

The relative importance of environmental aspects vs. social aspects in defining sustainability
vs. driving consumer boycott behavior

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Abstract

Companies increasingly include sustainability claims in their marketing and communication towards customers. Often firms assume that these customers have a non-ambiguous understanding of sustainability and suppose that the environmental dimension is the dominant consumer association. Using CFA applied to cross-national data from 7 countries, we find that consumers meaningfully distinguish social and environmental aspects when defining sustainability. Our results show that the environmental dimension is key but that the importance gap between both dimensions declines when consumers identify reasons to boycott brands. As consumer boycotts are an increasingly trending phenomenon, we show that social sustainability facets are important drivers of consumer boycotts. Based on our results, we conclude that firms that set sustainability priorities based on how they think consumers define sustainability might misfire, as social aspects might be underestimated as key drivers of boycott behavior.

Keywords: Sustainability, consumer boycott, structural equation modeling

Track: Social responsibility & ethics

1. Introduction

The notion of sustainability is ubiquitous in contemporary market and business practice (Schaltegger & Burritt, 2018). In response to shifting expectations from consumers and society at large, presenting sustainable offerings to consumers (i.e., sustainable products and/or service processes) has shifted from a 'nice to have' to a 'need to have'. The concept of sustainability has intertwined itself in almost all areas of society, and has grown into a broad concept that can convey different things to different people (Lunde, 2018; Salas-Zapata & Ortiz-Muñoz, 2019).

In the marketing literature, sustainable products are generally defined as products that have a positive social and/or environmental impact (Luchs, Naylor, Irwin, and Raghunathan, 2010). Thus, consumers are assumed to define sustainability as relating to both environmental and social aspects of products and services. But an extensive recent literature review finds that consumer research has typically focused rather single-mindedly on the environmental dimension, at the expense of the social dimension (Bangsa & Schlegelmilch, 2020). This leads to our first exploratory research question (**RQ1**), asking **how prominently environmental versus social aspects figure in consumers' definitions of sustainability**. This research question is important since companies often assume that consumers have a non-ambiguous understanding of sustainability. To illustrate: many firms tend to positively claim to offer "sustainable" products without specifying what exactly this sustainability claim is referring to and may not always take into account the extent to which social (equality) elements matter for their consumers. However, more explicitly considering a customer definition perspective (how consumers conceptualize sustainability in the first place, and what aspects are mainly thought of), is worthwhile. This insight could enhance the effectiveness for sustainability claims, as it could allow firms to position better around elements that consumers really find significant when 'thinking' about sustainability.

While companies often engage in sustainable practices as a way to positively market their brands and products, another important reason to focus on sustainability in a business context is more reactive in nature (Schaltegger & Burritt, 2018). In particular, businesses may aim to avoid negative backlash from the market (Wang, Chang, and Chen, 2021), such as consumer dissatisfaction or even anti-consumption behavior. One particularly threatening prospect for many companies is the risk that consumers may boycott them. Consumer boycott behavior as a means of expressing dissatisfaction can have detrimental effects on the firm. It cuts into profit margins and potentially even affects the brand image. In contrast to the dominance of

environmental aspects of sustainability in consumer research, studies on consumer boycotts commonly focus on social aspects of sustainability. These studies indicate that consumers may boycott a brand when they perceive the brand to violate some social or ethical norm (Klein, Smith, and John, 2004; Makarem & Jae, 2015; Wang et al., 2021). Other research shows that individuals engage more readily in action or change their behavior more quickly when detrimental sustainability issues are proximate, tangible and/or visceral - as compared to those that are more difficult to conceive and that unfold over a longer period (Griskevicius, Cantú, and Vugt, 2012). For example, the observation of unethical working conditions is tangible, and can therefore swiftly evoke feelings of injustice or anger and lead to immediate consumer response. In contrast, assessing the severity of global warming or greenhouse gas emissions is less evident (as it is more “intangible” or “impalpable” in nature), leaving consumers possibly less action-focused and more prone to disregard concerns.

This brings us to our second research question (**RQ2**), which relates to consumer boycott behavior as a particularly relevant type of sustainability consumer response. **Which sustainability dimension (environmental vs social) is relatively more prominent in leading to consumer boycotts?** Based on the theoretical background presented, and reasoning further on RQ2, we aim to investigate whether the social sustainability dimension will gain in relative importance to the environmental sustainability dimension as a ground for consumer boycott behavior, as compared to be a defining dimension in consumer’s conceptualization of sustainability. Hence, a third research question (**RQ3**) explores **whether potential importance gaps in dimensions (social vs. environmental) are equally pronounced in (a) defining sustainability, as compared to (b) being motivators of consumer boycott behavior.** Differently put, we aim to assess a plausible difference in discrepancies between both sustainability dimensions.

We address these research questions by analyzing defining aspects of sustainability, and by comparing these with sustainability aspects that have led to boycott behavior. Our contribution to the literature is threefold. *First*, we show how different aspects of sustainability are considered to be defining aspects by consumers. More specifically, we evaluate the extent to which sustainability is primarily defined in terms of environmental rather than social aspects. *Second*, our study assesses to what extent these same aspects are likely to trigger consumer boycotts, again evaluating the extent to which consumer boycotts may be more likely to be motivated by environmental rather than social aspects. *Third*, we compare the relative importance of environmental and social aspects of sustainability in (a)

defining sustainability, vs. (b) in leading to consumer boycott behavior - thereby assessing whether this difference in importance shifts. In sum, our research entails the comparison of both dimensions in defining sustainability, in constituting triggers for boycotts, and the extent to which this possible discrepancy declines or increases. By comparing the relative importance of sustainability dimensions, firms are more capable of determining which sets of sustainability claims are appropriate to communicate to consumers.

2. Method

2.1. Variables and sample

To address our exploratory research questions, we analyzed secondary data collected by a large international market research firm that conducted an international (for country details: see below) cross-sectional survey study on consumer perceptions of sustainability in 2020. For the current study we focus on two key questionnaire sections taken from this survey that pertain to sustainability.

In a first survey section, the following question probed consumers' unaided definitions of sustainability: "When you hear the word 'sustainability', what do you think it means? Please explain in detail what your idea of sustainability is." In a subsequent (closed) part of the question, the respondents were instructed to tick off the sustainability facets that were part of their prior definition. Based on desk research (using academic literature and business sources), we made a selection of five social aspects of sustainability from a longer list of aspects that was included in the questionnaire by the market research company namely, (a) fair wages, (b) good labor conditions, (c) safeguarding racial diversity and equality, (d) LGBT+ rights support, (e) gender equality support, and eight environmental aspects: (a) reduction of CO₂ emissions, (b) reduction of packaging & non-biodegradable/single-use plastics, (c) recycling programs, (d) circular economy initiatives (i.e. the waste of one company is used by other companies nearby), (e) restoration/replenishment of natural resources, (f) preservation/restoration of biospheres, (g) reducing food waste, (h) reducing and managing water usage.

A second survey section started with the question: "Have you ever participated in boycotting a brand because you deemed it 'not sustainable'?" - with response options 'yes', 'no' and 'I'd rather not say'. A subsequent question asked participants: "For what objective(s)/goal(s) did you boycott a brand/company?", offering the same response options

as the definition question explained above. Figure 1 shows these aspects with observed sample proportions. These indicate to what extent the sustainability facet is part of their definition and/or leads them to boycott behavior, respectively.

From an initial raw sample of N = 2806, we only retained respondents (for the current study) that provided an unaided definition of the concept sustainability (i.e., who did not endorse the ‘no idea’ option in response to the ‘definition’ question), and that reported having engaged in a consumer boycott before (i.e., who responded positively to the ‘boycott’ question). This resulted in an actual sample of N = 559 (see Table 1 for a breakdown of the sample selection process) with respondents from seven countries: Belgium (N = 62), Netherlands (N = 69), France (N = 97), Germany (N = 81), Australia (N = 88), Sweden (N = 90), UK (N = 72).

		Participated in a boycott?			Total
		Yes	No	I'd rather not say	
Sustainability definition	Provided definition	559	1732	79	2370
	No idea	69	319	48	436
Total		628	2051	127	2806

Table 1: Sample breakdown.

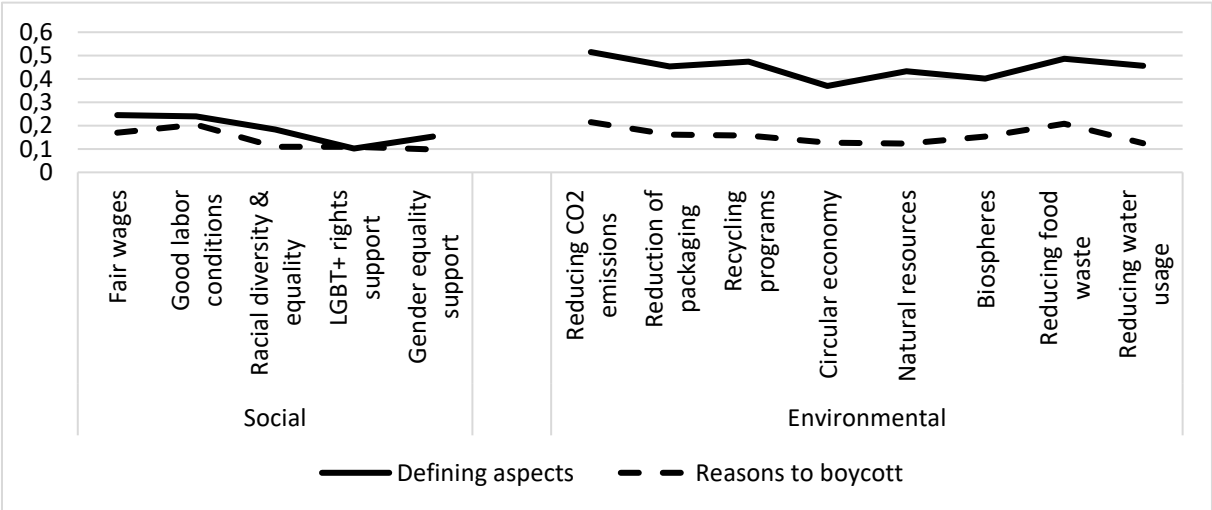


Figure 1: Observed proportions of selected aspects.

2.2. Data analysis

To answer our research questions, we use confirmatory factor analysis (CFA) using the binary indicators of the ‘definition’ question and the ‘boycott’ question. Our primary goal was to understand whether the underlying environmental and social dimensions were equally

important for both the definition of sustainability as for triggering actual boycott behavior. As all sustainability aspects could only hold the values of 0 and 1 (i.e., did my definition mention that aspect: yes or no?), tetrachoric correlations were used for all subsequent analyses. The underlying rationale is that dichotomous items are reflective of underlying latent variables, often referred to as y^* (y-star) variables. Once subjects exceed a certain latent value or threshold, then the answer on that item will be 1 instead of 0. The tetrachoric correlation for two y^* variables is theoretically defined as the Pearson correlation for continuous variables.

We specify four latent factors. Two factors, derived from the ‘definition’ question, capture the extent to which respondents indicate social items (F1) or environmental items (F2) as defining aspects of sustainability. Two other factors, derived from the ‘boycott’ question, capture the extent to which respondents indicate social items (F3) or environmental items (F4) as reasons for boycotting a company. These respective factors represent covariation in defining aspects and boycott motives. The model also includes a factor loading and an item threshold for each indicator. To illustrate the interpretation, the factor loading of item ‘fair wages’ as a defining aspect of sustainability on F1 shows how strongly this indicator covaries with other social aspects being indicated as defining for sustainability. The item threshold of item ‘fair wages’ as a defining aspect of sustainability on F1 relates to how likely participants are to indicate this specific item (assuming the mean of F1 is zero), with lower thresholds indicating a higher likelihood of the item being indicated. Analogously, the item thresholds for the ‘boycott’ items (on F3 and F4) can be interpreted as the rarity of a given aspect acting as a motive for a boycott (i.e., a high item threshold would mean that this aspect does not often lead to boycott behavior). Our main goal was to examine whether these aspects of sustainability were also grounds for triggering actual boycott behavior. Therefore, we focused on the factor mean differences between both dimensions and on the item thresholds.

3. Results

To empirically investigate our research questions, we tested three models with four factors: two factors (environment and social) for both the ‘definition’ question and the ‘boycott’ question each. In the first unconstrained model the factor means could be freely estimated, along with all thresholds (except for one threshold per factor that is set to zero for model identification). In Mplus 8.4 we estimate a CFA using the default WLSMV estimator with probit link (and the difftest procedure for testing χ^2 difference between nested models). Since our model includes 26 items, 22 thresholds were freely estimated. The resulting model

showed good fit with the data ($\chi^2(293)= 380.004, p<.001, RMSEA=.023, CFI=.972, TLI=.969, SRMR=.075$) and suggested that a four-factor solution was defensible.

In our second model, the corresponding item thresholds for both the ‘definition’ and ‘boycott’ question were constrained to be invariant (e.g., we constrained the latent thresholds for ‘Reduction of CO2 emissions’ to equality across F2, the environmental definition factor, and F4, the environmental boycott factor), but the factor means could be freely estimated. This way we could empirically validate or rebut the assumption that both thresholds are indeed equal - and that an aspect is as representative for the definition of sustainability as it is a trigger for actual boycott behavior, controlling for mean differences in sustainability factors. This second model showed acceptable fit with the data ($\chi^2(304)=440.340, p=.001, RMSEA=.022, CFI=.974, TLI=.972, SRMR=.075$). A χ^2 difference test comparing both models showed no significant deterioration in fit ($\chi^2_{diff}(11)=9.543, p=.572$).

Our third and final model constrained both corresponding item thresholds as well as corresponding factor means (i.e., additionally constraining the means of F1 and F3 to equality, as well as F2 and F4) . A good fit would indicate that a dimension is as representative for the definition of sustainability, as it is grounds for triggering boycott behavior, and that items are as representative for defining sustainability as it constitutes as being triggers for boycott behavior. This third model showed rather weak fit with the data ($\chi^2(306)=527.449, p<.001, RMSEA=.036, CFI=.928, TLI=.923, SRMR=.084$). χ^2 difference showed a significant decline in fit with the former model only constraining corresponding item thresholds ($\chi^2_{diff}(2)=69.722, p<.001$). Table 2 summarizes all model fit results.

Measurement model	χ^2_M	df _M	χ^2_D	df _D	RMSEA	CFI	TLI	SRMR
Unconstrained	380.004	293	-	-	.023	.972	.969	.075
Invariant thresholds	383.976	304	9.543	11	.022	.974	.972	.075
Invariant thresholds & invariant means	527.449	306	69.722	2	.036	.928	.923	.084

Table 2: Model fit comparison of CFA models

As model two showed no deterioration in fit in comparison with the unconstrained model, and hence has a more parsimonious structure, the latter was adopted for further analysis and interpretation. (Note that the current sample sizes per country did not permit cross-country invariance testing, but preliminary analyses using the full initial sample indicated that cross-

country measurement invariance could be accepted for this model. Also, the fact that the model provided good fit with the data shows that the assumption of measurement invariance across countries is plausible.)

Figure 2 shows that for the ‘definition’ question the factor mean estimate is much higher for the environmental dimension ($M=.038, SE=.054$) as compared to the social dimension ($M=-.663, SE=.060$). A two-tailed t-test indicates that this mean difference is highly significant ($d=.701, z=3.781, p<.001$). This suggests that consumers more often think about environmental issues as defining aspects of sustainability in comparison with social sustainability facets. However, when asked for which sustainability aspects consumers have undertaken boycotts, the relative discrepancy between the social dimension ($M=-.988, SE=.064$) and the environmental dimension ($M=-.793, SE=.061$) decreases drastically but remains significant ($d=.195, z=2.374, p=.018$). The difference in differences suggests that the discrepancy between the importance of both dimensions is smaller for the ‘boycott’ question ($d=.506, z=4.563, p<.001$), as compared to the ‘definition’ question. Together, this shows that social sustainability aspects gain in relative importance to environmental sustainability aspects when identifying motivators for consumer boycott. These results also demonstrate that consumers would take boycott actions relatively more often for social reasons, than that they would consider these issues to be a part of sustainability. Differently put, where the social dimension is less important in the conceptualization of sustainability, it relatively gains in importance as being a motivator for boycott behavior as the discrepancy between both dimensions decreases. Yet, environmental aspects remain superior in triggering boycotts.

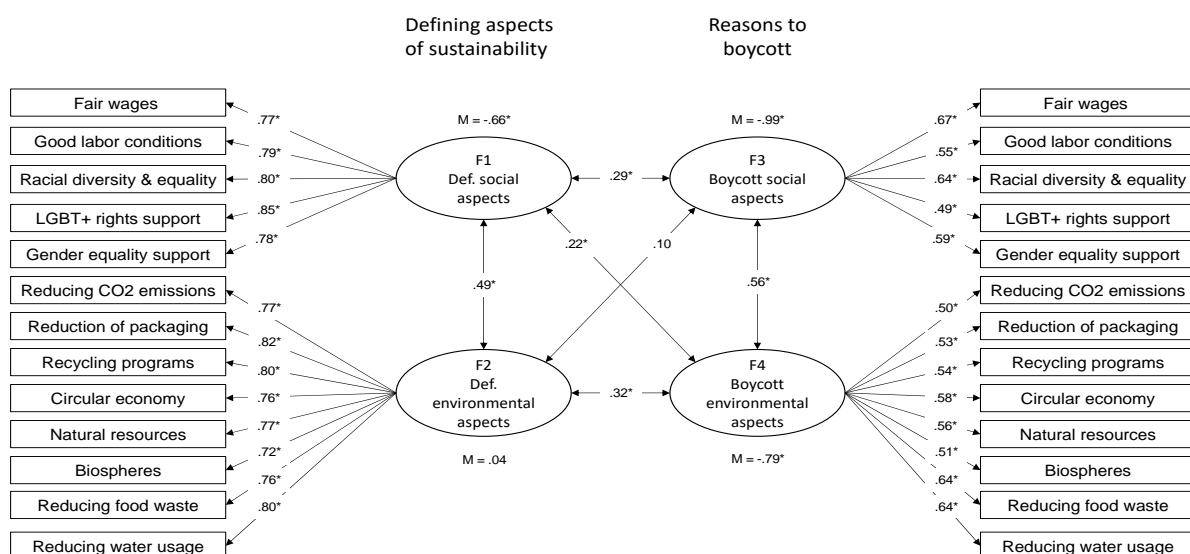


Figure 2: Final CFA model with factor means, intercorrelations, and factor loadings (all parameters are unstandardized). Latent item thresholds are omitted for readability.

The model implied proportions were calculated using the unstandardized thresholds and latent factor means (see figure 3). As corresponding item thresholds for both the ‘definition’ question and ‘boycott’ question were constrained to invariance (e.g., that the position of an item being a defining aspect of sustainability relative to other items within the same dimension is equal to the position of that item being a motivator for boycotting relative to other aspects within the same sustainability dimension), both lines within a dimension show a similar pattern, and proportional differences are merely a reflection of factor mean differences. For example, the aspect ‘fair wages’ has the highest model implied proportion value within the social dimension, both for the ‘definition’ question and for the ‘boycott’ question. The undotted lines show a large discrepancy, meaning that the environmental dimension is more important for consumers’ conceptualizations of sustainability as compared to the social dimension. Interestingly, the dotted lines of both dimensions are more proximal, indicating that the relative discrepancy between the environmental and social dimension is greatly reduced when identifying grounds for boycott behavior. Yet this difference between both dimensions remains significant, with the environmental dimension still being dominant.

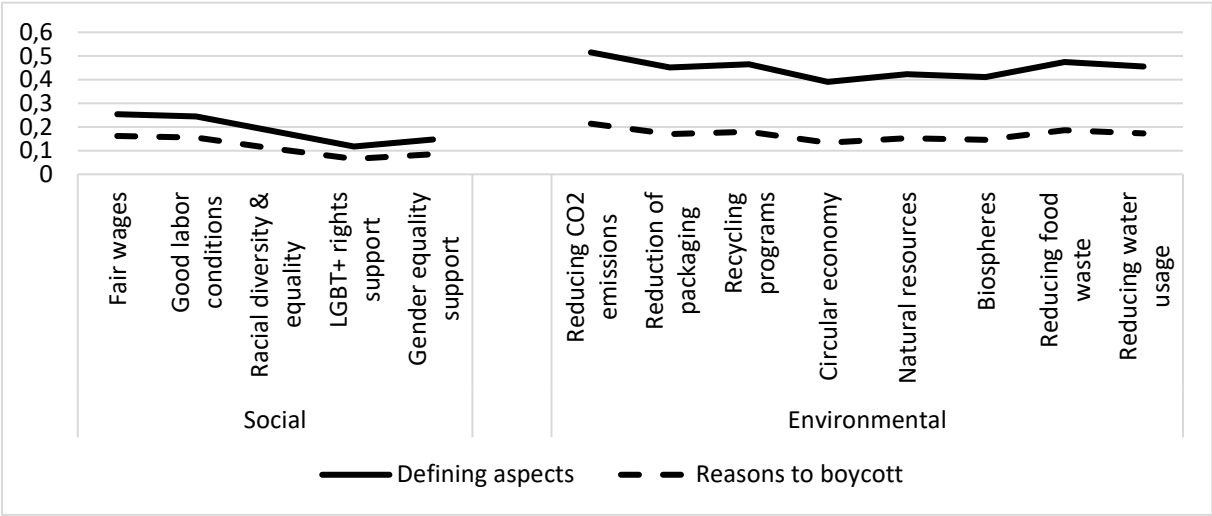


Figure 3: Model implied proportions of selected aspects.

4. Discussion

In this study, we investigated three research questions. RQ1 asks how prominently environmental versus social aspects figure in consumers’ definitions of sustainability. RQ2 explores which sustainability dimension (environmental vs. social) is more prominent in leading to consumer boycotts. RQ3 explores if mean differences are equal for both questions, thereby assessing whether the discrepancy in importance decreases when identifying reasons for boycotting, as compared to identifying defining aspects of sustainability. Using CFA

applied to cross-national data, we show that consumers meaningfully distinguish social and environmental dimensions, both when defining sustainability as when identifying reasons to boycott a company. Invariance tests show that the relative importance of different social and environmental aspects among one another is largely equivalent whether consumers are asked to define sustainability or identify reasons to boycott (see figure 3). This means, for instance, that if the aspect ‘fair wages’ is more likely to be listed as a defining aspect than, say, ‘gender equality’, ‘fair wages’ is on average also more likely to be listed as a motive to boycott.

Importantly, however, this study shows that environmental aspects are on average considered to be relatively more likely to be identified as defining of sustainability than social aspects (RQ1). This discrepancy of the environmental vs. the social dimension declines in magnitude but is still present when considering reasons to boycott. Our results suggest that the social dimension of sustainability is a more important driver for boycotting behavior than one might expect based solely on its unimportance when defining sustainability. An important caveat of this study is that all countries were part of the ‘Western society’, meaning that conclusions might not be valid for other countries with diverging politic or economic systems. This is an aspect that can be flagged for future research. To conclude, there seems to be a discrepancy between how consumers define sustainability (where the environment looms larger) versus which dimension of sustainability activates them to boycott (where the social dimension gains in importance). Firms creating sustainability priorities based on how consumers conceptualize sustainability may end up misdirected, as the social dimension may be rendered undervalued as a major driver of consumer boycotts.

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