Introducing Public Procurement Tenders as Part of Corporate Communications

A typological analysis based on CSR reporting indicators

Abstract

Purpose – Corporations have to include increasingly CSR communication by responding to public procurement tenders because of the recently revised Government Procurement Agreement (GPA) concluded by the WTO. We argue that procurement tenders are to be seen as part of corporate communications, particularly when aligned with CSR reporting and performance indicators as proposed by the Global Reporting Initiative (GRI). The recently published ISO 20400 on sustainable procurement lacks a clear usage indication of sustainability indicators (SIs). This paper aims to close this gap.

Design/methodology/approach – The paper performs a typological analysis of sustainability indicators in a sample of 665 currently used SIs. Furthermore, the paper conceptualizes a SIs selector for Sustainable Public Procurement (SPP) which bases on the typological analysis and acknowledges recent developments in the evolution of SIs.

Findings – The SIs typology results in three indicator types. The typology leads to the conceptualization of a SIs selector for sustainable public procurement. It enables professionals to build indicators for SPP considering the context of sustainability with impact valuations and allows scholars to advance research on measurement and decision-making.

Originality/value – To our best knowledge this is the first introduction of procurement tender processes as part of corporate communications. Furthermore, the derived typology contributes an overview of existing SIs used in CSR communication. The paper contributes a self-responsible and pragmatic approach to CSR theory as private business self-regulation and a definition of SIs for corporate communications.

Keywords – CSR, SIs, Public Procurement, Corporate Communications

Paper type – Research paper

Introduction

We introduce public procurement tenders as corporate communications and base this line of argumentation on recent developments of using corporate social responsibility (CSR) communication within public procurement tender communications.

Next to the intensified climate debate sensitizing the field of public procurement for sustainability, the World Trade Organization (WTO) announced to foster sustainability in public procurement with the revised Government Procurement Agreement (GPA), entered into force on 6 April 2014 (WTO, 2015). Hence, the WTO aims to channel the global governmental expenditures in public procurement valued at 9.5 trillion US dollar annually (The World Bank, 2016) into sustainable ways. Thus, public procurement (PP) tenders will increasingly require social, environmental, and economic performance information from participating corporations. Furthermore, the International Organization for Standardization (ISO) released the ISO 20400, an international standard on sustainable procurement, emphasizing the alignment of procurement with existing sustainability reporting practices but lacks a clear usage indication of SIs (ISO, 2017). Soft laws like the UN Global Compact also lack such a clear usage indication for public procurement. This paper aims to close this gap by enabling procurers to implement SIs in public procurement processes with existing SIs today.

In doing so we follow Meadows (1998) call to rather start with imperfect SIs to learn and improve by doing instead of waiting (Meadows, 1998, p. 78). Recently acknowledged inertia in the implementation of SIs in public procurement tender processes holds this call true also for sustainable public procurement implementation (Meehan and Bryde, 2011).

The need of CSR communication and its sustainability indicators (SIs) to participate in public tenders, requests from procurers to tailor CSR communication and SIs to procurement processes. This need of CSR communication puts corporate communication in a position to translate already acquired sustainability measurement knowledge into Sustainable Public Procurement (SPP) requirements as well as to align SPP communication with overall CSR communication. In doing so we argue that this potentially increases corporate communication's value within corporations, because the required knowledge sits in the moment within the corporate communications department respectively CSR department (Lock and Seele, 2016).

Sustainability in public procurement encounters a common challenge, the tension between standardization and relevance of SIs. This tension arises from the dynamic of SIs. The more the SIs reflect diversity, the less they provide comparability. In other words SIs operate in a continuous tension between standardization and comparability on the one hand and diversification and uniqueness on the other hand (Salathé-Beaulieu et al., 2019).

We approach this dynamic of SIs between standardization and diversification from two simultaneously hold debates. In one debate quants and poets argue about the underlying methods used in the development of SIs with their pros and cons. In the other debate contextualists and incrementalists argue about impact valuations of currently used SIs and their lack of contextualization. The latter focuses more on the *what* to measure, the first rather on the *how* to measure sustainability.

After outlying these debates, we use their insights for a typological analysis of existing and currently predominantly used SIs for corporate communications. The analysis results in three ideal SI types and a SIs selector. The typology and the selector provide one possible solution to implementation inertia issues of SPP emphasized in previous research. In doing so the findings contribute to the theoretical body of CSR a pragmatic approach of CSR as private business self-regulation in the realm of procurement (Sheehy, 2014).

The paper is structured in three parts. The first part outlines the introduction of public procurement tenders as corporate communications and outlines the debates about SIs. The second part describes the typology development and the conceptualization of the SIs selector.

The third part provides a discussion and highlights the contributions of the paper to corporate communications' and CSR theory.

Introducing Public Procurement Tenders as Corporate Communications

Sustainability in public procurement – the upcoming need of SIs in tender communication between public procurers and corporations

Traditionally public procurement bases mainly on economic efficiency, but with the GPA announcement and the 2014 Directives by the EU (European Union, 2014) academics foresee a possible shift, whereby sustainability redefines public procurement processes. Upcoming public procurement legislation, in for example EU countries, provides public procurers with latitudes to implement sustainability in their tendering processes (Arrowsmith and Anderson, 2011; Dragos and Neamtu, 2014). The question of how practitioners can fill these upcoming latitudes remains open.

We refer to public procurement as acquisition of goods and services by government of public sector organizations (Uyarra and Flanagan, 2010). Within this definition we acknowledge the different theoretical aspects and understand public procurement as a broad field covering its potential as policy tool, its role in government efficiency, and the strategic implications it brings along (Flynn and Davis, 2014; Koala and Steinfeld, 2018; Patrucco et al., 2017; Thai, 2008). The process starts with a bid that specifies criteria for the selection of the supplier, such as required quality. When the bid is published, suppliers can make their offers, and are evaluated by the public organization in order to select the best according to the set criteria (Dragos and Neamtu, 2014).

Procurers still lack a clear understanding and application know-how of "sustainable procurement" (Snell, 2006). On the theoretical side academics see an increasing interest in the theory of sustainable public procurement but assess its current status as expandable (Brammer and Walker, 2011; Gelderman et al., 2015; Preuss, 2009; Thai, 2001, 2008). With the typology development of this paper we aim to bring more understanding into the theoretical realm of SPP. In this paper we refer to public procurement as sustainable when it "enfolds the economic, environmental and social dimensions in all public purchases" (Knebel et al., 2019, p. 7). Thus, SPP shifts the focus in public procurement on value instead of price, using rather value performance than cost performance taking into account entire lifecycles (Grandia, 2015). The biggest challenge of the implementation of CSR communication into public procurement emerges with the vast variety of procured products as well as the individual needs and occurrences of sustainability matters in each purchased good or service. Practitioners need on one hand clear comparable sustainability measurements and on the other hand the flexibility to tailor CSR communication and sustainability performance measurement to their needs in order to achieve relevance (ARE, 2018; BAFU, 2018; Salathé-Beaulieu et al., 2019). This tension between standardization and relevance leads to the debates about SIs outlined in the next chapter.

Meanwhile supply chain management, monitoring sustainability in the private sector, becomes state of the art and gives rise to profit orientated organizations like EcoVadis (EcoVadis, 2017). All relevant developments around sustainability measurement include the creation of SIs. Big corporations like Coca Cola and Nestle outsourced their supply chain monitoring and sustainability assessment to EcoVadis SIs methodology. The methodology encompasses seven management principles and 21 CSR criteria across the themes environment, labor & human rights, ethics, sustainable procurement (EcoVadis, 2020). So, they base their procurement decisions on EcoVadis' rating. Academics locate the main difference of private and public procurement regarding sustainability in the objective. In the private sector sustainable procurement underlies one over-riding goal, profit maximization. In the public sphere the

objectives remain unclear within a complex political environment with multiple stakeholders and often conflicting goals (McCue and Prier, 2008; Prier et al., 2016).

For this paper we refer to sustainability in its initial sense and follow the definition of the Brundtland Report that states development sustainable which "meets the needs of the present without compromising the ability of future generations to meet their own needs" (World commission on environment and development, 1987, p. 16). At the same time, we refer to CSR as "international private business self-regulation" (Sheehy, 2014, p. 625). Thus, we acknowledge recent developments and the implementation of new SPP laws, but the implementation generates first of all latitudes and opens space for public procurers without exact and detailed means to do so. Even though the initiators at the WTO hope for global cascading supply chain effects by nurturing sustainability, CSR remains in private hands and self-regulation. With this understanding CSR defines a wide range of approaches affecting the behavior of individuals and organizations (Black et al., 2006; Sheehy and Feaver, 2015). Two points in the definition of CSR remain important for this paper introducing SPP into corporate communications. Firstly, CSR describes more than environmental sustainability. Secondly, CSR describes more than voluntarily corporate behavior (Sheehy, 2014). Instead, CSR encompasses all three sustainability dimensions, social, environmental and economic and positions as type of international private law that produces self-regulatory initiatives (Sheehy, 2014).

In this paper we use the concept of corporate communications analogue to public relations, communication management, and strategic communication. We are aware of the different traditions and schools (and other concepts such as organizational communications) that exist, but our aim in this paper is not to discuss their differences (Cornelissen, 2017; Falkheimer and Gregory, 2016; Ihlen and May, 2011). We base this paper on the definition of corporate communications by Long and Hazelton Jr (1987) as a way to understand how to manage an organization concerning its communication (Long and Hazelton Jr, 1987). We see communication management in the manner of van Ruler and Verčič (2005), as helping "organizations by counseling the deliberations on legitimacy, by coaching its members in the development of their communicative competencies, by conceptualizing communication plans, and by executing communication means, using informational, persuasive, relational, and discursive interventions" (Van Ruler and Verčič, 2005, p. 265). Scholars commonly agree that explaining the value of communication remains the most important and fundamental challenge for professionals and scholars in corporate communication (Buhmann et al., 2017; Falkheimer et al., 2017; Macnamara, 2015; Zerfass and Viertmann, 2017). With the increased usage of CSR communication in public procurement tender processes, a so far purely sales driven task, corporate communications approximate another economical value generating area with the chance to increase its own value. We aim to support corporate communications professionals in this opportunity.

Throughout the paper we argue and contribute how the provided definitions of corporate communications enclose public procurement tender processes especially since they involve CSR communication as well as how CSR communication in tender processes strengthens the value of corporate communications.

Corporate communication professionals aim to achieve consistency in all corporate messages communicated through integrated channels inside and outside of the organization aligned with organizational goals (Craig and Allen, 2013).

Dawkins (2005) emphasizes the challenge to communicate CSR information in general. The challenge lies within a clear strategy as well as in the tailoring of CSR messages to different stakeholder groups (Dawkins, 2005). The same study reveals a lack of tailored CSR messages to individual stakeholder groups and the need of detailed indicators to do so. Furthermore, Coombs and Holladay (2013) highlight the challenge and motivations for true transparency through SIs in CSR reporting since corporations and responsible stakeholder rather build a

pseudo-panopticon than using SIs for sustainable development (Coombs and Holladay, 2013). Current reporting standards like the Global Reporting Initiative (GRI) provide SIs and guide their ideal usage but face at the same time critique, related to the mentioned pseudo-panopticon, stating that the GRI provides corporations with the means to hide their doings behind SIs and CSR reporting rather than disclosing them (Coombs and Holladay, 2013; Knebel and Seele, 2015). Meanwhile the recently introduced Sustainable Development Goals (SDGs) triggered the production of numerous SIs in order to guide and monitor the global process towards sustainability (Bain et al., 2019).

The described need of CSR communication in public procurement using SIs leads to the next chapter.

Sustainability Indicators – what they indicate and how

Managers of the dominant coalition increasingly rely on indicators to make decisions. Indicators main task in general consists in the creation of sanity in highly complex environments and in the support of decisions with severe organizational impact.

Indicators aim to simplify complexity into single values, numbers and synopses. At that they provide communicators with easily digestible and communicable pieces of information. The word indicator stems from the Latin word "indicare" which means to point out or direct to knowledge (Bell and Morse, 2018a). Furthermore, Bell and Morse explain indicator and indices as "simplifying tools designed to capture complexity and help convey information to specialists and non-specialists alike" (Bell and Morse, 2018b, p. 2).

However, no commonly agreed terminology exists for indicators. Some indicator developers use the term parameter for lower levels of abstraction, followed by criterion for higher levels of abstraction while quality builds the top of the ranking and data the bottom. Meanwhile scholars use the term indicator for the whole spectrum between data on the bottom of the pyramid and quality at its top (Turnhout et al., 2007). So, scholars use indicators and the definition of indicators in many varying ways, perspectives and contexts without an agreed common understanding or core definition. Due to the resulting uncertainties we propose the following definition of indicators for this paper:

> *Indicators are process oriented evolving ideals reducing complexity that initiate change through standardization leading to comparability and performance measurement.*

With this definition we aim to provide a common base for the overview of currently used SIs in corporate communications and their potential for public procurement processes.

Two debates outline the currently faced issues in the development and usage of SIs for sustainability measurement and comparison. One debate concerns the used methodologies in individual SIs, the other debate concerns the materiality and context of what the SIs measure. In other words, the first debate covers rather the issue of *how* to measure while the second debate focusses on the question of *what* to measure towards sustainability.

Quants and poets present the two main camps in the first debate about SIs and *how* they aim to measure sustainability (Crane et al., 2018). In this debate scholars and professionals debate about the methods behind SIs. Jesinghaus (2018) criticizes the aggregation behind SIs and the way these aggregations give powers to numbers that do not deserve it (Jesinghaus, 2018). At the same time Crane et al. (2018) point out the risk of dominant quantitative measures overrunning the field of sustainability measures as they have done before in business and society research (Crane et al., 2018). Poets criticize quants based on studies from Carroll et al. (2016) and Chen & Delmas (2011) which reveal problems of aggregated pure quantitative SIs

from Bloomberg, MSCI, and Thomson Reuters in their accuracy to predict social and environmental performance (Carroll et al., 2016; Chen and Delmas, 2011).

Macnamara (2015) identifies an over-reliance on quantitative measures as obstacle in corporate communications (Macnamara, 2015). The language of quantitative research and quantitative methodology derives from mathematics and consists of numbers, counts, percentages, degrees, weights etc. Social science follows in its methodology in search for credibility and legitimacy natural science (Macnamara, 2015). However, in its pursuit of scientific and social scientific knowledge scholars tend to forget the third approach, the humanistic perspective (Littlejohn and Foss, 2010).

Quantitative methods dominate current SIs developments while scholars criticize the trend because it shifts SIs developments in the tension between standardization and diversification further towards standardization and comparison, losing sight of context, relevance and diversification (Salathé-Beaulieu et al., 2019). In our perspective the sustainability reporting framework of the GRI is aware of the biases between quantitative and qualitative and addresses this issue by the decision tree (GRI 3.1) and later on by the materiality statement (GRI 4.0). Both approaches present a less formalized way of balancing the reporting needs in the qualitative-quantitative spectrum (GRI, 2011, 2014).

In order to find a way out of the deadlock of methods scholars call for the development of mix-methods which mix or combine quantitative and qualitative methods (Crane et al., 2018; Molina-Azorin, 2012). With our research we aim to follow this thought in order to find a balance between standardization and diversification.

The second debate occurs between contextualists and incrementalists (Baue, 2019; GRI, 2019; McElroy, 2019; McElroy and Baue, 2013; Salathé-Beaulieu et al., 2019). The debate surrounds the question of *what* to measure towards sustainability. Contextualists argue that for example measured tons of emissions only generate a message when contextualized with a threshold (Meadows, 1998, p. 12).

Recently and with the operationalization of the SDGs (UN DESA, 2019) the UN reviews methodologies and metrics of SIs as well as currently used SIs themselves. The program aims to move beyond the triple bottom line (TBL) that currently aims to reduce negative impacts and to improve efficiencies incrementally. TBL and the GRI that bases on the principle of TBL initially aimed at system change and transformation of capitalism but developed into an accounting system of incremental improvement and less triggers for transformation or disruption (Elkington, 2018). Thus, contextualists define currently used SIs as "numerical" impact valuation (IV) assessing marginal change and size comparing performance in the sense of incremental goals (McElroy, 2019; Salathé-Beaulieu et al., 2019). However, in doing so they lose their validity regarding sustainability (Baue, 2019). So, contextualists refocus the debate on materiality determinations and relevance of SIs while stating that none of the currently used SIs indicate sustainable development. With our analysis and overview of SIs we aim to comprehend this claim. Furthermore, the universality of SIs brings along the problem of contextuality (Baue, 2019). A recent case in Switzerland about a railway tunnel project in the Alpes called "Monte-Ceneri" exemplifies how the problematic of relevance plays a major role in the selection of SIs in public procurement. The case illustrates how a public procurer used non-transparent and non-fitting methods to compare qualitative sustainability criteria (Swiss Constitutional Court, 2018). Universal SIs only work if they proof their materiality for all organization respectively for each individual tender process and each procured good and service. Universal SIs only work if they proof their materiality for all organization respectively for each individual tender process and each procured good and service. Due to the vast amount of procured goods and services we argue that it takes too much time in order to reach such universality and refer to Meadows (1998) call to start right away with what exists even though waiting appears tempting.

Contextualists argue sustainability requires contextualization within thresholds (Salathé-Beaulieu et al., 2019). In this line of argumentation a material and contextual SI expresses performance as impact compared to a sustainability norm (McElroy, 2019). Instead of numerically incrementally measuring, contextual SIs compare actual impacts to normative impacts (Baue, 2019). A recent published typology of SIs from Baue (2019) differentiates between incremental numerical SIs which SIs frameworks contain mainly today and contextualized SIs that measure actual impacts against normative impacts while considering sustainability thresholds in ecological, social, and economic systems (Baue, 2019). Furthermore, this typology includes a possible next generation of SIs called transformative SIs that add "transcontextual" elements to SIs for implementation practices and policies but provides only hints how they might look like (Baue, 2019).

In summary, the two debates, quants vs. poets and contextualists vs. incrementalists contain overlaps. Contextualists and poets criticize the predominant usage of purely numerical quantitative and incremental SIs because they lose the context of sustainability crucial for sustainable development. These thoughts lead to the following research agenda.

Research Objective

Developing the means to tailor SIs to the vast variety of needs in public procurement tender processes with what exists today along a typology that provides an overview of currently used SIs.

Three SIs Types and a SIs Selector to design the formal communication process of SPP tenders

Methods and Sample

We aim to understand SIs in their consistence to find out how they can serve public procurement, respectively how SIs translate into the needs of public procurement. Figure 1 summarizes the in the following outlined typological analysis of currently used SIs, the frequencies of the resulting types in the sample as well as the conceptualization of a SIs selector that builds on the previous results.

Stage 1: Sampling
Gathering most prominent SIs currently used for sustainable performance measurement

Stage 2: Typological Analysis
1. Identifying an organizing framework for typology development.
2. Identifying important sources of commonality and variation that occur in the data set.
3. Looking within those sources of commonality and variation for patterns of similarity and difference.
4. Reconstruction of patterns of similarity and difference into ideal types or model cases.

Stage 3: Coding
Transferring the ideal types into a coding for further analysis and a inter-coder reliability test

Stage 4: Descriptive Statistics
Analyzing the sample regarding frequencies of occurring types

Stage 5: Conceptualization of a SIs Selector
Conceptualization of SI - selecting decision tree for SPP based on the insights of the typological analysis and the frequencies of occurring types in the sample
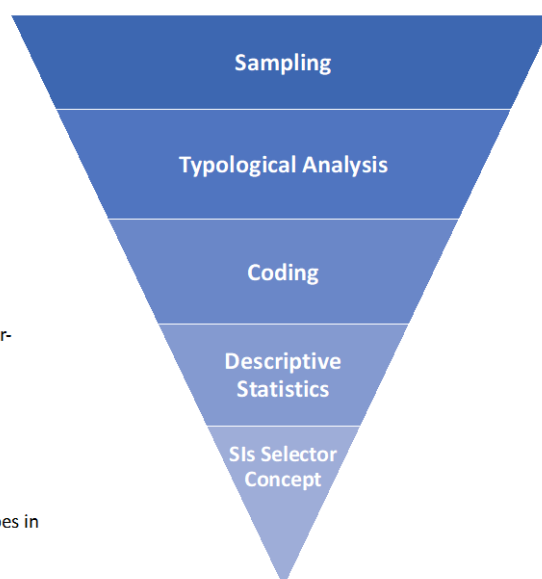

Sampling
Typological Analysis
Coding
Descriptive Statistics
SIs Selector Concept

Figure 1: Overview of used methods.

Sampling

We collected 665 (n=665) currently used and proven SIs. We collected the data in a time period between August 2019 to December 2019. In order to establish a broad range of commonly used SIs we referred next to others to the UN Department of Economic and Societal Data (DESA) that maintains an updated overview of most commonly used SIs globally as well as to the Global Reporting Initiative (GRI) from the realm of corporate reporting. Table 1 depicts an overview of the sample.

Sustainability Indicators Sources	Number of Indicators
Global Reporting Initiative (GRI)	149
Global Compact (GC)	10
MONET 2030	106
Sustainable Development Goals (SDGs)	17
UN DESA SDG Target Indicators	244
ISO 26000	35
ISO 20400	66
EcoVadis	21
UN SCP Indicators	17
Total	665

Table 1: Sustainability Indicators sources and number of indicators in the sample.

Typological Analysis

In order to produce an overview of existing SIs we chose as method a typological analysis. We chose this method because it allows to inductively analyse raw data, in our case SIs, to understand their composition and to create types. Scholars in many qualitative studies construct types to comprehend and understand complex social realities. A few approaches in social qualitative research explain the process of typology construction in detail. One of these approaches is called typological analysis (Kluge, 2000). This process results in the development of a typology of the underlying structure of experiences or processes of the raw data.
The primary technique of analysis is the construction of types from raw data (Thomas, 2006). Given (2008) explains the research process in four steps. The systemisation of a typological analysis in steps varies between the different authors but contains a common ground in working inductively from the raw data in different grouping and restructuring steps to reveal and summarise underlying patterns in types (Given, 2008; Kluge, 2000; Suziedelis and Lorr, 1973; Thomas, 2006).
We followed these steps keeping the debates between quants and poets as well as between incrementalists and contextualists in mind.
In a first step, as organising framework, we collected and listed schematically all sustainability indicators in one data pool. In order to do so we gave each indicator an ID and a source tag. Furthermore, we reused the given identification number if existent and copied, translated or

summarized an indicator definition. As a result, we ended up with an excel sheet containing 665 sustainability indicators and their definitions.

In a second step we identified possible sources of communality and variation. We found them in the three dimensions of sustainability, the social, economic and environmental dimension.

A numerical incremental pattern and a textual reporting pattern. Confirming previous typology developments, we could not find contextual SIs (Baue, 2019). Hence, we experimented with the SIs and produced a contextual pattern by combining certain textual and numerical SIs as the examples further in the text illustrate. By looking into the parameters of SIs and the methods used, the possibilities of combinations even increase.

In the fourth step following the method of the typological analysis we reconstructed ideal types out of the patterns as follows:

Type I: Numerical

Numerical type 1 SIs produce numerical outcomes. Their predominantly quantitative approach results in clean clear-cut numbers. They produce numerical and comparable results.

> *Examples:*
> *"Percentage of new suppliers that were screened using labor practices criteria"*
> *"Total number of incidents of violations involving rights of indigenous peoples."*
> *"Direct economic value generated and distributed."*
> *"Energy consumption within the organization."*
> *"Total water withdrawal by source."*
> *"Number of grievances about human rights impacts filed."*
> *"Direct greenhouse gas (GHG) emissions."*

Type II: Textual

Textual type 2 SIs produce textual outcomes. They predominantly use qualitative measures and consist of explications. Hence, they produce summaries, synopses, descriptions or references in form of text. This type provides a textual image of sustainability performance.

> *Examples:*
> *"Provide a list of stakeholder groups engaged by the organization."*
> *"Report the governance structure of the organization."*
> *"Describe the organization's values, principles, standards and norms of behavior such as codes of conduct and codes of ethics."*
> *"Report the basis for identification and selection of stakeholders with whom to engage."*
> *"Significant actual and potential negative human rights impacts in the supply chain and actions taken."*

Type III: Contextual

Contextual type III SIs produce numerical outcomes within a textual sustainability context. In doing so they differ from the SI type defined by contextualists in the sense that they use as normative impact existing textual sustainability references instead of thresholds or limits. Thus, they combine existing textual and numerical SIs as well as their underlying qualitative and quantitative methods.

Examples:

"Report level of compliance with labor rights (e.g. freedom of association and collective bargaining)" combined with "Report the percentage of total employees covered by collective bargaining agreements."

"Change in water-use efficiency over time" combined with "Identity, size, protected status and biodiversity value of water bodies affected by the organizations discharges of water."

"Report operations with significant actual and potential impacts on local communities", combined with "Percentage of operations with implemented local community engagement."

"Report confirmed incidents of corruption and actions taken" combined with "Total value of political contributions by country and recipient"

"Report the supply chain management and monitoring system" combined with "Percentage of suppliers that were screened using criteria for impacts on society."

Based on this typology we generated a coding in order to further analyse the SIs in the sample as the next chapter outlines.

Coding and inter-coder reliability

In order to validate the derived SI types for a frequency analysis we developed a coding based on the distinguished types from the typological analysis. Then we coded the sample first in their sustainability dimensions, then regarding their produced output formats.

Some of the frameworks within the sample indicate the sustainability dimension they operate in directly, others reveal their dimension in the definition using the defining words like "environmental", "water", "ozone", "emissions", "waste" for the environmental dimension, respectively "social", "human rights", "employee", "gender", "salary", "child labour", for the social dimension, or "economic", "corruption", "political contribution", "investment" for the economic dimension.

Most indicators provide also the necessary information in their definition regarding the produced outcome. They use wordings like, "percentage of…", "total number of…", or "proportion of…" "volume of...", "average of…", "rate of…", "investments in…" for numerical type I SIs. SIs' definitions use wordings like, "provide a list of…", "report the measures taken…", "type of…", "provide a description…", "communication…", "structure…" if they produce textual outcomes.

We could not find any contextual SIs that used impact values in combination with sustainability norms or hybrid forms of SIs that produced numerical and textual outcomes in a mixed way.

Two researchers coded independently a subsample (recommended 10%) of the data for an inter-coder reliability test using Krippendorff's alpha (Hayes and Krippendorff, 2007; Krippendorff, 1980). These alphas (α) are reported in the next lines. After the coding no data was missing even though the statistical test with Krippendorff's alpha does not require all data (Krippendorff, 2018). Numerical outcome of a SI was coded = 1, Textual = 2, Contextual = 3, not coded or missing data = 0. The sustainability dimensions were coded = 0 if the coder could not identify a sustainability dimension, environmental SIs were coded = 1, social = 2, economic = 3.

An alpha below 0.67 indicates a low inter-rater reliability, an ideal alpha states above 0.8, an alpha above 0.67 but below 0.8 indicates low reliability (Krippendorff, 2018). The results show that the intercoder reliability for the SI types was high ($\alpha = 0.88$). Furthermore, the results of the test show also for the sustainability dimensions a high inter-coder reliability ($\alpha = 0.81$). The results show additionally that there is an estimated 2.79 percent chance that the alpha would be below 0.67 if the whole sample would be tested for the sustainability dimensions, respectively 1.88 percent for the SI types test.

After the reliability tests we analysed the sample regarding frequencies of types and sustainability dimensions as the following section outlines.

Results

Descriptive Statistics

Table 2 and 3 show the results of the frequency analysis.

Sustainability Dimensions	Count	Percentage
Environmental	177	27 %
Economical	66	10 %
Social	388	58 %
N/A	34	5 %
Total	665	100 %

Table 2: Sustainability indicators in their sustainability dimensions.

Indicator Types	Count	% in Sample	% in Social	% Environmental	% in Economic
Type 1: Numerical	459	64 %	61 %	76 %	74 %
Type 2: Textual	84	14 %	13 %	7 %	11 %
Type 3: Contextual	0	0 %	0 %	0 %	0 %
N/A	122	22 %	26 %	18 %	15 %
Total	665	100 %	100 %	100 %	100 %

Table 3: Sustainability indicators types and their appearance in the sample.

The next section outlines the conceptualization of an SIs selector showing how public procurers and corporate communications specialists can use the knowledge provided by the typology.

Conceptualization of a SIs selector for sustainable public procurement

The overview of current SIs shows how they produce either textual or numerical outputs. The predominance of numerical SIs illustrates the currently mainly incremental sustainability performance measurement. The following conceptualization of a SIs selector combines these findings with the outlined needs to contextualize SIs in order to measure sustainability.

For the conceptualization of the selector we revised a decision tree initially developed for a previous GRI framework to set boundaries of sustainability impacts (Global Reporting

Initiative, 2011, p. 18). The decision tree consists of a basic algorithm to guide practitioners to the decision if and how they can implement SIs in a tender communication. We translate this algorithm into the realm of public procurement and propose a two-step process in its application.
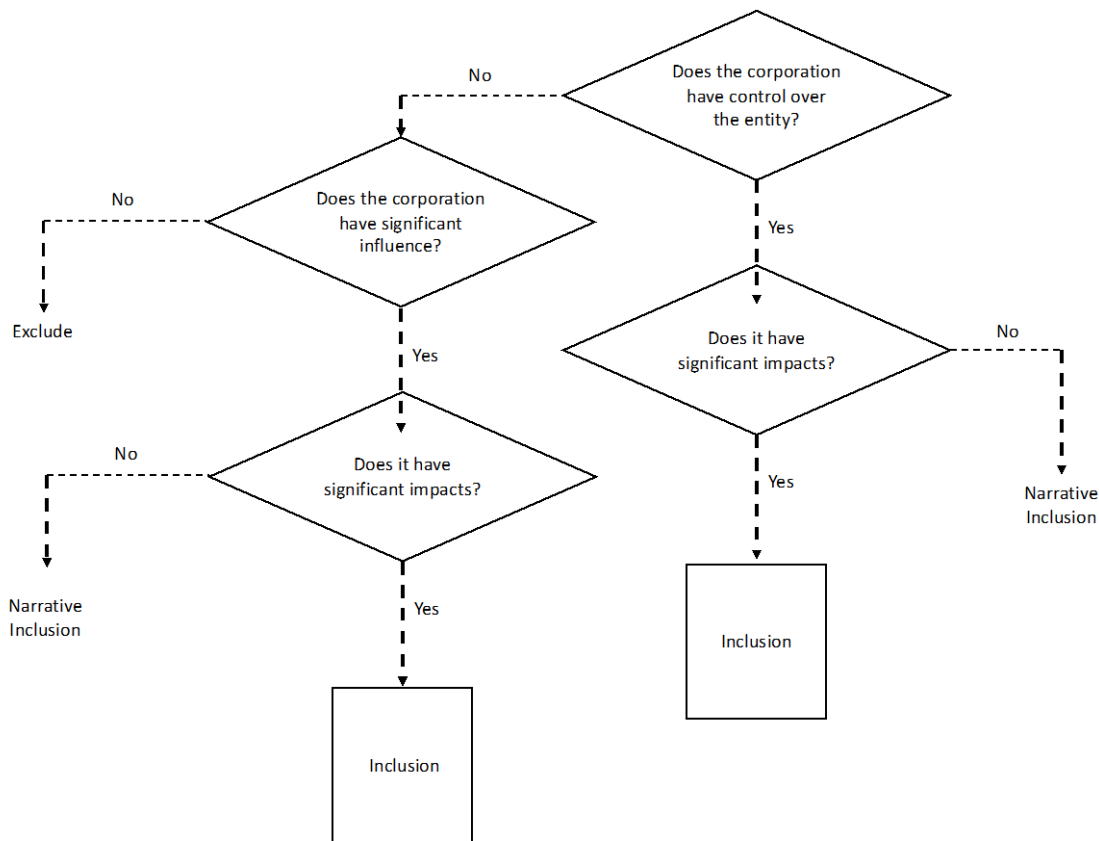

Figure 2: Decision tree for SIs selection in public procurement.

Figure 2 visualises the decision tree. Figure 3 illustrates how professionals can use the decision tree in two steps to select indicators and parameters to create type III SIs. In a first step, the professional has to decide whether the corporation has control over the entity the SI points to and further if the corporation has significant influence and impacts. Depending on each decision led by the tree, professionals either exclude or include a SI in the tender communication. In a second step, the professional uses the decision tree again for the selection of the parameter and its methods. As a result, the selector, enables procurers to understand if a SI shows relevance, respectively the right amount of diversification and standardization. Additionally, the selector allows professionals for each individual tender procedure to produce type III SIs combining impact values (IVs) within a sustainability context, depending on the requirements of each procurement. So, they can combine numerical quantitative with qualitative textual indicators and parameters to achieve contextuality in their sustainability measurements. In other words, professionals can approach any set of SIs and dissect them with the SIs selector to build SIs of their needs. Furthermore, they can overcome the acknowledged lack of contextuality in currently SIs by combining parameters of type I and type II SIs into type III SIs.
Depending on the situation and the informational demands, the decision tree allows always the inclusion of a whole indicator and individual parameters in a narrative form. In doing so the

professional selecting a SI and its parameters can give important additional information or explain why a parameter or whole indicator was not comprehensively and completely included.
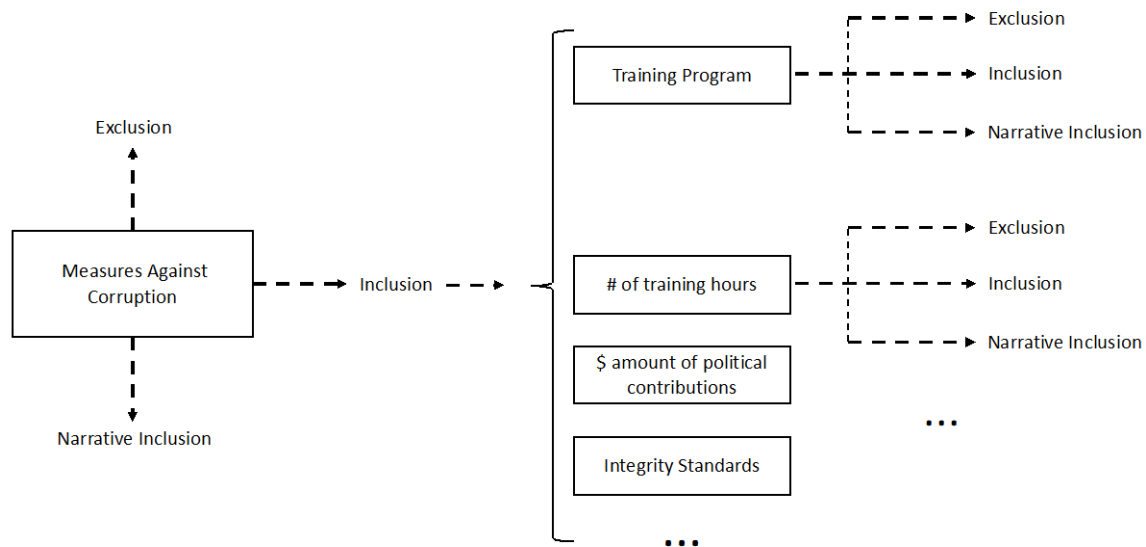

Figure 3: Example of a type III SI and the functionality of the decision tree in two steps.

The conceptualization of a SIs selector to produce type III SIs for public procurement tender communication leads to the following discussion, practical implications and theoretical contribution.

Discussion, Contribution and Practical Implications

The derived typology in three types anticipates the two debates about SIs between quants and poets as well as incrementalists and contextualists. We see our approach as mediating within the debates enabling procurers to delve into SPP without waiting for perfect SIs or frameworks. The SIs selector presents a possibility to start now with what there is in order to inject sustainability in public procurement tender communication. Hence, it shows why and how corporate communications and CSR communication contain the needed knowledge for upcoming organizational challenges regarding sustainability measuring.

Type I SIs that produce numerical outputs work perfectly as control mechanisms and facilitate goal settings. The biggest advantage lies in the straight forward comparability. The biggest disadvantage lies in context oblivion. So, the type I SIs present the standardization and comparability side in the dynamic of SIs. Type II SIs contain their biggest advantage in diversification, uniqueness and adaptation. Their biggest disadvantage lies within the hardship of comparability. So, type II SIs present the diversification and unique side in the tension of SIs between comparability and relevance. Type III SIs aim to balance type I and type II SIs. Their hybrid approach allows for contextuality already today without waiting for thresholds of danger and risks respectively new SIs. Furthermore, they balance diversification and uniqueness with standardization and comparability. The biggest advantage of type III indicators lies in its flexibility and situational adaptation while enabling comparison, as well as contextuality. Its biggest disadvantage lies within the involved efforts and needed specialized capabilities of professionals. We argue that this "disadvantage" increases the value of CSR and corporate communication professionals because it calls for their experience and knowledge. A look at the

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overview of SIs underlines the need for professional assistance for procurers in order to manage the implementation of sustainability in public procurement.

Even though the temptation to wait for the perfect easy to use tool remains high, we argue in line with Meadows that in order to overcome the acknowledged inertia in the SPP implementation process procurers rather use what exists assisted by CSR and corporate communications specialists. In turn, this need for corporate communications helps the profession to proof its value and sharpens its portfolio for upcoming challenges regarding climate change, digitalization, human rights and global supply chain monitoring.

Tender processes aim for comparison of corporations and their offers. This fact increases the temptation to rely solely on easy comparable numerical SIs. However, the numerical incremental SIs run the risk of overvaluation. Type 2 SIs provide a textual image of the actual sustainability performance but they leave room for buzzwords and greenwashing. Additionally, they increase the needed efforts for comparison. Type 3 SIs provide the option to use simultaneously numerical and textual outputs with the aim to start an evolution of SIs towards contextuality as called for by contextualists.

In order to implement and actually use a SIs selector in public procurement professionals require a pool of SIs or criteria and their methods, similar to the one used for this study. Experience and evolution of the used indicators then lead to a more focused set of reusable SIs for public procurement. The rise of SIs and the increased production of new SIs and frameworks like the GPP criteria of the EU provide more than enough SIs in order to use a SIs selector.

The derived typology contributes to the debate between quants and poets a new approach of combining qualitative and quantitative methods as called for by scholars (Macnamara, 2015; Morse, 2004). In the debate between quants an poets the paper with its typology and the selector anticipates critiques from poets like Jesinghaus and Crane et al. (Crane et al., 2018; Jesinghaus, 2018) about the aggregation of numbers and dominating quantitative measures. Thus, it aims to balance the usage of methods in SIs development bringing the two camps closer together. Firstly, by providing an overview of current usage in a typology, secondly, by conceptualizing a tool which enables the harmonious usage of quantitative and qualitative methods simultaneously in a hybrid way for the best usage of SIs towards sustainable development.

Furthermore, it contributes to the debate between incrementalists and contextualists a way to refocus on contextuality by combining numerical IVs with qualitative methods until the development of thresholds and limits flourish. Although, instead of waiting for new SIs and thresholds as proposed by Baue (2019) we use his argument to learn by doing and use today what is there in order to provide needed contextuality in the usage of SIs with the conceptualization of the selector and mixed methods (Baue, 2019).

Further, the paper contributes to CSR theory as international private business self-regulation (Sheehy, 2014) a pragmatic approach extending the field of interest into the realm of public procurement tender communication. Furthermore, it contributes to the theoretical body of corporate communications the introduction of SPP as part of it and a definition of SIs for corporate communications. The proposed conceptualization provides professionals also with a way to standardise and prepare CSR communication for usage in different areas of the organization. This in turn might serve as a blue print for all sorts of standardized CSR communication which needs translation and transfer into all kinds of corporate processes. Finally, the case as such and the typology hopefully helps scholars to launch further research to overcome methodological deadlocks and proof the value of corporate communications.

Limitations and Future Research

The limitations of the study lie within the legal and country specific contextuality of public procurement tender processes. Also, the law-making bodies of governments start slowly to

follow the GPA agreement, which leaves uncertainty of how sustainability enters public procurement and how the final requirements will look like. However, no matter how the final legislation might look like in the GPA member countries, this paper proposes a conceptualization of how to deal with the given latitudes in new public procurement laws towards sustainability which requires further legal counsel in its operationalization.

Future research in the field of standardised communication with adaptation possibilities including decision trees could also be pursued further in the direction of datafication and digital driven communication management with automations. The digital revolution automates communication processes already today. With the introduced SIs selector for public procurement based on a basic algorithm future research can use the concept and elaborate automations simplifying the process for procurers and communication professionals.

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