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Validating a triple bottom line construct and reasons for implementing sustainable business practices in companies and their business networks

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Abstract

Purpose – The purpose of this paper is to validate a triple bottom line (TBL) construct, as well as to describe the TBL reasons for implementing sustainable business practices in companies and their business networks.

Design/methodology/approach – This study reports on the validation of a TBL construct, in a Spanish context, of a study originally conducted in Norway. In this validation study, 230 companies were selected for participation. A total of 89 usable questionnaires were returned, generating a response rate of 38.5 per cent.

Findings – The empirical findings indicate major similarities and minor differences between organizations in Spain and Norway across two studies. By extension, the empirical findings appear to be valid and reliable across contexts and through time.

Research limitations/implications – This study explains the structural properties of the main reasons for business sustainability (economic, social and environmental) and business sustainability efforts in companies and the supply chains or business networks.

Practical implications – Business sustainability efforts need to be assessed in a systematic manner, and the validated TBL construct offers a foundation for doing this, though it needs to be complemented with other elements and details in connection with business sustainability.

Originality/value – Business sustainability efforts have been evolving over time and are increasingly seen to consider economic viability, as well as environmental sustainability and social responsibility. This study deals with how these elements of TBL are interrelated with respect to business sustainability.

Keywords Spain, Sustainability, Triple bottom line, Corporate governance

Paper type Research paper

Introduction

Sustainability is often regarded as the "right thing to do", and companies claim to internalize this in their values and objectives (White, 2009). However, it is not only companies that engage in business sustainability practices but also governments and other organizations (Aras and Crowther, 2015).

Aras and Crowther (2015) argue that to achieve a sustainable level of development, companies need to make a truly concerted effort to implement sustainability. It is necessary to pay attention to the elements of sustainability and to maintain an equilibrium among these elements (Aras and Crowther, 2015).

There is ample evidence that companies are genuinely interested in ways to enhance their performance from a business sustainability perspective (Burke and Logsdon, 1996;

Waddock and Graves, 1997; Berman et al., 1999; Dowell et al., 2000; Cambra-Fierro and Ruiz-Benítez, 2011; Dos Santos, 2011; Svensson and Wagner, 2011, 2012). These companies are curious to know how they can measure and manage those structures and systems that support business sustainability performance (Wood, 1991; Christman, 2000; James, 2000; Høgevold, 2011, Høgevold and Svensson, 2012).

Wagner and Svensson (2014) provided an outline enabling companies to steer business sustainability in their respective business networks. According to Holton et al. (2010) and Jamali (2006, p. 812), there is still room to improve our understanding of the strategic organizational intricacies that go hand in hand with one another when sustainable business practices are implemented, monitored and evaluated, such as the triple bottom line (TBL) approach, consisting of economic, social and environmental elements (Elkington, 1994, 1999).

It is therefore important to detect practices and strategies that will enable companies to meet the needs of today, without negatively impacting the future. This can be done by taking into account the various reasons and motives for engaging in business practices that are sustainable, while still considering the social, economic and environmental aspects, otherwise known as the TBL approach (Elkington, 1994, 1999; Høgevold et al., 2014).

By improving our understanding of the TBL approach and the influence of business practices that are sustainable for a company, the potential to assimilate such practices into the company's strategic, tactical and long-term operations can be improved, whilst simultaneously solidifying the integration of these practices into organizational cultures (Gray and Bebbington, 2000; Strandberg Consulting, 2009).

This study addresses how social, economic and environmental elements can be measured on an aggregated level, as well as reasons why companies engage in business practices that strive to be sustainable internally, as well as in the business networks of these companies. The authors argue that by doing so, a relevant contribution to the existing body of knowledge will be made. Additionally, useful future research will be fostered and encouraged through this study.

The present study is based upon Høgevold et al. (2015), who developed and tested an aggregated construct of TBL in Norway. Svensson (2013) writes that a validation of previous empirical findings is necessary to build a valid and reliable theory that is applicable over time and across contexts. Hair et al. (2011, p. 33) also write that "[. . .] researchers develop theory based on the accumulated body of previous research". Therefore, it is necessary to analyse and validate similar phenomena in a different context to develop theory. Without validation, a potential theory cannot be confirmed, or it will be fragmented and the findings will be, at worst, meaningless, if validation efforts are not undertaken to confirm the validity and reliability of previous research across contexts.

The findings of business research are rarely replicated and validated across contexts and through time, resulting in poorly substantiated theories and models that lack empirical support beyond the original study. It is notable that replication of empirical findings in previous studies fails to a large extent (Science Alert, 2015).

The TBL construct of Høgevold et al. (2015) may be applied in relation to quality constructs (such as satisfaction, trust and commitment) in business relationships, which are used in measurement and structural models of structural equation modelling, but such a model first needs to be validated across contexts and through time. To the best of the authors' knowledge, there is no other aggregated construct tested in the literature, the measurement properties of which can be used as an aggregated construct of TBL in connection with structural properties of other relevant constructs. This study also generates knowledge on the principal reasons to implement the elements of TBL within companies and their business networks.

The remainder of the article commences with a literature review that frames business sustainability and the TBL approach. This is followed by an overview of the methodology, the findings, implications, conclusions and possible ways forward.

Literature review

The notion of sustainability can be traced back over many decades (Carson, 1962). According to Hassini *et al.* (2012), despite this fact, numerous companies are not keen on implementing business practices that are sustainable, and they doubt whether implementing them is of any real benefit to them specifically.

Social responsibility was described by Carroll (1979, p. 499) as the complete range of accountabilities that a company has to society. According to Carroll (1979, p. 499), social responsibility is best expressed as the "economic, legal, ethical and discretionary" accomplishments of a company.

On the one hand, TBL can be seen as a framework that has been developed to assess three interconnected dimensions (economic, social and environmental), with the aim of assisting companies in achieving their sustainability objectives (Slaper and Hall, 2011). In doing so, the TBL goes beyond the tools normally used to measure company performance (Slaper and Hall, 2011).

On the other hand, the concept of corporate social responsibility (CSR) was developed to define the social activities in which companies engage. However, the concept has varying meanings for the various stakeholders concerned. According to Hubbard (2009), CSR can be assessed by considering activities such as donations to charities in a narrower sense, or the extent to which a particular company engages in activities related to "corporate citizenship" and "strategic philanthropy".

CSR involves the specific activities companies engage in to demonstrate the fact that they *do* take social and environmental aspects into account in their day-to-day operations, whilst at the same time endeavouring to make a profit, which is what matters when they engage with their stakeholders (Pérez and del Bosque, 2014), including the public at large (Anas *et al.*, 2015). Pérez and del Bosque (2014) state furthermore that CSR depends on the extent to which companies really *want* to be sustainable.

Schwartz and Carroll (2003, p. 524) develop a CSR pyramid and also identify possible company orientations towards CSR, including legal, ethical and economic ones. The CSR pyramid argues that a company should adhere to international laws and the laws of the country where it conducts its business. A company should always act in an ethical manner in all countries and actively demonstrate being a corporate citizen by meeting the expectations of a country in which it operates. Finally, a company should aim at achieving acceptable and sustainable profit margins (Carroll, 2004, p. 119).

Furthermore, there is a significant body of knowledge that provides insight into company motivations to be socially responsible (Stanwick and Stanwick, 1998; Bansal and Roth, 2000; Sharma, 2000). There is also evidence in the literature on the financial rewards of acting in a socially responsible manner (Burke and Logsdon, 1996; Waddock and Graves, 1997; Berman *et al.*, 1999; Dowell *et al.*, 2000).

According to Porter and Kramer (2006, p. 78), companies are often unsuccessful in the execution of CSR activities, as they fail to recognize that the company and society are not opponents but rather two entities that are interconnected and dependent on each another. CSR is often considered from a generic standpoint instead of being considered from the company's own point of view. CSR initiatives therefore all too often fail, as companies do not tailor them specifically to the company (Porter and Kramer, 2006, p. 78).

Companies should focus on creating value for both themselves and society; the former should aim both at making themselves grow and contributing to the latter at the same time (Porter and Kramer, 2011, p. 75). In addition, achieving value for both company and society

is not only done by keeping to regulatory requirements and ethical principles, but also by taking the needs of customers and external stakeholders into account (Porter and Kramer, 2011, p. 75).

Framing business sustainability

With business sustainability becoming more prominent during the early 1980s, companies departed from a limited economic perspective of their broader accountability to society and subsequently significantly shifted their reactions to pressures from the environment in which they were operating (Robinson, 2000; Evans and Sawyer, 2010). These pressures were largely driven by changes in the expectations of society (Robinson, 2000; Evans and Sawyer, 2010).

The following decade saw even more changes in paradigms, as companies moved from a context that focused on merely managing the environment to a wider approach involving the management of sustainability itself (Schuftan, 2013).

Another decade later, in the 90s, the belief was widely held that sustainability, viewed from a global perspective, is propelled by a rise in the collaboration of an increased number of company stakeholders that originate from society, a rise in "industrial activity, consumption, pollution and waste generation", the availability of innovative technological solutions and a rise in "population, poverty and inequity associated with globalization" (Hart and Milstein, 2003, pp. 58-59).

Isaksson et al. (2015) write that companies are themselves systems that operate in a larger global system, and for the global system to be sustainable, companies need to be sustainable as well.

From an overview of the current literature in recent years that focuses on business sustainability, it is clear that sustainable business practices have become much more prominent in recent years (Høgevold et al., 2014). According to White (2009), this can in part be ascribed to the fact that companies are becoming ever more accountable for their impact on their operating environment.

However, a large number of companies still only dabble in sustainable business practices on an *ad hoc* basis (Seuring and Müller, 2008; Chabowski et al., 2011; Leonidou and Leonidou, 2011). Irrespective of this state of affairs, the literature does reveal a number of companies that have successfully implemented positive practices in their organizations and in their business networks (Cambra-Fierro and Ruiz-Benítez, 2011; Dos Santos, 2011; Høgevold, 2011, Høgevold and Svensson, 2012; Svensson and Wagner, 2011, 2012).

Business sustainability is strategic in nature (Winnard et al., 2014), and companies which would like to be sustainable should focus on limiting their negative impact on the environment, opting rather to conserve resources and rebuild the environment around them, while still being profitable (Johnston et al., 2007).

Sustainability means in essence that companies should achieve business success while still seriously considering their impact on the environment (Granados and Gámez, 2010). According to Isaksson et al. (2015), sustainability involves putting systems in place that can be maintained indefinitely.

In a recent publication by Høgevold et al. (2014), some insight is provided into the development of models for business sustainability in companies focusing particularly on challenges they face with respect to sustainability, as well as the corporate motivations for achieving businesses sustainability, the economic consequences, the environmental activities and the social limitations.

Business strategies that are inherently sustainable have thus become the departure point from which production and consumption are being considered. This is primarily due to the

forces of demand created by a growing population and the fact that society is now being seriously confronted with diminishing natural resources.

Framing triple bottom line

According to Elkington (1994), as well as Norman and Macdonald (2004, p. 243), sustainable development is grounded by three interconnected principles, namely, equity in society, economic prosperity and maintaining integrity from an environmental or ecological perspective. The state of affairs related to any of these principles is influenced by the conditions in any of the other aspects (Hockerts, 1999).

Nayak (2015) affirms that companies should consider all three interconnected dimensions as equally important from a strategic perspective. Furthermore, the author contends that the implementation and successful execution of sustainable business practices needs to be approached from an integrated perspective, using tools that assure quality and a more effective implementation and management of these practices. Finally, the author suggests that when companies embrace sustainable business practices, it could result in long-term competitiveness (Nayak, 2015).

Norman and MacDonald (2004) also note the escalation of awareness in the TBL approach on the part of many stakeholders originating from the companies itself, as well as from stakeholders external to the company which are located in its regulatory environment. More specifically, there seems to be increased pressure across the globe on companies to improve their understanding of responsibilities that fall outside the confines of merely pleasing shareholders and customers, to also being responsible and accountable to a range of other stakeholders (Suggett and Goodsir, 2002).

Adopting the TBL approach commences with a paradigm shift that involves redefining the company objectives from merely focusing on profits for shareholders to creating value for all stakeholders. In this way, the company remains profitable, but this also benefits the broader stakeholder community. According to Hardjono and Marrewijk (2001), companies are indeed often willing to expand their performance measures from narrowly focussing on profit over the short term to also considering social, economic and environmental aspects over the long term.

Being economically sustainable involves a company's capacity to endure and make a profit, to contribute to economies both from a domestic as well as a global perspective (Roberts and Tribe, 2008). In essence, the economic focus of TBL refers to the manner in which the company remains in business.

The social focus of the TBL approach is often least understood by the very companies which really should be concerned. Many companies find it difficult to grasp the extent of their impact, as well as their accountability, as far as the social principle is concerned. It is furthermore not easy to define sustainability from social, community and cultural points of view. Roberts and Tribe (2008) conclude that sustainability, viewed from a social perspective, encapsulates the values of people, their behavioural patterns and their social activities.

Knowles et al. (1999), as well as Hobson and Essex (2001), contend that cost-cutting motives are often viewed as the primary motivator for companies to engage in environmental activities. Many companies, however, do indeed use environmental management systems (EMS) that are certified and globally acknowledged to measure their performance from an environmental perspective, regarding the TBL approach. By using EMS, companies are able to establish appropriate environmental policies, goals and performance criteria. They are therefore able to accurately gauge how they perform against these criteria.

It is thus evident that business sustainability should be established through activities that encapsulate a range of social, economic and environmental aspects. When a company

becomes involved in such activities, it can successfully integrate sustainability into its business practices and even achieve a competitive advantage in the market, growth in market share and an enhancement of shareholder value through its sustainable business practices (BSDGlobal, 2002).

Methodology

This section reports on a validation study, in a Spanish context, of a study originally conducted in Norway by Høgevold et al. (2015), which serves as the foundation for the current study.

The international research team decided to collect data in Spain, as the country boasts an admirable environmental profile, with an Environmental Performance Index (EPI, 2012) ranking of seven out of a possible 178 countries. Other European countries are also viewed by many as forerunners in the world with respect to sustainability issues and CSR (Strand et al., 2015).

Bearing in mind that the target was large Spanish companies, the criteria established by the Spanish Accounting Plan (Royal Decree 1514/2007) were used to define the population and construct the sampling frame for the study. The criteria allowed for the inclusion of those companies which have:

- a total asset value of more than €2.85 million;
- a net annual turnover above €5.7 million; and
- an average number of employees exceeding 100.

The latest update of the financial database "System Iberian Balance Analysis" (SIBA) was used for this purpose. The database contains, among other considerations, economic and financial data for two million Spanish companies. Spain is one of the largest economies in Europe.

A total of 3,818 Spanish companies across industrial sectors met the criteria for inclusion in this study. However, 791 companies were eliminated, because they were subsidiaries of other companies already in the sampling frame. A systematic sampling technique was subsequently used, for which every tenth company in the sampling frame was selected, ultimately generating a sample of 303 companies out of a possible 3,027 in the sampling frame. These companies furthermore had to engage in business sustainability efforts and have a department or division focusing on CSR or sustainable development. As a result, 73 companies were excluded from the study, as they did not have a department or division focusing on CSR or sustainable development, based upon information from the assessment of the companies during the last quarter of 2014.

Consequently, 230 companies were ultimately selected to take part in the study. A questionnaire accompanied by an introductory letter containing the contact details of the research team was sent to the key informants. The key informants (or targeted respondents) were managers responsible for CSR departments or in charge of sustainable development at the selected companies.

Key informants were requested to participate in the study, and email reminders were subsequently sent, or telephone calls were made to remind people to complete the questionnaire if they had not done so within one month of the initial request. This procedure was repeated two and three months after the initial request if the questionnaires had still not been returned.

A total of 98 questionnaires were returned, generating an initial response rate of 42.4 per cent. Eleven key informants contacted the research team to apologize for not being able to collaborate with the investigation, because of company policy preventing them to do so. Nine of the returned questionnaires were eliminated due to unsatisfactory responses

(poorly completed questionnaires). Ultimately, 89 usable questionnaires were returned, generating a final response rate of 38.5 per cent.

One limitation of this study may be that of social desirability bias among informants (Fisher, 1993; Nederhof, 1985). The expectations of society from corporate practices related to TBL may lead informants (incorrectly) to agree with the statements, but one of the selection criteria for the study was that the company had engaged substantially in sustainable business practices, as was the criterion in the Norwegian study by Høgevold et al. (2015). A comparison of the Norwegian and Spanish data is therefore presented in Table III to check for similarities and differences. To overcome possible social desirability bias, key informants were assured that their responses would remain strictly confidential and that the results would only be used in aggregated form for the study as a whole and not for individual companies.

In addition, two screening questions asked about the informants' ability to complete the questionnaire, namely:

1. how knowledgeable they were about their company's sustainable business practices; and

2. how knowledgeable they were about such practices in the entire business network.

The questions were included in the study for the purposes of checking the competency of the respondent. This is in line with Campbell's (1955) recommendations that respondents in a study need to be competent enough to answer questions relating to the subject matter under investigation. The findings indicated that 98.7 per cent (mean = 4.69 and standard deviation = 0.59) of the respondents had satisfactory knowledge of their company's sustainable business practices and that 92.0 per cent (mean = 4.01 and standard deviation = 0.98) had satisfactory knowledge of their company's sustainable business practices in the entire business network. Univariate and multivariate statistical techniques were used to analyse the data collected during the empirical phase of the study. The results are presented in the following section.

The dimensions and items are the same as those used by Høgevold et al. (2015) to make validation possible. A five-point Likert scale was used for all of the items as listed below, with "Strongly Disagree" (1) and "Strongly Agree" (5) as the end points:

1. Triple bottom line – General
   - Economic, social and environmental efforts of sustainable business practices [. . .]:
     - [. . .] are well intertwined in the company.
     - [. . .] need to be simultaneously addressed.
     - [. . .] are interconnected in the company.
     - [. . .] are not treated separately from one another.
     - [. . .] are considered separately from one another.

2. Triple bottom line – Specific
   - Environmental – our sustainable business practices [. . .]:
     - [. . .] focus on environmental issues.
     - [. . .] make the most efficient use of the resources available in the environment.
     - [. . .] are based upon environmental monitoring.
   - Economic – our sustainable business practices [. . .]:
     - [. . .] rest on economic considerations.
     - [. . .] focus on survival in the marketplace.
     - [. . .] saved money to the company at the beginning of implementation.

- Social – Our sustainable business practices [. . .]:
  - [. . .] take current activities in the community into account.
  - [. . .] consider the social well-being of society as a whole.
  - [. . .] focus on social (i.e. relational or societal) aspects.

The following items were based upon ranks (1 to 3), and a five-point semantic differential scale was also used, ranging from "Minor Extent" (1) to "Major Extent" (5):

1. Sustainable business practices – implementation

  - To what extent has your company implemented sustainable business practices [. . .]:
    - [. . .] within the company.
    - [. . .] in the company's business network.

2. Sustainable business practices – TBL reasons

  - Please rank from 1 to 3 the main reasons for implementing sustainable business practices within your company (where 1 is most important and 3 least important) [. . .]:
    - economic reasons;
    - social reasons;
    - environmental reasons;

  - Ranking the main reasons for implementing sustainable business practices within your company's business network (where 1 is most important and 3 least important)[. . .]
    - economic reasons;
    - social reasons;
    - environmental reasons;

The following items were based upon ranks (1 to 3), and a five-point semantic differential scale was also used, ranging from "Minor Extent" (1) to "Major Extent" (5):

1. Sustainable business practices – implementation

  - To what extent has your company implemented sustainable business practices [. . .]:
    - [. . .] within the company.
    - [. . .] in the company's business network.

2. Sustainable business practices – TBL reasons

  - Please rank from 1 to 3 the main reasons for implementing sustainable business practices within your company (where 1 is most important and 3 least important) [. . .]
    - economic reasons;
    - social reasons;
    - environmental reasons;

  - Ranking the main reasons for implementing sustainable business practices within your company's business network (where 1 is most important and 3 least important)[. . .]
    - economic reasons;
    - social reasons;
    - environmental reasons;

Univariate and multivariate techniques were used to analyse the data collected and the underlying patterns, all of which are presented in the next section.

Empirical findings

The corporate sample characteristics of this study are summarized in Table I. The nature of business extends across industries and sectors of Spanish companies deemed representative of a broad spectrum of Spanish businesses.

The profile of the studied companies corresponds to a total of annual operating revenues (in 2014) of 1,057,826.865.000 Euros, a maximum value of 15,116 000 000 Euros in annual revenue and a minimum value of 2,523.000 Euros. The average number of employees in the studied companies was 5,631.

Univariate variate analysis

The TBL items used, and the univariate analysis of the items used to measure each construct or aspect of TBL and sustainable business practices, are presented in Table II. The results display consistency across the items. In addition to the TBL items, we also determined the reasons the companies implement sustainable business practices within their organizations and business networks.

It appears, as shown in Table II, based on the results obtained from this Spanish survey, that the main reasons for implementing sustainable business practices within the companies relate to social ones, followed by economic and environmental ones.

The reasons for implementing sustainable business practices in business networks are slightly different. Environmental reasons are the least important ones.

More than 70 per cent of the studied companies believe that the economic, social and environmental efforts of their sustainable business practices are intertwined, and only 5 per cent believe the opposite. Almost two-thirds of the companies also perceive these efforts as interconnected, and again, only 5 per cent perceive the opposite. Close to 80 per cent of the companies perceive that the economic, social and environmental efforts of sustainable business practices need to be addressed simultaneously.

Table II also shows the degree to which the companies have implemented sustainable business practices in their own company and in their business network. A further 68 per cent of the companies have implemented sustainable business practices to a large extent in their own organization and 45 per cent in their business networks.

Table I	Sample characteristics–nature of business
Nature of business	Count
Accommodation, cafe or restaurant	2
Agriculture, forest or fishing	4
Communication services	8
Construction	8
Electricity, gas or water	8
Finance and/or Insurance	6
Government administration or defence	1
Health & community services	7
Mining	2
Manufacturing	18
Personal and other services	10
Retail trade	2
Transport and storage	3
Wholesale trade	6
Other	4
Total	89
Note: Turnover and number of employees	

Table II	Univariate statistics						
Dimension	Item	N	Mean	SD	1-2 (%)	3 (%)	4-5 (%)
TBL	(a)	76	3.97	0.75	5.3	18.4	76.3
	(b)	75	4.07	0.74	2.7	18.7	78.6
	(c)	77	4.01	0.80	5.2	20.8	74.0
	(d)	76	3.76	0.95	9.2	23.7	67.1
	(e)[a]	76	3.24	1.13	30.3	23.7	46.0
Environmental	(a)	89	4.18	0.73	3.4	9.0	87.6
	(b)	89	4.00	0.83	4.5	20.2	75.3
	(c)	89	4.22	0.84	3.4	15.7	80.9
Economic	(a)	86	3.74	0.95	11.7	25.6	62.7
	(b)	86	3.53	1.10	19.8	31.4	48.8
	(c)	86	3.72	0.95	10.5	31.4	58.1
Social	(a)	81	4.21	0.77	4.9	6.2	88.9
	(b)	82	4.24	0.83	4.9	9.8	85.3
	(c)	79	4.24	0.79	2.5	12.7	84.8
Implementation sustainable business practices within . . .	Company	89	4.12	0.99	7.8	24.7	67.5
	Business network	86	3.22	1.13	24.4	31.4	44.2
					1 (%)	2 (%)	3 (%)
TBL reasons within the company	(a)	88	2.07	0.83	30.7	31.8	37.5
	(b)	88	1.77	0.81	46.6	29.5	23.9
	(c)	88	2.16	0.77	22.7	38.6	38.6
TBL reasons in the company's business network	(a)	85	1.96	0.87	38.8	25.9	35.3
	(b)	85	1.79	0.73	38.8	43.3	17.6
	(c)	85	2.25	0.80	22.4	30.6	47.1

Notes: [a]Item with reversed/negative meaning

In addition to the items of the TBL construct in Table II, the companies were also asked about their perceptions of the extent to which economic, social and environmental efforts are interconnected and interrelated in their sustainable business practices, all of which are shown in Table II.

Comparative analysis

Table III compares the findings presented in Høgevold *et al.* (2015), based on a Norwegian study, with this study, which is based on Spanish companies. The comparison of empirical findings between countries is done to report similarities and differences between the two studies.

Spanish and Norwegian companies have different reasons for implementing sustainable business practices, both within their own organization and in their business network. In the Norwegian study, more than half of the companies consider economic reasons to be the main ones for implementing sustainable business practices within their company, followed by social and environmental reasons. In Spain, social reasons were the most important. Comparing the reasons for implementing sustainable business practices in their business network also revealed differences. Norwegian companies perceive economic factors to be the most important factor, and in Spain, social and economic factors are perceived as equally important.

Two-thirds of the organizations, both in the Norwegian and the Spanish study, responded that they have implemented sustainable business practices within the company to a large degree.

Companies in both countries perceive the TBL efforts as being well intertwined in the company. In total, 55 per cent of the Norwegian companies and 76 per cent of the Spanish companies responded that their organization's TBL efforts are well intertwined. Interesting, and in support of these findings, were the companies' responses that their sustainable business efforts are not treated separately from one another. In total, 45 per cent of the

Table III Comparison between Norwegian and Spanish survey				
Dimension	*Item*	*Norway 4-5 (%)*	*Spain 4-5 (%)*	*Difference*
TBL	(a) . . . are well intertwined in the company	55.4	76.3	20.9
	(b) . . . need to be simultaneously addressed	70.9	78.6	7.7
	(c) . . . are interconnected in the company	61.8	74.0	12.2
	(d) . . . are not treated separately from one another	44.5	67.1	22.6
	(e) . . . are considered separately from one another	29.1	46.0	16.9
Environmental	(a) . . . focus on environmental issues	48.6	87.6	39.0
	(b) . . . make the most efficient use of the resources available in the environment	62.4	75.3	12.9
	(c) . . . are based upon environmental monitoring	53.2	80.9	27.7
Economic	(a) . . . rest on economic considerations	44.0	62.7	18.7
	(b) . . . focus on survival in the marketplace	55.9	48.8	−7.1
	(c) . . . saved money to the company at the beginning of implementation	34.3	58.1	23.8
Social	(a) . . . take current activities in the community into account	55.9	88.9	33.0
	(b) . . . consider the social well-being of society as a whole	64.6	85.3	20.7
	(c) . . . focus on social (i.e. relational or societal) aspects	21.9	84.8	62.9
Implementation sustainable business practices within. . .	(a) . . .within the company	66.7	67.5	0.2
	(b) . . .in the company's business network	27.9	44.2	16.3
		Rank 1	*Rank 1*	*Difference*
TBL reasons within the company	(a) Economic reasons	52.3	30.7	−21.6
	(b) Social reasons	32.1	46.6	14.5
	(c) Environmental reasons	27.6	22.7	−4.9
TBL reasons in the company's business network	(a) Economic reasons	50.0	38.8	−11.2
	(b) Social reasons	30.3	38.8	8.5
	(c) Environmental reasons	28.7	22.4	−6.3

Norwegian companies and 67 per cent of the Spanish ones perceive these efforts as not treated separately from one another.

Also, more than 70 per cent of the companies in both countries perceive TBL actions as being addressed simultaneously. Furthermore, 62 per cent of the Norwegian companies and 74 per cent of the Spanish companies regard their efforts as interconnected in the company.

Multivariate analysis

To validate the underlying pattern of dimensions and items of the TBL construct of Hogevold et al. (2015), an exploratory factor analysis was conducted as shown in Table IV. The principal component analysis method was used for factor extraction. An orthogonal approach, namely, the varimax method, was used to rotate the initial factor solution. Subsequently, a factor analysis was performed of the TBL construct. The factor solution contains three dimensions and nine items of a construct of TBL.

As shown in Table IV, the outcome of the factor solution of dimensions and items of the construct of TBL was acceptable (Kaiser–Meyer–Olkin [KMO]: 0.607 (overall measure of sampling adequacy [MSA]); Bartlett's test: approx. χ^2: 218,838, df: 36, Sig.: 0.000). MSAs ranged between 0.40 and 0.75. Communalities ranged between 0.46 and 0.79, with a total explained variance of 67.8 per cent. The Cronbach's alpha for each factor ranged between 0.62 and 0.79.

The Norwegian factor analysis reported by Høgevold et al. (2015) turned out to be similar (KMO: 0.666 (overall MSA); Bartlett's test: approx. χ^2: 210,267, df: 36, Sig.: 0.000). MSAs ranged between 0.61 and 0.75. Communalities ranged between 0.53 and 0.76, with a total

		Factor				
Table IV Exploratory factor analysis–triple bottom line						
Dimension	Item	1	2	3	a	b
Environmental	(a) . . . focus on environmental issues	0.883	−0.024	−0.063	0.700	0.720
	(b) . . . are based upon environmental monitoring	0.829	0.097	0.059	0.785	0.573
	(c) . . . make the most efficient use of the resources available in the environment	0.826	0.205	0.104	0.736	0.626
Social	(a) . . . focus on social (i.e. relational or societal) aspects	0.074	0.855	0.051	0.619	0.753
	(b) . . . consider the social well-being of society as a whole	0.149	0.840	0.176	0.759	0.661
	(c) . . . take current activities in the community into account	0.048	0.772	−0.142	0.739	0.619
Economic	(a) . . . rest on economic considerations	0.033	−0.055	0.890	0.796	0.479
	(b) . . . focus on survival in the marketplace	−0.024	−0.076	0.710	0.511	0.399
	(c) . . . saved money to the company at the beginning of implementation	0.083	0.206	0.638	0.457	0.600
Cumulative explained total variance (%)		24.3	23.7	19.7		
Total explained variance per factor (%)		24.3	48.1	67.8		
Cronbach's alpha		0.79	0.78	0.62		

Notes: [a]Communality per item; [b]measures of sampling adequacy (MSA per item)

explained variance of 64.8 per cent. The Cronbach's alpha for each factor ranged between 0.66 and 0.68.

Subsequently, the same three factors were validated as shown in Table IV, all of which indicated acceptable convergent, discriminant and nomological validity, as well as acceptable reliability for each dimension. The measurement metrics of the construct of TBL assessed in Table IV indicate acceptable validity and reliability across contexts and through time.

The validated findings in Tables II and IV provide opportunities for further research, which are outlined in the following section.

Research implications

The findings in the field of business sustainability are still mostly descriptive, such as conceptual frameworks, case studies and descriptive surveys. Constructs are rarely developed and tested in empirical settings.

This study, based on corporate Spain, validates and confirms the TBL construct in corporate Norway of Høgevold et al. (2015), indicating validity and reliability through time and across contexts. It is applicable in the development of nomological frameworks in relation to other relevant constructs (e.g. satisfaction, trust and commitment) in business relationships with respect to business sustainability.

The validated TBL construct is a general one that can be used in relation to other general constructs, in connection with measurement and structural models. Future studies may focus on validating the TBL construct and its relationship with other relevant constructs. For example, to what degree do the TBL dimensions impact on satisfaction, trust and commitment in a business relationship?

The TBL construct tested in both corporate Norway and Spain offers a foundation of measurement properties for testing the economic, social and environmental elements of business sustainability through its validated dimensions and items (see above-mentioned list and Table III). It can be applied as a toolkit to explore business sustainability efforts within companies and their supply chains or business networks. Furthermore, the toolkit can be applied to explore business sustainability in various industries and different markets.

This current study provides a foundation explaining the structural properties of the main reasons for business sustainability (economic, social and environmental) and business sustainability efforts in companies and supply chains or business networks (see above-mentioned list and Table II). However, translating sustainable business practices into action and driving them through a complex organization remains a substantial challenge.

The presented measurement properties of the validated TBL construct and the potential structural ones may be relevant for developing a nomological framework of economic, social and environmental dimensions and items in in relation to business sustainability.

Managerial implications

Business sustainability efforts vary between companies and industries. It may therefore not be appropriate to compare different companies and industries, as their abilities and actions have to be differently oriented. For example, some companies or industries may focus on energy consumption, while others on raw materials. A universal formula of TBL to explore business sustainability efforts may potentially be impossible, or at least not very practical or viable.

Business sustainability efforts need to be assessed in a systematic manner, and the validated TBL construct offers a foundation for doing so, although it needs to be complemented with other elements in connection with business sustainability. A nomological framework should always consider the economic, social and environmental elements of business sustainability efforts. Companies therefore need to broaden the basis of assessment, taking the three elements of TBL into account.

The corporate reasons and motivations for business sustainability efforts within companies and their business network should be assessed to obtain an understanding of what they do, why they do it and where they are heading. Business sustainability efforts are continuous and evolutionary, requiring companies to be open-minded to deal with change.

Conclusions, research limitations and suggestions

Business sustainability efforts have been evolving over time to increasingly consider economic viability as well as environmental sustainability and social responsibility. This study contributes to demonstrating how these elements of TBL are interrelated with respect to business sustainability.

This study also contributes to a validated TBL construct (Table III), all aspects of which may be applied and tested in relation to other constructs in measurement and structural models. Svensson (2013) and Hair et al. (2011) both argue that research efforts to validate the outcome of previous research are crucial, to generate valid and reliable theories and models over time and across contexts. Theories and models require subsequent validations to verify the (original) validity and reliability of previous results. Otherwise, they may be worthless and fail to capture the reality of business.

In addition, this study contributes to framing the priorities behind the main reasons (Table II) for implementing the elements of TBL within companies and their supply chains and business networks.

The study shows that in corporate Spain, the main incentives to implement business sustainability efforts are environmental, while it is more economic in nature in corporate Norway (Høgevold et al., 2015). The difference is explained by that fact that Spanish companies are judicially obliged to undertake certain sustainability practices. Corporate Spain ranks economic reasons as less important than environmental ones, while Norwegian firms rank social reasons as less important than economic ones (Høgevold et al., 2015). Finally, corporate Spain ranks social reasons last, but Norway ranks environmental reason last (Høgevold et al., 2015).

This study suffers from some research limitations, such as the data being based on the perceptions of key executives in large organizations, even though their views do not necessarily reflect what the companies actually do when it comes to sustainable business practices or the impact of these actions. The study has validated a TBL construct, but it of course needs effective implementation to be useful in practice and potentially influence sustainability performance.

Further research could usefully focus on non-European business settings (e.g. Africa and Asia) to verify the validity and reliability of the TBL construct across contexts and through time. In addition, additional in-depth research is required to investigate the specifics of what companies actually do across economic, social and environmental actions in connection with sustainable business practices.

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