et al. (2018).

We measured the second-order construct, economic factor, with seven first-order constructs (profitability, cost reduction, competitiveness, brand value, spin-offs, trade-off, and finance), each of which was measured by three Likert-type indicators. We measured the second-order construct, social aspect, with six first-order constructs (whole business network, organizational support, corporate culture, commitment and dedication, longevity of perspective and consistency, and reporting), each of which was measured by three Likert-type indicators. Finally, we measured the third-order construct, environmental aspect, with six first-order constructs (footprint and the natural environment, climate change and global warning, multitude of initiatives, product/process decarbonizing, product/process dematerialization, and efficiency programs), each of which was measured by three Likert-type indicators. A questionnaire was developed that included questions in line with the above measurements (Tables 3–5).

4.4 | Model estimation

To test our model, we performed an analysis using partial least squares structural equation modeling (PLS-SEM). In addition, we took into account that our model is complex with a small sample size. Previous research has shown that models used in PLS-SEM work well for small sample sizes (Sarstedt et al., 2014). In particular, we used ADANCO 2.1.1 software to make estimates with the selected sample (Henseler, 2017). In addition, given the multiple possible configurations, we ran a series of analyses with alternative models to evaluate

15353966, 2022, 5, Downloaded from https://onlinelibrary.wiley.com/doi/10.1002/csr.2261 by NICE, National Institute for Health and Care Excellence, Wiley Online Library on [13/05/2026]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

TABLE 5 Environmental higher-order dimension of TBL and its lower-order dimensions'/items' univariate statistics, internal consistency, and convergent and discriminant validity estimates. *N* (number of observations); M (mean); SD (standard deviation); AVE (average variance extracted)

Environmental dimension: Our sustainable business practices…							
Lower-order dimensions and items	**Loadings**	***N***	**M**	**SD**	**AVE**	**Rho$_a$**	**Cronbach's alpha**
Footprint and the natural environment							
(a) …reduce our business partners' impact on the natural environment	0.784	106	3.53	0.918	0.564	0.794	0.793
(b) …take the impact of business partners on the natural environment into account	0.746	107	3.74	0.935			
(c) …diminish the corporate impact on the natural environment	0.720	107	3.95	0.955			
Climate change and global warming							
(a) …are implemented in response to the ongoing climate change	0.780	107	3.90	0.951	0.590	0.811	0.810
(b) …consider the effects of corporate business operations on global warming	0.796	107	3.87	0.972			
(c) …strive to minimize the generation of global warming gasses	0.725	107	4.18	0.856			
Multitude of initiatives							
(a) …involve a comprehensive strategic effort from the company	0.795	106	4.00	0.995	0.646	0.845	0.844
(b) …go beyond the company itself	0.771	107	3.75	1.02			
(c) …consist of multiple initiatives	0.844	107	4.19	0.859			
Product/process decarbonizing							
(a) …show each product's impact on the natural environment	0.824	103	3.62	1.251	0.645	0.844	0.843
(b) …highlight each product's footprint on the natural environment	0.819	102	3.01	1.173			
(c) …are visible to stakeholders	0.763	103	3.62	1.112			
Product/process dematerialization							
(a) …have led to company products becoming more ecologically friendly	0.771	103	3.93	1.105	0.592	0.813	0.811
(b) …address activities related to the environmental impact of products	0.807	103	3.92	0.987			
(c) …are considered suitable to deal with the natural environment	0.729	102	3.78	0.971			
Efficiency programs							
(a) …are monitored through continuous improvement	0.815	107	4.15	0.909	0.667	0.857	0.855
(b) …are a continuous process	0.850	107	4.45	0.780			
(c) …are part of the company's environmental efficiency efforts	0.783	107	4.29	0.813			

the specification of higher-order constructs in both a reflective and formative manner (Van Riel et al., 2017).

5 | EMPIRICAL FINDINGS

5.1 | Measurement model evaluation

To test the research model, we carried out a two-stage analysis. First, we checked the internal consistency of the first-order constructs (Anderson & Gerbing, 1988). Correct identification and verification of the first-order constructs is essential to be able to analyze the composition of the second-order constructs. Second, we ran an initial analysis of the internal consistency of the scales based on reliability and convergent and discriminant validity (Bagozzi & Yi, 1988).

With regard to the analysis of the first-order construct of economic factors (see Table 3), we found that the rho and Cronbach's alpha values are consistent and above the threshold of 0.70 recommended in the literature (Hair et al., 2006). Although we obtained a value of 0.67 for trade-off, it is close enough to 0.70 to be

15353966, 2022, 5, Downloaded from https://onlinelibrary.wiley.com/doi/10.1002/csr.2261 by NICE, National Institute for Health and Care Excellence, Wiley Online Library on [13/05/2026]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

TABLE 6 HTMT values

Dimension	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1. Profitability																		
2. Cost reduction	0.547																	
3. Competitiveness	0.512	0.383																
4. Brand value	0.244	0.236	0.632															
5. Spin-offs	0.394	0.415	0.516	0.464														
6. Trade-off	0.233	0.024	0.226	0.242	0.593													
7. Finance	0.545	0.686	0.507	0.422	0.415	0.003												
8. Footprint	0.534	0.467	0.476	0.273	0.436	0.516	0.439											
9. Climate	0.326	0.352	0.412	0.356	0.471	0.399	0.362	0.701										
10. Multiple initiatives	0.570	0.461	0.547	0.438	0.617	0.510	0.366	0.770	0.708									
11. Pr/Pr decarbonizing	0.342	0.396	0.322	0.277	0.127	0.196	0.420	0.533	0.518	0.237								
12. Pr/Pr dematerialization	0.408	0.525	0.513	0.396	0.379	0.315	0.348	0.550	0.512	0.678	0.533							
13. Efficiency	0.374	0.420	0.310	0.307	0.391	0.405	0.312	0.720	0.722	0.806	0.428	0.629						
14. Whole business network	0.319	0.479	0.363	0.326	0.442	0.413	0.400	0.632	0.330	0.485	0.371	0.361	0.421					
15. Organizational support	0.306	0.275	0.219	0.002	0.167	0.105	0.175	0.188	0.148	0.198	0.117	0.069	0.128	0.415				
16. Corporate culture	0.406	0.341	0.429	0.428	0.503	0.397	0.414	0.643	0.520	0.669	0.408	0.373	0.493	0.606	0.115			
17. Commitment	0.366	0.180	0.041	0.004	0.249	0.612	0.022	0.580	0.564	0.524	0.519	0.420	0.449	0.564	0.377	0.554		
18. Longevity	0.377	0.205	0.407	0.427	0.454	0.402	0.150	0.533	0.504	0.649	0.243	0.248	0.582	0.352	0.247	0.609	0.508	
19. Reporting	0.331	0.239	0.307	0.414	0.339	0.247	0.261	0.439	0.368	0.415	0.588	0.439	0.408	0.240	0.058	0.433	0.326	0.429

Note: Pr/Pr = product/process.

15353966, 2022, 5, Downloaded from https://onlinelibrary.wiley.com/doi/10.1002/csr.2261 by NICE, National Institute for Health and Care Excellence, Wiley Online Library on [13/05/2026]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

considered acceptable. Convergent validity is also confirmed, as all loadings are above 0.50 with significant t-values.

In the analysis of the first-order construct of social factors (see Table 4), we found that the rho and Cronbach's alpha values are consistent and above the threshold of 0.70 recommended in the literature. Again, although we obtained a value of 0.67 for commitment and dedication, it is close to 0.70, so we deemed it acceptable. Convergent validity is also confirmed, as all loadings are above 0.50 with significant t-values.

Finally, in the analysis of the first-order dimension of environmental factors (see Table 5), we found that the rho and Cronbach's alpha values are consistent and above the threshold of 0.70 recommended in the literature. In this case, no construct fell below this critical value. Convergent validity is also confirmed, as all loadings are above 0.50 with significant t-values.

Discriminant validity is a serious problem in scientific work (Bagozzi & Yi, 1988). Although several methods are accepted in the literature, such as confidence interval comparison or path restriction between constructs (Anderson & Gerbing, 1988), we employed the two most recognized methods in the literature. First, we compared the correlations between constructs with the variance extracted from each of the constructs. The results obtained were satisfactory.

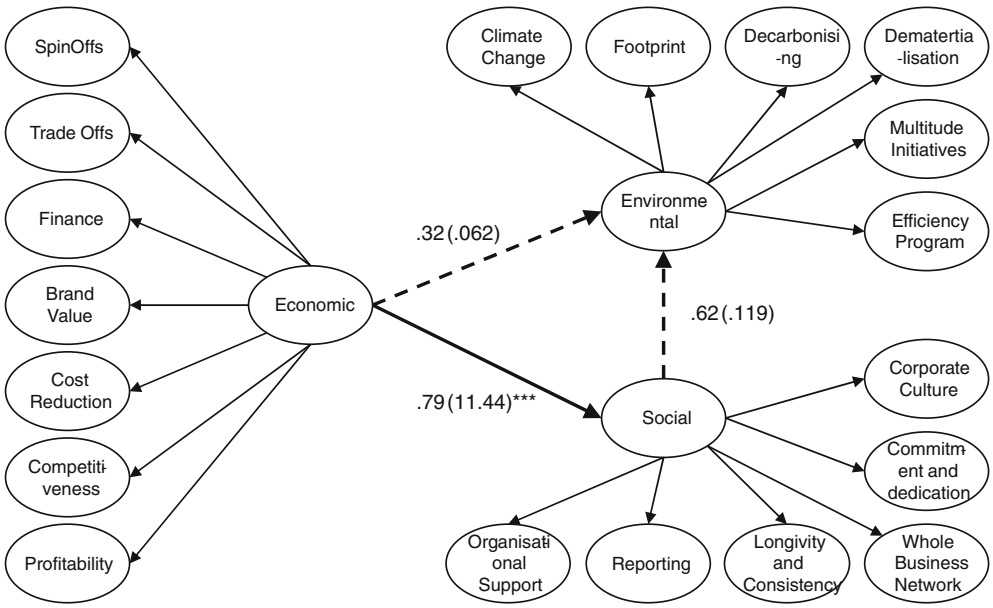

FIGURE 2 Model results: First-order and second-order dimensions

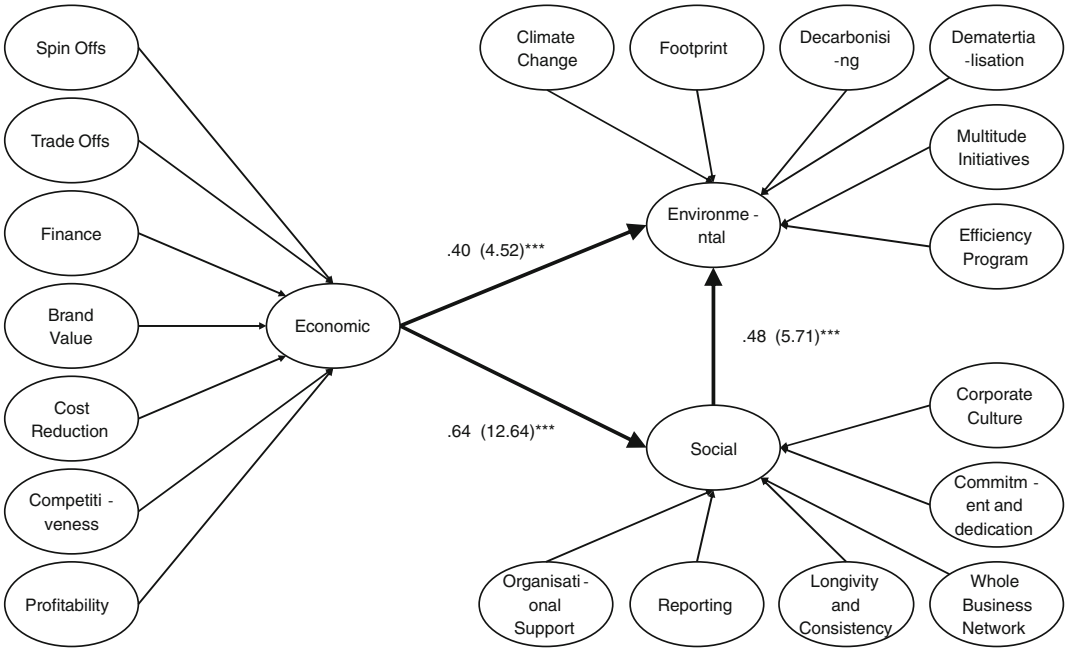

FIGURE 3 Model results: First-order and second-order dimensions

15353966, 2022, 5, Downloaded from https://onlinelibrary.wiley.com/doi/10.1002/csr.2261 by NICE, National Institute for Health and Care Excellence, Wiley Online Library on [13/05/2026]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

Second, Voorhees et al. (2015) recommend using the heterotrait-monotrait (HTMT) method to evaluate discriminant validity. The HTMT ratio of discriminant validity with a 0.85 cutoff point is recommended over more traditional methods. To apply this procedure, the HTMT test produces an HTMT ratio of the average correlations between constructs to the geometric mean of the average correlations of items within the same constructs. From this evidence, we can confirm that our measures do not suffer from convergent or discriminant validity problems. Table 6 provides a summary of the results.

5.2 | Structural model assessment

After checking the reliability of the research model, we carried out a series of structural model estimates for second-order constructs (Jarvis et al., 2003). First, we estimated a reflective first-order construct for the second-order constructs. As Figure 2 shows, the results were not satisfactory. Second, we estimated another research model in which we considered the composite nature of our constructs. In this case, the estimates obtained were highly satisfactory, as shown in Figure 3; thus, H1, H2, and H3 are supported.

From these results, we adopted this alternative model, which includes a reflective first order and a composite second order (Van Riel et al., 2017). In additional analysis, we estimated the indirect relationships derived from our analysis (Iacobucci, 2009). The results show a positive indirect effect of economic factors on environmental factors through social factors, in support of H4.

6 | DISCUSSION

This study set out to test the results from Svensson et al. (2018) by simultaneously assessing the relationships among the TBL's economic, social, and environmental dimensions in a new context (Sweden), as well as testing social aspects' mediating role in the relationship between economic and environmental dimensions. Similar to Svensson et al. (2018), we find that in Sweden, the economic dimension has a significant effect on the social dimension but not on the environmental dimension, while the social dimension has a significant impact on the environmental dimension, in line with Svensson et al.'s (2018) findings from Norway and Spain.

Although the results across Norway, Spain, and Sweden are rather the same, there are some differences in business practices given cultural differences. Different cultures vary in how they deal with uncertainty. The fundamental issue involved in UA is "how society deals with the fact that time runs only one way. That is, we are all caught in the reality of past, present and future and we have to live with uncertainty because the future is unknown and always will be" (Hofstede, 1983, p. 81). Societies differ in how they deal with uncertainty: some are more accepting of it, while others are more inclined to try to avoid it. The societies most inclined to avoid uncertainty have more laws and formal rules to guard against unpredictability. That is, people living in cultures with strong UA cultures maintain rigid laws and regulations, whereas people living in weak UA cultures have a more relaxed attitude toward regulations, and practice counts more than principles (Gallego-Álvarez & Ortas, 2017; Ueno & Sekaran, 1992).

UA is different in all three countries. Spain is governed by formal laws and regulations, and contracts with different stakeholders are more formalized than in Norway. Sweden has fewer formal laws, regulations, and contracts than Norway. This indicates that sustainability reporting in a strong UA country happens in accordance with regulations and laws. Conversely, for weak UA cultures, reporting and compliance with regulations are ways to build trust with stakeholders. That is, reporting is more transparent and widespread in Sweden than in Norway and Spain, and reporting is more transparent and widespread in Norway than in Spain. We confirm these results herein, as firms from Sweden show higher scores in transparent reporting than Norway and Spain.

6.1 | Research contributions

The results based on a research model containing direct and indirect effects among economic, social, and environmental dimensions in connection with business sustainability complement those of previous studies (e.g., Svensson et al., 2018). Moreover, this study offers additional validity and reliability to establish the measurement and structural properties of the TBL dimensions.

We validate three direct effects among the TBL dimensions: (1) the economic dimension relates positively to the social dimension, (2) the economic dimension relates positively to the environmental dimension, and (3) the social dimension relates positively to the environmental dimension. We also validate the indirect effect—namely, the social dimension mediates the effect between the economic and the environmental dimensions. Consequently, the results provide a foundation to establish cause-and-effect relationships among the dimensions. We also provide a foundation of a theory of TBL that outlines the structural properties among economic, social, and environmental dimensions in connection with business sustainability. Our findings extend earlier findings, which look at business sustainability as an integrative logic (Gao & Bansal, 2013; Porter & Kramer, 2011). By explicitly discussing how the three TBL goals relate to each other. The study also contributing by validating the measures for the economic, social, and environmental dimensions in the TBL. By including the performance measures competitiveness and brand value, the measurements better grasp long-term economic performance. We also show that the dynamic capability view can be a fruitful lens to investigate business sustainability. Our model fit well with the dynamic capability view and show how firms that adapt to changing environment (including demand from different stakeholders) and that orchestrate resources and activities satisfying both external and internal stakeholders can achieve sustainable competitive advantage.

This research contributes to the sustainability and TBL literature by explicitly investigate the relationships among the different

15353966, 2022, 5, Downloaded from https://onlinelibrary.wiley.com/doi/10.1002/csr.2261 by NICE, National Institute for Health and Care Excellence, Wiley Online Library on [13/05/2026]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

elements in the TBL model in a new national context (Sweden). Our study confirms and validates the main relationships identified in previous studies (Svensson et al., 2018) but also identifies some differences in sustainability business practices caused by differences in national cultures.

Nevertheless, this study focuses on a business-to-business research setting based on a cross-industrial sample of companies. Further research based on other sample settings, such as purely product- or services-oriented companies or business-to-consumer settings, is therefore required. This study took place in Sweden, with the findings compared with other European countries. Thus, we call for further research to test whether our results are also valid in more culturally distant countries.

6.2 | Managerial implications

Companies may benefit from the findings with regard to the structural properties among economic, social, and environmental dimensions. Companies can structure their actions in connection with business sustainability, dividing them into economic, social, and environmental dimensions, all of which provide a managerial framework to assess the effects of company actions.

Currently, companies' actions in connection with business sustainability appear to be unstructured, without an underlying formalized framework. In other words, the cause and effect of their actions are not clear or at least not explicit. Managerial actions in connection with business sustainability therefore suffer from structural properties. In turn, this causes the assessment of corporate actions related to business sustainability to be subjective without a strict logic of the effects on economic, social, and environmental dimensions.

We contend that our research model provides a basis to guide companies' actions in business sustainability. The model shows companies how to establish the order of actions undertaken across economic, social, and environmental dimensions. In addition, it clarifies that the economic dimension exerts an effect on the social and environmental dimensions. The model grasp long-term economic performance by including competiveness and brand value, while earlier research mainly has focused on more short-term meausrements as return on assets (ROA) (Gao & Bansal, 2013). For example, any corporate action in connection with business sustainability needs to consider economic costs and the extent to which the action can be justified socially in the marketplace and society. Any corporate action also needs to be contextualized in terms of the extent to which it optimizes the environmental dimension.

Ultimately, corporate actions in connection with business sustainability are about setting priorities to optimize the economic input in relation to the social and environmental output in the marketplace and society in a long-term perspective. The direct and indirect effects of economic, social, and environmental dimensions are therefore a crucial consideration in the planning and implementation of business sustainability.

6.3 | Limitations and future research

As do all studies, our research suffers from limitations, which may also provide opportunities for further research. First, research could further develop and test the measurement properties in other research settings. For example, research could retest the structural properties among the economic, social, and environmental dimensions in connection with business sustainability in a non-Western research setting. That is, verifying whether the direct and indirect effects among the TBL dimensions are valid and reliable in an Eastern research setting would be valuable. Second, our study was limited to a business-to-business research setting, thus offering an opportunity for research to develop and test the measurement and structural properties, including the direct and indirect effects between the economic and environmental dimensions, in a business-to-consumer setting. Third, this model explicitly includes brand value as part of the economic goals. There is an increasing stream of literature that is looking for how business sustainability is connected to brand value and more research is recommended to further investigate how business sustainability is connected to how different stakeholders perceive firms' brands.

ORCID

Svante Andersson https://orcid.org/0000-0002-8194-2053
Niklas P. E. Karlsson https://orcid.org/0000-0003-3068-5269

REFERENCES

Alhaddi, H. (2015). Triple bottom line and sustainability: A literature review. *Business and Management Studies*, *1*(2), 6–10.

Amos, A. O., & Uniamikogbo, E. (2016). Sustainability and triple bottom line: An overview of two interrelated concepts. *Igbinedion University Journal of Accounting*, *2*(August), 88–126.

Anderson, J. C., & Gerbing, D. W. (1988). Structural equation modelling in practice: A review and recommended two-step approach. *Psychological Bulletin*, *103*(3), 411–423.

Bagozzi, R. P., & Yi, Y. (1988). On the evaluation of structural equation models. *Journal of the Academy of Marketing Science*, *16*(1), 74–94.

Baird, K., Su, S., & Tung, A. (2018). Organizational culture and environmental activity management. *Business Strategy and the Environment*, *27*(3), 403–414.

Bansal, P. (2019). Sustainable development in an age of disruption. *Academy of Management Discoveries*, *5*(1), 8–12.

Bansal, P., & DesJardine, M. R. (2014). Business sustainability: It is about time. *Strategic Organization*, *12*, 70–78.

Barnett, M. L. (2007). Stakeholder influence capacity and the variability of financial returns to corporate social responsibility. *Academy of Management Review*, *32*, 794–816.

Barney, J. B. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, *17*(1), 99–120.

Bocken, N. M. P., Short, S. W., Rana, P., & Evans, S. (2014). A literature and practice review to develop sustainable business model archetypes. *Journal of Cleaner Production*, *65*(15), 42–56.

Braccini, A. M., & Margherita, E. G. (2019). Exploring organizational sustainability of industry 4.0 under the triple bottom line: The case of a manufacturing company. *Sustainability*, *11*(1), 36.

Brown, D., Dillard, J., & Marshall, S. (2006). Triple bottom line: A business metaphor for a social construct. In *Critical perspectives on accounting proceedings*. City University of New York.

15353966, 2022, 5, Downloaded from https://onlinelibrary.wiley.com/doi/10.1002/csr.2261 by NICE, National Institute for Health and Care Excellence, Wiley Online Library on [13/05/2026]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

Caprar, D. V., & Neville, B. A. (2012). "Norming" and "conforming": Integrating cultural and institutional explanations for sustainability adoption in business. *Journal of Business Ethics*, *110*(2), 231–245.

Carroll, A. B., & Shabana, K. M. (2010). The business case for corporate social responsibility: A review of concepts, research and practice. *International Journal of Management Reviews*, *12*(1), 85–105.

Carter, C. R., & Easton, P. L. (2011). Sustainable supply chain management: Evolution and future directions. *International Journal of Physical Distribution & Logistics Management*, *41*(1), 46–62.

Carter, C. R., & Rogers, D. S. (2008). A framework of sustainable supply chain management: Moving toward new theory. *International Journal of Physical Distribution & Logistics Management*, *38*(5), 360–387.

Clark, T. (1990). International marketing and national character: A review and proposal for an integrative theory. *Journal of Marketing*, *54*(1), 66–79.

Correa da Cunha, H., 2019. Asymmetry and the moderating effects of formal institutional distance on the relationship between cultural distance and performance: The case of multinational foreign subsidiaries in Latin America. Halmstad University, The Direction of Cultural Distance and the Performance of Foreign Subsidiaries in Latin America Dissertations no. 61. Halmstad University Press.

Crew, B. E. C. (2015). Scientists tried to replicate 100 psychology experiments and 64% failed, Science Alert. Retrieved February 26, 2022 from www.sciencealert.com/scientists-tried-to-replicate-100-psychology-experiments-and-64-failed#.WZ8YbMTdpz0.link.

Deephouse, D. L., Newburry, W., & Soleimani, A. (2016). The effects of institutional development and national culture on cross-national differences in corporate reputation. *Journal of World Business*, *51*(3), 463–473.

Del Mar Miras-Rodríguez, M., Carrasco-Gallego, A., & Escobar-Pérez, B. (2015). Are socially responsible behaviors paid off equally? A cross-cultural analysis. *Corporate Social Responsibility and Environmental Management*, *22*, 237–256.

Dyck, B., Walker, K., & Caza, A. (2019). Antecedents of sustainable organizing: A look at the relationship between organizational culture and the triple bottom line. *Journal of Cleaner Production*, *231*, 1235–1247.

Elkington, J. (1994). Towards the sustainable corporation: Win-win-win business strategies for sustainable development. *California Management Review*, *36*, 90–100. https://doi.org/10.2307/41165746

Elkington, J. (1997). *Cannibals with forks: The TBL of the 21st century business*. Capstone.

Elkington, J. (1998). Partnerships from cannibals with forks: The triple bottom line of 21st-century business. *Environmental Quality Management*, *8*(1), 37–51.

Elkington, J. (2004). Enter the triple bottom line. In A. Henriques & J. Richardson (Eds.), *The triple bottom line: Does it all add up?* (pp. 1–16). Earthscan.

Epstein, M. (2008). *Making sustainability work: Best practices in managing and measuring corporate social, environmental, and economic impacts*. Greenleaf.

Evans, N., & Sawyer, J. (2010). CSR and stakeholders of small businesses in regional South Australia. *Social Responsibility Journal*, *6*(3), 433–451.

Evans, S., Vladimirova, D., Holgado, M., Van Fossen, K., Yang, M., Silva, E. A., & Barlow, C. Y. (2017). Business model innovation for sustainability: Towards a unified perspective for creation of sustainable business models. *Business Strategy and the Environment*, *26*(5), 597–608.

Farooq, Q., Fu, P., Liu, X., & Hao, Y. (2021). Basics of macro to microlevel corporate social responsibility and advancement in triple bottom line theory. *Corporate Social Responsibility and Environmental Management*, *28*(3), 969–979.

Farooq, Q., Hao, Y., & Liu, X. (2019). Understanding corporate social responsibility with cross-cultural differences: A deeper look at religiosity. *Corporate Social Responsibility and Environmental Management*, *26*, 965–971.

Frazier, G. L., Maltz, E., Antia, K., & Rindfleisch, A. (2009). Distributor sharing of strategic information with suppliers. *Journal of Marketing*, *73*(3), 31–43.

Gallego-Álvarez, I., & Ortas, E. (2017). Corporate environmental sustainability reporting in the context of national cultures: A quantile regression approach. *International Business Review*, *26*(2), 337–353.

Gao, J., & Bansal, P. (2013). Instrumental and integrative logics in business sustainability. *Journal of Business Ethics*, *112*, 241–255.

Garcia, S., Cintra, Y., Rita de Cássia, S. R., & Lima, F. G. (2016). Corporate sustainability management: A proposed multi-criteria model to support balanced decision-making. *Journal of Cleaner Production*, *136*, 181–196.

Glavas, A., & Mish, J. (2015). Resources and capabilities of triple bottom line firms: Going over old or breaking new ground? *Journal of Business Ethics*, *127*(3), 623–642.

Goel, P. (2010). Triple bottom line reporting: An analytical approach for corporate sustainability. *Journal of Finance, Accounting, and Management*, *1*(1), 27–42.

Goh, C. S., Chong, H. Y., Jack, L., & Faris, A. F. M. (2020). Revisiting triple bottom line within the context of sustainable construction: A systematic review. *Journal of Cleaner Production*, *252*, 119884.

Hair, J., Black, W., Babin, B., Anderson, R., & Tatham, R. (2006). *Multivariate data analysis* (6th ed.). Pearson Prentice Hall.

Hair, J. F., Wolfinbarger Celsi, M., Money, A. H., Samouel, P., & Page, M. J. (2011). *Essentials of business research methods*. M.E. Sharpe.

Henseler, J. (2017). Bridging design and behavioral research with variance-based structural equation modeling. *Journal of Advertising*, *46*(1), 178–192. https://doi.org/10.1080/00913367.2017.1281780

Hofstede, G. (1980). *Culture's consequences. International differences in work-related values*. Sage.

Hofstede, G. (1983). The cultural relativity of organizational practices and theories. *Journal of International Business Studies*, *14*(2), 75–89.

Hofstede, G. (2001). *Culture's consequences: Comparing values, behaviors, institutions, and organizations across nations*. Sage.

Hofstede, G., & Minkov, M. (2010). Long- versus short-term orientation: New perspectives. *Asian Pacific Business Review*, *16*(4), 493–504.

Hofstede Insights (2021). Country comparison. https://www.hofstedeinsights.com/country-comparison.

House, R. J., Hanges, P. J., Javidan, M., Dorfman, P. W., & Gupta, V. (Eds.). (2004). *Culture, leadership, and organizations: The GLOBE study of 62 societies*. Sage Publications.

Hsu, A. (2016). *Environmental performance index*. Yale University. https://epi.yale.edu/epi-results/2020/component/epi

Hubbard, G. (2009). Measuring organizational performance: Beyond the triple bottom line. *Business Strategy and the Environment*, *18*(3), 177–191.

Hussain, N., Rigoni, U., & Orij, R. P. (2018). Corporate governance and sustainability performance: Analysis of triple bottom line performance. *Journal of Business Ethics*, *149*(2), 411–432.

Iacobucci, D. (2009). Everything you always wanted to know about SEM (structural equation modelling) but were afraid to ask. *Journal of Consumer Psychology*, *19*(4), 673–680.

Janjua, S. Y., Sarker, P. K., & Biswas, W. K. (2021). Sustainability implications of service life on residential buildings–an application of life cycle sustainability assessment framework. *Environmental and Sustainability Indicators*, *10*, 100109.

Jarvis, C., Mackenzie, S., & Podsakoff, P. (2003). A critical review of construct indicators and measurement model misspecification in marketing and consumer research. *Journal of Consumer Research*, *30*(4), 199–218.

Karlsson, N. P. E., Laurell, H., Lindgren, J., Pehrsson, T., Andersson, S., & Svensson, G. (2018). A cross-country comparison and validation of firms' stakeholder considerations in sustainable business practices. *Corporate Governance: The International Journal of Business in Society*, *18*(3), 408–424.

15353966, 2022, 5, Downloaded from https://onlinelibrary.wiley.com/doi/10.1002/csr.2261 by NICE, National Institute for Health and Care Excellence, Wiley Online Library on [13/05/2026]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

Kashmanian, R., Keenan, C., & Wells, R. (2010). Corporate environmental leadership: Drivers, characteristics, and examples. *Environmental Quality Management*, *19*(4), 1–20.

Lai, C. S. (2007). The effects of influence strategies on dealer satisfaction and performance in Taiwan's motor industry. *Industrial Marketing Management*, *36*(4), 518–527.

Laurell, H., Karlsson, N., Lindgren, J., Andersson, S., & Svensson, G. (2019). Re-testing and validating a TBL-dominant logic for business sustainability. *Management of Environmental Quality*, *30*(3), 518–537.

Lee, C. K. M., & Lee Lam, J. S. (2012). Managing reverse logistics to enhance sustainability of industrial marketing. *Industrial Marketing Management*, *41*(4), 589–598.

Lichtenstein, D. R., Drumwright, M. E., & Braig, B. M. (2004). The effect of corporate social responsibility on customer donations to corporate-supported nonprofits. *Journal of Marketing*, *68*(4), 16–32.

Lin, Y. H., & Chen, Y. S. (2017). Determinants of green competitive advantage: The roles of green knowledge sharing, green dynamic capabilities, and green service innovation. *Quality and Quantity*, *51*(4), 1663–1685.

Linnenluecke, M. K., Russell, S. V., & Griffiths, A. (2009). Subcultures and sustainability practices: The impact on understanding corporate sustainability. *Business Strategy and the Environment*, *18*(7), 432–452.

Loviscek, V. (2020). Triple bottom line toward a holistic framework for sustainability: A systematic review. *Journal of Contemporary Administration*, *25*(3), 1–11.

Lozano, R. (2015). A holistic perspective on corporate sustainability drivers. *Corporate Social Responsibility and Environmental Management*, *22*(1), 32–44.

Malhotra, N. K., Kim, S. S., & Patil, A. (2006). Common method variance in IS research: A comparison of alternative approaches and a reanalysis of past research. *Management Science*, *52*(12), 1865–1883. https://doi.org/10.1287/mnsc.1060.0597

Morioka, S. N., Bolis, I., Evans, S., & Carvalho, M. M. (2017). Transforming sustainability challenges into competitive advantage: Multiple case studies kaleidoscope converging into sustainable business models. *Journal of Cleaner Production*, *167*, 723–738.

Nursimloo, S., Ramdhony, D., & Mooneeapen, O. (2020). Influence of board characteristics on TBL reporting. *Corporate Governance: The International Journal of Business in Society*, *20*(5), 765–780.

Open Science Collaboration. (2015). Estimating the reproducibility of psychological science. *Science*, *349*(6251), 943–950.

Painter-Morland, M. (2006). Triple bottom-line reporting associal grammar: Integrating corporate social responsibility and corporate codes of conduct. *Business Ethics: A European Review*, *15*(4), 352–364.

Podsakoff, P. M., MacKenzie, S. B., Lee, J.-Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, *88*(5), 879–903. https://doi.org/10.1037/0021-9010.88.5.879

Podsakoff, P. M., & Organ, D. W. (1986). Self-reports in organizational research: Problems and prospects. *Journal of Management*, *12*(4), 531–544. https://doi.org/10.1177/014920638601200408

Porter, M. E., & Kramer, M. R. (2011). Creating shared value. *Harvard Business Review*, *89*(1/2), 62–77.

Qiu, L., Jie, X., Wang, Y., & Zhao, M. (2020). Green product innovation, green dynamic capability, and competitive advantage: Evidence from Chinese manufacturing enterprises. *Corporate Social Responsibility and Environmental Management*, *27*(1), 146–165.

Richardson, P. J., & Boyd, R. (2005). *Not by genes alone: How culture transformed human evolution*. University of Chicago Press.

Rode, J., Heinz, N., Cornelissen, G., & Le Menestrel, M. (2020). How to encourage business professionals to adopt sustainable practices? Experimental evidence that the 'business case' discourse can backfire. *Journal of Cleaner Production*, *283*, 124618.

Rodríguez, R., Svensson, G., & Otero-Neira, C. (2020). Future direction of sustainable development in private hospitals: General similarities and specific differences. *Journal of Business & Industrial Marketing*, *35*(3), 537–550.

Rogers, K., & Hudson, B. (2011). The triple bottom line. OD. *Practitioner*, *43*(4), 4.

Salzmann, O., Ionescu-Somers, A., & Steger, U. (2005). The business case for corporate sustainability: Literature review and research options. *European Management Journal*, *23*, 27–36.

Sarstedt, M., Ringle, C. M., Smith, D., Reams, R., & Hair, J. F. (2014). Partial least squares structural equation modeling (PLS-SEM): A useful tool for family business researchers. *Journal of Family Business Strategy*, *5*(1), 105–115. https://doi.org/10.1016/j.jfbs.2014.01.002

Schaltegger, S., Hörisch, J., & Freeman, R. E. (2019). Business cases for sustainability: A stakeholder theory perspective. *Organization & Environment*, *32*(3), 191–212.

Schwartz, S. H. (1992). Universals in the content and structure of values: Theoretical advances and empirical tests in 20 countries. In M. P. Zanna (Ed.), *Advances in experimental social psychology* (Vol. 25, pp. 1–65). Academic Press.

Schwartz, S. H. (1994). Are there universal aspects in the structure and contents of human values? *Journal of Social Issues*, *50*(4), 19–45.

Soares, A. M., Farhangmehr, M., & Shoham, A. (2007). Hofstede's dimensions of culture in international marketing studies. *Journal of Business Research*, *60*(3), 277–284.

Solovida, G. T., & Latan, H. (2021). Achieving triple bottom line performance: Highlighting the role of social capabilities and environmental management accounting. *Management of Environmental Quality: An International Journal*, *32*(3), 596–611.

Steenkamp, J. B. E. (2001). The role of national culture in international marketing research. *International Marketing Review*, *18*(1), 30–44.

Svensson, G., Ferro, C., Høgevold, N., Padin, C., Varela, J. C. S., & Sarstedt, M. (2018). Framing the triple bottom line approach: Direct and mediation effects between economic, social and environmental elements. *Journal of Cleaner Production*, *197*, 972–991.

Svensson, G., Høgevold, N., Ferro, C., Sosa Varela, J. C., Padin, C., & Wagner, B. (2016). A triple bottom line dominant logic for business sustainability: Framework and empirical finding. *Journal of Business-to-Business Marketing*, *23*, 153–188.

Svensson, G., & Wagner, B. (2015). Implementing and managing economic, social and environmental efforts of business sustainability: Propositions for measurement and structural models. *Management of Environmental Quality*, *26*(2), 195–213.

Tata, J., & Prasad, S. (2015). National cultural values, sustainability beliefs, and organizational initiatives. *Cross Cultural Management*, *22*(2), 278–296.

Tate, W. L., & Bals, L. (2018). Achieving shared triple bottom line (TBL) value creation: Toward a social resource-based view (SRBV) of the firm. *Journal of Business Ethics*, *152*(3), 803–826.

Teece, D. J. (2007). Explicating dynamic capabilities: The nature and microfoundations of (sustainable) enterprise performance. *Strategic Management Journal*, *28*(13), 1319–1350.

Teece, D. J. (2014). A dynamic capabilities-based entrepreneurial theory of the multinational enterprise. *Journal of International Business Studies*, *45*(1), 8–37.

Tseng, M. L., Chang, C. H., Lin, C. W. R., Wu, K. J., Chen, Q., Xia, L., & Xue, B. (2020). Future trends and guidance for the triple bottom line and sustainability: A data driven bibliometric analysis. *Environmental Science and Pollution Research*, *27*, 33543–33567.

Ueno, S., & Sekaran, U. (1992). The influence of culture on budget control practices in the USA and Japan: An empirical study. *Journal of International Business Studies*, *23*(4), 659–674.

Ullah, Z., Arslan, A., & Puhakka, V. (2021). Corporate social responsibility strategy, sustainable product attributes, and export performance. *Corporate Social Responsibility and Environmental Management*, *28*(6), 1840–1853.

Van Riel, A. C. R., Henseler, J., Kemény, I., & Sasovova, Z. (2017). Estimating hierarchical constructs using consistent partial least squares.

15353966, 2022, 5, Downloaded from https://onlinelibrary.wiley.com/doi/10.1002/csr.2261 by NICE, National Institute for Health and Care Excellence, Wiley Online Library on [13/05/2026]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

Industrial Management & Data Systems, *117*(3), 459–477. https://doi.org/10.1108/imds-07-2016-0286

Voorhees, C. M., Brady, M. K., Calantone, R., & Ramirez, E. (2015). Discriminant validity testing in marketing: An analysis, causes for concern, and proposed remedies. *Journal of the Academy of Marketing Science*, *44*(1), 119–134. https://doi.org/10.1007/s11747-015-0455-4

Wasti, S. N., Kozan, M. K., & Kuman, A. (2006). Buyer-supplier relationships in the Turkish automotive industry. *International Journal of Operations & Production Management*, *26*(9), 947–970.

Weidner, K., Nakata, C., & Zhu, Z. (2021). Sustainable innovation and the triple bottom-line: A market-based capabilities and stakeholder perspective. *Journal of Marketing Theory and Practice*, *29*(2), 141–161.

Wernerfelt, B. (1984). A resource-based view of the firm. *Strategic Management Journal*, *5*(2), 171–180.

World Commission on Environment and Development. (1987). *Our Common Future*. Oxford University Press.

How to cite this article: Andersson, S., Svensson, G., Molina-Castillo, F.-J., Otero-Neira, C., Lindgren, J., Karlsson, N. P. E., & Laurell, H. (2022). Sustainable development—Direct and indirect effects between economic, social, and environmental dimensions in business practices. *Corporate Social Responsibility and Environmental Management*, *29*(5), 1158–1172. https://doi.org/10.1002/csr.2261

15353966, 2022, 5, Downloaded from https://onlinelibrary.wiley.com/doi/10.1002/csr.2261 by NICE, National Institute for Health and Care Excellence, Wiley Online Library on [13/05/2026]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License