

Factors influencing the integration of sustainability indicators into a company's performance management system

Abstract

This paper investigates how different factors influence whether companies integrate economic, social and environmental sustainability indicators into their performance management system. A survey was conducted among sustainability managers at 239 Australian and New Zealand companies across a wide range of industrial sectors. Using hierarchical multiple regression analysis, this study found that industry, company size, and managers' perception of the importance of a sustainability indicator all influenced their integration into a company's performance management system. In particular, larger companies and companies in environmentally low-impact industries generally integrated more sustainability indicators into their performance management systems, especially if sustainability managers considered them important to performance. Large companies and companies from environmentally high-impact industries integrated social but generally not environmental indicators into their performance management systems. Conspicuously, whether or not an indicator was included in corporate sustainability reports did not influence its integration into a company's performance management system. The results thus highlight the lack of synergy between external corporate sustainability reports and internal sustainability performance management which organisations need to address in order to become more sustainable.

Keywords: Balanced scorecard, Global Reporting Initiative, Corporate sustainability report, Environmental impact, Social issues

1. Introduction

Producing corporate sustainability reports for external stakeholders is becoming an important business practice in many countries (KPMG, 2020). It has, though, been argued that organisations need to embrace sustainability concerns using their internal performance management systems (PMS) to ensure maximum benefits for themselves, society and the environment (Lankoski, 2016; Sroufe, 2017; Wijethilake and Upadhaya, 2020). Although generally voluntary, sustainability reports are used by organisations worldwide to disclose the sustainability impacts of their operations or at least to be seen to disclose them (Zharfpeykan, 2021). Unrepresentative reporting or ‘greenwashing’ that highlights the irrelevant positives or obfuscate relevant negatives, has been found to be a problem with sustainability reports (Zharfpeykan, 2021). This has been shown to lead to a disconnect between external sustainability disclosures and internal sustainability actions (Baird et al., 2022).

According to the latest KPMG survey, 80% of organisations worldwide now disclose some form of sustainability information (KPMG, 2020). However, even representative sustainability reports have been criticised for a second problem: social and environmental information is often gathered on an ad hoc basis and is not part of the regular performance management cycle (Jollands et al., 2018), so is often disconnected from organisational processes (Gray, 2010). In addition, sustainability must be incorporated into management decision making processes, which involves the integration of sustainability information into an organisations’ PMS, to have any real effect on the practices of managers (Engert et al., 2016; Wijethilake and Ekanayake, 2018).

This internal disconnect makes it difficult for companies to develop sustainability strategies and report on sustainability issues without collecting data and developing a PMS that specifically monitors sustainability objectives (Bebbington and Unerman, 2018). It has also been argued that to implement sustainable practices, and thus make sustainability reporting more meaningful, it is necessary to link representative sustainability reports with management control mechanisms (Jollands et al., 2018) such as a PMS (Traxler et al., 2020).

One mechanism often examined in the accounting literature, which is said to help companies integrate sustainability into their PMS, is the balanced scorecard (BSC) (De Villiers et al., 2016; Kerr et al., 2015). The BSC was originally developed by Professor Kaplan of Harvard University and Dr Norton, a management consultant (Balanced Scorecard Institute, 2021) to help 'balance' the use of financial and non-financial measures in order to improve performance management (Kaplan and Norton, 1996). As such, a BSC does not come conveniently pre-labelled with indicators for all the economic, social and environmental aspects of sustainability. However, it has been argued that the BSC's flexible structure allows many different ways of integrating sustainability indicators into its four perspectives (Hristov et al., 2019). As Kerr et al. (2015) suggest, it is essential to understand the factors contributing to the integration of sustainability indicators into a PMS as environmental and social sustainability issues significantly impact the company performance.

The purpose of this study is to explore factors which may influence whether indicators of social and environmental performance, which are reported in external sustainability reports, are integrated into internal PMSs. To do this, a survey was developed using the sustainability key performance indicators (KPIs) from the widely-used Global Reporting Initiatives (GRI) standards. While there are a number of other reporting standards, such as the Sustainability Accounting Standards Board (SASB) framework and International Standards Organization (ISO) standards, the GRI was chosen for this study as it remains the most commonly used reporting standard in practice (KPMG, 2020) and a natural way for managers to think about measuring sustainability (Sroufe, 2017). The survey was sent to sustainability managers in 239 Australian and New Zealand companies across a wide range of industrial sectors to examine their practices. To interpret the findings the paper uses a practice theory perspective which focuses on the perceptions of sustainability managers about their organisational practices (Jalas et al., 2017).

Survey data was collected on the perceptions of sustainability managers regarding the importance of sustainability KPIs for their company's performance. The survey also asked these managers if those

KPIs are reported externally in sustainability reports and whether they integrate them into their internal PMS. We also collect data on other factors which have been said to influence sustainability in practice such as; ownership type; public sector or private (Li et al., 2021), industry; high/low environmental impact industry (Hendricks et al., 2012) and company size; small, medium or large (Hendricks et al., 2012).

This study builds on the literature which examines how companies integrate sustainability indicators into their PMS (De Villiers et al., 2016; Hristov et al., 2019) and makes several contributions to the literature. First, it addresses the call for more research on the factors that contribute to a company integrating sustainability indicators into their PMS (Morioka and De Carvalho, 2016). Second, by taking a practice theory perspective this study examines the influence that sustainability managers' perceptions have on the integration of sustainability indicators into their company's PMS. Rates of external sustainability reporting are also examined to enable a comparison with rates of integration which, to the authors knowledge, has not been examined before. Third, by dividing industries into environmentally high and low impact, this study shows how the integration of sustainability indicators differs by industry, which has been argued to be a major factor in practice (Corsi and Arru, 2021). Fourth, the study responds to calls by Kerr et al. (2015) to look at whether companies integrate the sustainability indicators used in sustainability reports into their internal PMSs. Finally, this study addresses the lack of generalisable research findings in this area which is dominated by case studies, as noted by De Villiers et al. (2016) and Sharma and Sharma (2021), by surveying sustainability managers across a wide sample of companies with different contextual factors such as ownership type, size and industry.

2. Literature review

To have genuine long-term sustainability, companies need to measure and evaluate their social, environmental and economic performance regularly. Studies have found that sustainability reporting can positively improve firm performance (Le et al., 2021; Sardana et al., 2020). However, while

sustainability reporting is increasing in practice (KPMG, 2020), Lueg and Radlach (2016) argue that just publishing a sustainability report without implementing practical actions will not lead to sustainable outcomes. Milne et al. (2009) also argue that the lack of a relationship between external sustainability reporting and internal decision-making and management control processes is an indication that a company is merely aiming to improve its image and gain legitimacy. This is because sustainability issues in an organisation cannot be addressed solely by disclosure in a report (Corsi and Arru, 2021). Therefore, companies should try to ensure that their mission, objectives, and strategies link to their sustainability reports so that they can implement the appropriate management controls to monitor progress towards sustainability goals (Jollands et al., 2015). This connection can contribute significantly towards corporate sustainability and consequently to a sustainable economy. To achieve it, companies need to integrate sustainability into their day-to-day activities and develop measures for them so as to influence organisational practices (Engert et al., 2016). However, in addition to the problem of often-unrepresentative reporting or greenwashing, another issue arises: how to link sustainability reports with management control mechanisms (Traxler et al., 2020).

It has been argued that companies need sustainability-focused management controls, which have been defined as “the set of tools and practices useful to operationalise sustainable strategies and to ensure a balanced achievement of the economic, social and environmental corporate performance” (Vitale et al., 2019, p. 4). Companies cannot achieve good outcomes if they cannot, or do not, appropriately manage their strategic initiatives and competencies. The motto that “if you can't measure it, you can't manage it” indicates that the company's performance can be positively influenced by measuring underlying success factors (Kaplan and Norton, 1996, p. 21).

2.1 Balanced scorecard (BSC)

In order to measure a wider set of goals, many companies apply a BSC, which is a strategy focused PMS introduced by Kaplan and Norton (1996) which has four perspectives: financial, customer, internal processes, and learning and growth. The BSC considers shareholders in the financial

perspective, customers in the customer perspective, and employees in the learning and growth perspective. It has been argued that a BSC can be used to link KPIs to corporate strategy so that a company can successfully reach its goals (Agarwal, 2021). This is because a BSC can translate competitive strategies into KPIs and create a balance between short-term financial indicators and long-term non-financial indicators that enable companies to move towards superior competitive performance and sustainability over time (Agarwal, 2021).

It has been argued that the inclusion of sustainability indicators in a BSC can be used to provide a framework to develop sustainability reports in order to manage sustainability issues (Schaltegger, 2011). This would help companies to align externally and internally focused sustainability information so that they can integrate it into their daily operations (Corsi and Arru, 2021). This integration could create opportunities for managers to achieve goals in all three dimensions of sustainability; economic, social and environmental (Hens et al., 2018).

Various studies have shown how a company can integrate sustainability indicators into the BSC to enable the evaluation of sustainability performance. Debnath et al. (2018), for example, showed how a company could use a BSC to develop a strategy and performance measurement criteria to implement corporate sustainability. They found an interrelationship among BSC perspectives and indicators which managers need to emphasize to improve sustainability performance. Kerr et al. (2015), proposed a number of sustainability indicators which could be connected to a BSC and showed the potential benefits of using a BSC for sustainability purposes; such as helping to operationalise sustainability objectives, broaden accountability to more stakeholders, intensify interactions with stakeholders, formalise the company's beliefs and improve the communication of sustainability indicators internally.

However, research has shown that there are still considerable challenges to integrating sustainability measures into a PMS. For example, Hristov et al. (2019) argue that KPI selection for a

PMS (such as a BSC) often depends on ownership type and a company's strategic purpose. Morioka and De Carvalho (2016) also suggest other internal and external factors can influence integration.

2.2 Factors in integrating sustainability indicators into a PMS

It has been shown that internal and external factors can put pressure on companies to improve their sustainability performance (Morioka and De Carvalho, 2016). Internal context such as corporate structure and governance (Cohen et al., 2011) and top management support (Grosvold et al., 2014), as well as external context such as industry-specific factors (Grosvold et al., 2014), all potentially influence the integration of sustainability measures into business performance (Morioka and De Carvalho, 2016). Notably, the size of a company influences its ability to enable corporate sustainability as financial resources and the availability of skilled, motivated employees are both necessary to carry out this expensive and specialised work (Grosvold et al., 2014).

Previous studies have investigated some of the factors which influence the integration of sustainability indicators into a PMS or explained why they differ across companies. For instance, Gates and Germain (2010) study highlights 'industry sector' as an influential factor in the use of sustainability indicators in a company's PMS. Adams and Frost (2008) also found a significant diversity in different industries' KPIs selection, sustainability reports, and processes and integrating sustainability reports into a company's decision-making processes.

Morioka and De Carvalho (2016) examined the importance of the compatibility of sustainability-focused PMS with an organisational context. They argue that companies which have a higher level of support for sustainability values and the satisfaction of a wider group of stakeholders are more likely to integrate sustainability indicators into their PMS. This has been shown to be more likely to happen in companies with higher social and environmental impacts (Kerr et al., 2015). As mentioned previously, it would be expected that a sustainability indicator would be integrated into a BSC or other PMS if it was aligned with the company's strategy. This would be influenced by different configurations depending on ownership type as this would affect their strategic goals.

Literature also suggests that factors such as companies' size can influence the relationship among sustainability indicators (Lisi and Cifalinò, 2017) as size can define a company's access to resources. Since resources are limited, companies need to make trade-offs between sustainability values and other priorities (Morioka and Carvalho, 2016). As smaller companies have limited resources, managers have to make compromises as they reconcile different (and usually conflicting) interests. It has been suggested that medium and large companies have more potential to engage in sustainability practices. For instance, Hendricks et al. (2012) found that larger companies with significantly higher levels of environmental uncertainty are more likely to adopt a BSC.

Since the design of a BSC is complex, it has been suggested that large companies are more likely to adopt a BSC (Sharma and Sharma, 2021). However, Kaplan and Norton (2001) suggest that smaller companies can also benefit from a BSC. Smaller companies may also have greater motivations to engage with sustainability practices since their managers often have more freedom in making decisions compared to larger companies. The values and motivations of the managers of small companies are crucial to their strategic direction, which can lead to deeper engagement with sustainability issues (Lisi and Cifalinò, 2017). Therefore, smaller companies could also benefit from integrating sustainability into their PMS.

Internal factors can also provide insights into the integration of sustainability issues into a PMS. For instance, Gates and Germain (2010) suggest that managers may balance sustainability goals with revenue and profit goals by incorporating sustainability indicators into their company's PMS. Literature also suggests a close relationship between sustainability reporting and PMS, such as the BSC (Kerr et al., 2015; Maas et al., 2016) and sustainability indicators in a PMS and sustainability reports (Morioka and De Carvalho, 2016).

Disclosure is also an essential element of any corporate sustainability strategy (Zharfpeykan, 2021). Having open communication with stakeholders through the disclosure of sustainability indicators can help identify their needs and expectations, which is necessary for better planning and implementing

practices for sustainability performance (Morioka and De Carvalho, 2016). But for sustainability reports to lead to improvements in sustainability performance, both financial and non-financial indicators need to be integrated to capture different aspects of performance (Adams and Frost, 2008). Also, having those indicators already measured and reported externally can make their integration into internal decision-making processes more straightforward (Mio et al., 2016). Thus, sustainability reporting frameworks such as the GRI can operate as a valuable input for designing a PMS (De Villiers and Sharma, 2020).

Given these findings from the literature, it is important to examine how different factors may influence the integration of indicators, such as those used in sustainability reports into a company's PMS. In particular, Morioka and Carvalho (2016) argue that there is a need to understand how internal factors, such as a managers' perception of the importance of an indicator, can influence whether and how sustainability issues are integrated into a PMS in companies which operate in different organisational contexts.

3. Method

This study used a questionnaire survey based on the GRI Standards. The GRI sustainability standards are organised into three broad series; economic (7 standards), environmental (8) and social (19)¹. The survey link was sent by email to top managers of Australian and New Zealand registered companies from various industries. The survey targeted the managers responsible for sustainability performance (sustainability managers). To ensure the survey was completed by the most appropriate person, a control question at the beginning of the survey filtered out people not responsible for sustainability reports.

A database of companies in Australia and New Zealand that did not have any specific filtering was used to collect the data. As long as a company was registered and they existed in the database, they were sent the survey. The database is the property of a company called 'researchnow'. A total of 1,882

¹ <https://www.globalreporting.org/standards/> (last accessed 15, October, 2021)

participants started the survey, and 239 finished it (13% response rate). Table 1 shows the details of the participants.

Table 1: Details of survey participants

Country	Type		Industry	Size			
Australia	53	Public	62	High environmental impact industries ²	66	Small	141
						Medium	32
New Zealand	186	Private	177	Environmentally low-impact industries ³	173	Large	66

Participants were classified according to their country (Australia vs New Zealand), type, industry and size. Participants were grouped by type into private sector companies (whether publicly listed or not) and public sector companies. The Australian Bureau of Statistics defines public sector companies as “those government units and units controlled by the government”⁴. This study used the number of employees from the Australian Government’s categorisation of company size based on the numbers of employees (Swanepoel and Harrison, 2015). This resulted in companies grouped into small (fewer than 20), medium (20 to 200) and large (over 200 employees).

Since the survey participants were from both Australia and New Zealand, a t-test and Levene's Test for Equality of Variances were conducted for any statistically significant difference between the two nations with respect to average reporting, importance scores and BSC perspectives a standard would belong under. The results did not significantly differ. Therefore the two countries' results are combined in the following analyses.

Hierarchical multiple regression was used to evaluate the relationships between different factors influencing the integration of sustainability KPIs (using the GRI standards) into the PMS and whether

² The sample of environmentally-sensitive industries in this study consisted of companies from airport operations, electric utilities, mining and metals, oil and gas, agriculture, forestry and paper, and manufacturing.

³ The sample of non-environmentally sensitive industries in this study consisted of service organisations, financial services, media, NGOs, healthcare services, retail and educational services.

⁴<https://www.abs.gov.au/ausstats/abs@.nsf/Lookup/C8D72A039A7A7741CA257BDD001164CE?opendocument#:~:text=The%20public%20sector%20comprises%3A,control%20outlined%20in%20'Key%20Concepts'> (last accessed January 2021).

each indicator belonged in one of the BSC perspectives. The factors included in this study are the ownership type, size, and industry. This study also aims to see whether managers' perception of the importance of GRI standards for their company's performance and the fact that the company chooses to report these standards externally can also influence their integration into one of the four BSC perspectives. This study controls for the factors of ownership type, size and industry by entering them in the model first; then, the independent variables (perceived level of importance, whether or not sustainability reports were published) were entered into the model. The following model is used:

Equation 1: Regression model for factors influencing the integration of sustainability issues into BSC.

$$SBSC_j = \alpha + \beta_1 type + \beta_2 industry + \beta_3 size + \beta_4 L_{GRI_j} + \beta_5 R_{GRI_j} + \epsilon_j$$

Where:

$$j = 1, \dots, 239$$

- *SBSC_j*: Integration of GRI standards into the BSC (dummy variable of 0 if the standard is not integrated and one if the standard is integrated under any of the four BSC perspectives for company j)
- *Type*: Dummy variable of 1 (public) or 2 (private) sector.
- *Industry*: Binary coding of 1 when the company is in high environmental impact industries or 2 where it is not.
- *Size*: Small (1), medium(2) and large (3)
- *L_{GRI_j}*: Level of importance of each disclosure
- *R_{GRI_j}*: Dummy variable of 0 for not reporting and 1 for reporting of each aspect

Participants were also asked if they used a BSC in their company or not, and the results of the two groups were compared to test for data robustness. There was no statistically significant difference between the categorisation of standards for those companies with or without a BSC. Therefore the results would not be different whether or not a company already has a BSC. For that reason, all the data was used in the analyses.

4. Results

The overall regression model predicts approximately 43.3% of the variance in the integration score ($R^2 = 0.433$, $F(5,149) = 22.792$, $P < 0.001$). The results of the regression are presented in Table 2.

Table 2: Regression analysis showing type, industry, size, level of importance and reporting score as predictors of integration into PMS (divided into the BSC perspectives)

Variable	Cumulative		Simultaneous	
	R ² - change	F-change	β	p
Step 1				
Type	0.071	F(3,151)= 3.852*	0.036	0.673
Industry			0.172	0.030*
Size			0.212	0.014*
Step 2				
Level of importance of each standard	0.362	F(5,149)= 22.792**	0.519	0.000**
Reporting score			0.124	0.151

*p<0.05, **p<0.01

The factors (ownership type, industry and size) predict only 7.1% of the integration score variance. Of these though, only industry and size are significant predictors, with higher integration scores for larger companies and companies in environmentally low-impact industries. After controlling for these factors, step two predicts 36.2% of the integration score variance based on the two independent variables. However, of these, only the perception of managers of the importance of an indicator significantly predicts the integration score. Therefore, the results suggest that the more that managers considered an indicator important, the more likely the company integrated it into their PMS. Conversely, whether or not companies chose to report the indicators externally in their sustainability report does not impact their integration internally into a PMS. As the results show statistically significant relationships between size, industry, and managers' assessment of importance on the one hand and the sample companies' integration score on the other, the details of the integrations were also studied to understand how they are different, what sustainability areas managers consider to be important, and what BSC perspective they categorise or would (if they had a BSC) categorise them into.

Tables 3 and 4 are a complementary pair. Both arrange industries by high/low environmental impact. Table 3 presents standards that were (or would be) integrated; Table 4, those that are not integrated. To decide whether a standard was integrated under a certain perspective, companies' responses to each of its standard (for instance materials) were assembled and then the dominant categorisation for that standard was calculated: either to one of the four BSC perspectives or to none. Just which perspective an indicator was thought to belong under could vary from respondent to respondent, so this study aggregated the results within groups.

The regression results in Table 3 show that companies in environmentally low-impact industries integrate more and categorise more social, environmental and economic GRI standards under the four traditional BSC perspectives than companies from high environmental impact industries (actually twice as many: 19 vs 9). It should be noted that any GRI standards listed in this table were, overall (by calculation of dominance above), integrated into the companies' PMSs. The table also shows which perspective, overall, each standard was considered to belong to. Normally companies in either group which integrated a standard deemed it either important or occasionally just possibly important, to their performance. Also, the results show that the low-impact industry companies would categorise all economic and most social GRI standards under one of the four BSC perspectives. Companies in high-impact industries do not. More conspicuously, just two out of eight environmental standards – Materials and Energy – are integrated by companies in industries with high environmental impact into a BSC perspective.

The social indicators integrated by high and low impact industries alike often relate to employees, in areas such as employment, labor/management relation, training and education, diversity and equal opportunities and occupational health and safety.

Table 3: GRI standards integrated into the PMS, as described using the four BSC perspectives, for companies in environmentally high and low impact industries respectively

BSC perspective	GRI series	High environmental impact industries		Environmentally low-impact industries	
		GRI standards	Level of importance	GRI standards	Level of importance
Financial	Economic	Economic performance	Possibly important	Economic performance	Possibly important
		Indirect economic impacts	Important	Indirect economic impacts	Important
				Procurement practices	Important
Customer					
Internal business processes	Economic			Market presence	Important
				Anti-corruption	Important
	Environmental	Materials	Important	Materials	Important
		Energy	Possibly Important		
	Social	Employment	Possibly Important	Employment	Important
		Labor/management relation	Important	Labor/management relation	Important
		Occupational health and safety	Important	Occupational health and safety	Possibly important
		Training and education	Important	Diversity and equal opportunities	Important
		Diversity and equal opportunities	Important	Supplier Social Assessment	Important
				Non-discrimination	Important
			Freedom of association and collective bargaining	N/A	
			Local communities	Important	
		Customer health and safety	Important		
		Marketing and Labeling	Important		
		Customer privacy	Important		
		Socioeconomic Compliance	Important		
Learning and growth	Social			Training and education	Important
Total number of GRI standards integrated		9		19	

To complement Table 3, Table 4 shows companies in both environmentally high and low impact industries fail to integrate the majority of their environmental indicators under any of the BSC perspectives. However, for environmentally low-impact industries, these are all considered not applicable (N/A) to the industry, whereas they are mostly stated by sustainability managers to be important for the performance of high environmental impact industries.

Table 4: GRI standards NOT integrated into the PMS by companies in environmentally high and low impact industries respectively

GRI series	High environmental impact industries		Environmentally low-impact industries	
	GRI standards	Level of importance	GRI standards	Level of importance
Economic	Market presence	Important		
	Procurement practices	Important		
	Anti-corruption	Important	Anti-competitive behaviour	N/A
	Anti-competitive behaviour	N/A		
Environmental	Water	N/A	Energy	Possibly important
	Biodiversity	Important	Water	N/A
	Emissions	Important	Biodiversity	N/A
	Waste	Important	Emissions	N/A
	Environmental Compliance	Important	Waste	N/A
	Supplier environmental assessment	Important	Environmental Compliance	N/A
Social			Supplier environmental assessment	N/A
	Human Rights Assessment	Important	Human Rights Assessment	
	Child labour	N/A	Child labour	N/A
	Forced or compulsory labour	N/A	Forced or compulsory labour	N/A
	Security practices	N/A	Security practices	N/A
	Rights of Indigenous Peoples	N/A	Rights of Indigenous Peoples	N/A
	Public policy	N/A	Public policy	N/A
	Freedom of association and collective bargaining	N/A		
	Non-discrimination	Important		
	Local communities	Important		
	Supplier Social Assessment	Important		
	Customer health and safety	Important		
	Marketing and Labeling	Important		
	Customer privacy	Important		
Socioeconomic Compliance	Important			
Total number of GRI standards not integrated	24		14	

Tables 5 and 6 are another complementary pair. Both arrange companies by size. Table 5 presents standards that were integrated (we used the same method as for the high/low impact industries to derive a dominant answer across the firms in a group) into any of the four BSC perspectives; Table 6 presents the complement: those not integrated and stated as not belonging under any of the four BSC perspectives. Table 5 indicates that compared with small counterparts, larger (i.e. medium-sized and large) companies integrated more GRI sustainability standards (even, oddly, a few stated to be Not Applicable) under one of the four BSC perspectives.

Table 5: GRI standards integrated into the PMS, as described using the four BSC perspectives, for small, medium and large companies respectively

BSC perspective	GRI series	Small		Medium		Large	
		GRI standards	Level of importance	GRI standards	Level of importance	GRI standards	Level of importance
Financial	Economic	Economic performance Procurement practices	Possibly important Important	Economic performance Indirect economic impacts	Possibly important Important	Economic performance Indirect economic impacts Procurement practices	Possibly important Important Important
	Environment			Environmental Compliance	Important		
	Social			Socioeconomic Compliance	Important		
Customer	Economic			Procurement practices	Important		
	Social					Customer privacy	Important
	Economic	Indirect economic impacts Anti-corruption	Important Important	Market presence Anti-corruption	Important Not important	Anti-competitive behaviour Anti-corruption	N/A Important
	Environmental	Materials	Important	Materials Energy Emissions Supplier environmental assessment	Important Possibly important Important Important	Materials	Possibly important
	Social	Employment Labor/management relation Occupational health and safety Diversity and equal opportunities Local communities Marketing and Labeling	Important Important Important Important Important	Employment Labor/management relation Occupational health and safety Diversity and equal opportunities Supplier Social assessment Human Rights Assessment Non-discrimination Freedom of association and collective bargaining Security practices Customer health and safety Marketing and Labeling Customer privacy	Possibly important Important Possibly important Important Important Important N/A N/A Possibly important Possibly important Important	Employment Labor/management relation Occupational health and safety Diversity and equal opportunities Supplier Social Assessment Human Rights Assessment Non-discrimination Freedom of association and collective bargaining Security practices Rights of Indigenous Peoples Local communities Socioeconomic Compliance Customer health and safety Marketing and Labeling	Possibly important Important Possibly important Important Important N/A Important N/A Important Important Important Important
Learning and growth	Social	Training and education	Important	Training and education	Important	Training and education	Important
Total number of GRI standards integrated		12		24		22	

The totals by column were 12, 24 and 22 for small, medium and large companies respectively. Of the relatively few indicators integrated by small companies, employee-related ones were again

prominent. The results also show a higher number of environmental issues integrated into the PMSs of medium-size companies while there is only one standard (Materials) integrated in small or large companies.

Table 6: GRI standards NOT integrated into the PMS for small, medium and large companies respectively

GRI series	Small		Medium		Large	
	GRI standards	Level of importance	GRI standards	Level of importance	GRI standards	Level of importance
Economic	Market presence	Important	Anti-competitive behaviour	N/A	Market presence	Important
	Anti-competitive behaviour	N/A				
Environmental	Water	N/A	Water	Important	Water	N/A
	Biodiversity	N/A	Biodiversity	Important	Biodiversity	Important
	Waste	N/A	Waste	Important	Waste	N/A
	Energy	Possibly important			Energy	Possibly important
	Emissions	N/A			Emissions	N/A
	Environmental Compliance	N/A			Environmental Compliance	N/A
	Supplier environmental assessment	N/A			Supplier environmental assessment	N/A
Social	Child labour	N/A	Child labour	N/A	Child labour	N/A
	Forced or compulsory labour	N/A	Forced or compulsory labour	N/A	Forced or compulsory labour	N/A
	Public policy	N/A	Public policy	N/A	Public policy	N/A
	Rights of Indigenous Peoples	N/A	Rights of Indigenous Peoples	Important		
	Supplier Social Assessment	Important	Local communities	Important		
	Non-discrimination	N/A				
	Freedom of association and collective bargaining	N/A				
	Human Rights Assessment	N/A				
	Security practices	N/A				
	Socioeconomic Compliance	N/A				
	Customer health and safety	Important				
	Customer privacy	Important				
Total number of GRI standards not integrated	21		9		11	

Table 6 highlights GRI standards that the sample companies did not integrate into their PMS, regardless of their importance. Again, firms sometimes stated a standard was important but did not integrate it. For instance, both small and large companies considered 'market presence' and 'energy' important or possibly important but did not integrate them under any of the four BSC perspectives or their own PMSs equivalents. Small and large companies, though, consider most of the GRI standards they did not integrate to be 'Not Applicable'. Thus the results suggest a stronger link between a standard's importance and being integrated into the PMS and said to belong under one of the four BSC perspectives when grouping companies by size than when grouping them by environmental impact. The small and large size columns show the clean fit between indicators deemed not applicable and those not integrated – on visual inspection, a long list of N/As.

5. Discussion

This study aimed to understand how different factors influence the integration of various sustainability KPIs (specifically GRI standards) into a company's internal PMS and the sustainability managers' view of which perspective of a BSC indicators belonged to, if any. The results of the hierarchical multiple regression analysis suggest that an industry's high/low environmental impact, company size, and most of all managers' perception of the importance of an indicator influence the integration.

Missing from this list of demonstrated influences are two factors this study considered but found not statistically significant: ownership type and whether an indicator was reported in a company's sustainability report. As to ownership type, because of government owners' requirements, public (i.e., public sector) companies likely need to include more data in their sustainability reports. The governments of both Australia and New Zealand are economically advanced liberal democracies which consider environmental, social and economic sustainability, and the general public are particularly aware of environmental issues (WBCSD, 2018). Under what was defined as public ownership, government becomes a major internal stakeholder both reading sustainability reports and with some

influence over designing the PMS that they use. This should mean a public company has more data on sustainability already to hand which it can integrate into its PMS. Yet the results show public companies no more likely to integrate sustainability indicators into their PMS, or assign them to a (theoretical) BSC perspective, than their private company counterparts.

As to the second candidate, the fact that reporting sustainability indicators externally in sustainability reports does not increase the likelihood of integrating them into the PMS is an even more unexpected result. It shows that sustainability reports may be no more than ceremonial in practice and that they prioritise image and gaining (somewhat dubiously) legitimacy for a company. Moreover, besides failing to integrate sustainability indicators, previous research in Australia and elsewhere has shown that companies often publish unrepresentative sustainability reports which focus on potentially irrelevant positives and gloss over important negatives (Zharfpeykan, 2021).

Sustainability managers' perceptions of importance may be unsurprising as an influence on what gets integrated into the PMS. This is because these managers may well either have a say in composing the PMS or at least influence how it is designed. However, there were some interesting discrepancies between what was deemed important to performance and what was integrated. For instance, managers in high environmental impact industries considered environmental issues such as biodiversity, emission, waste and environmental compliance to be important for their performance but did not think they should be integrated into their PMS (BSC). The majority of the participants did, though, indicate that they disclose most of these issues externally in their sustainability reports.

We also found that companies from environmentally high-impact industries did not integrate environmental sustainability indicators more than those from low-impact industries, contrary to the expectation by Kerr et al. (2015). These are precisely the industries where environmental sustainability most needs to be internalised into performance management. Materials and energy – were the exceptions, and the two that were categorised to the BSC perspectives – might simply be the two that companies would feature in their PMS even if they were not interested in environmental

sustainability, because both are obvious inputs to consider in internal management decision-making. The fact that managers described several other environmental and also social and economic indicators as important but did not integrate them could suggest either (charitably) that they would aspire to integrate them in future, or an admission under anonymity, of failing to capture something that should be captured internally in a PMS. Given societies interest in sustainability's environmental component, high-impact industries may well be more used to scrutiny than low-impact ones. Perhaps sustainability managers of the former might have immersed themselves more deeply in the discourse of sustainability and know at least to *say* in a survey that social and economic aspects are important to internal performance measurement and management.

While pollution, emissions and the impact on biodiversity might seem like classic externalities, compliance is a striking oversight since it is in a company's interest if enforced, unless penalties are insufficient. Moreover, given that environmentally impactful industries are under increasing stakeholder scrutiny, the participants here were publishing sustainability reports on environmental indicators (albeit more out of legitimacy-seeking than sincere intention to improve). They would therefore already have in hand exactly the kind of data that should make integration easier. Any critical feedback from stakeholders reading those reports does not seem to have pressured the 66 high environmental impact industry companies into meaningful integration. Further, they integrated fewer social and economic sustainability indicators than their low-impact counterparts. This might, at worst, suggest a general culture in high-impact industries of valuing sustainability lowly in internal performance management practices. This lack of follow-through suggests they do not consider these indicators as part of their companies' strategies and decision-making processes, and thus do not have any plan to improve these areas.

This study found that both low and high impact industries did integrate more social indicators than environmental ones, especially (as would be expected) those they deem important to their performance. It is interesting that social indicators which were integrated and deemed important

often related to employees. This indicates companies in all industries try to show they care about their employees and consider these KPIs in their internal decision-making processes and link them to their strategies. Reporting externally is mostly to satisfy external stakeholders' needs and be seen (rightly or wrongly) to be legitimate. Employees, by contrast, are internal stakeholders. They are more visible to those devising a PMS, and labour or human capital is a self-evident factor of production. Australia has historically had a strong union movement⁵ and while union membership has decreased in New Zealand since the 1980s, workers' rights remain an issue. Meanwhile, diversity and gender equity have become prominent topics in society⁶. Therefore, it can be concluded that these companies do not consider environmental issues to be relevant or important for employees or their companies' performance. This can indicate the limited relationship between reporting an indicator externally and integrating it internally regardless of whether data is available to measure the indicator.

However, compared to high environmental impact industries, managers in environmentally low impact industries deem important and integrate more of the other, non-employee related social issues into their PMS. These include local communities, supplier social assessments and customer privacy. Therefore, these companies consider a broader range of stakeholders – external as well as internal – in their decision-making process. According to an agency theory view, the purpose of a PMS is to improve a company's economic performance (Naciti, 2019) and sustainability values should be factored in only insofar as they are instruments advancing that performance rather than as valuable in their own right. It may be that the various lines of operations in these companies (we can generalise only that they were non-environmental) are more for stakeholders. However, companies in environmentally high-impact industries may not recognise, or believe, that these non-employee related social indicators impact their company's performance.

As to sorting companies by size, a relative paucity of indicators were integrated by small firms. Importantly, this might simply mean that small firms do not have a formal PMS at all. To the extent

⁵<https://www.dca.org.au> (Last accessed June, 2021)

⁶ <https://www.mfat.govt.nz/en/about-us/who-we-are/diversity-and-inclusion/> (Last accessed June 2021)

that they do, though, it goes some way towards bearing out that, others things being equal, bigger firms will integrate more sustainability indicators simply on the basis of having more resources, since cost is one of the most significant burdens in implementing and managing sustainability management control mechanisms (Corsi and Arru, 2021). However, the results did not produce a perfect continuum from small to large: medium and large companies in the sample were quite similar in integrating sustainability KPIs into their BSCs, and both did so primarily in the social sustainability category, but medium sized companies in fact dominated. In particular, medium-sized companies tend to integrate more environmental indicators, while large companies considered more social indicators to be important and integrated these. This may be due to environmental indicators being more complex to understand than social indicators as they may be associated with environmental impact reduction and an increase in a company's earning (Morioka and Carvalho, 2016). Therefore, it is more difficult for companies, even large ones, to understand the beneficial cause-effect links with other performance indicators and to recognise their contribution to the goal of improving economic performance. Also, a slightly higher percentage of medium sized companies belong to highly polluting industries and that may also contribute to higher integration of environmental issues compared to the large and small companies (31.3% vs, 27% and 26%).

The results also highlight that small companies mostly integrate employee-related indicators, which again may indicate a focus on motivating employees. Environmental indicators as well as most social ones (especially those related to external stakeholders such as suppliers or customers) are not considered important by small companies and therefore not integrated into their PMS. However, as Kaplan and Norton (2001) suggest, the use of a PMS such as BSC should not be limited to large companies, and small companies can also benefit from using the BSC and integrating the most relevant and important sustainability indicators to improve their performance. The results of this study show that small companies also consider integrating sustainability into their PMS.

6. Conclusions

In conclusion, we know that the integration of sustainability indicators into a BSC or other PMS can have a positive impact on corporate performance while also promoting social, economic and environmental sustainability outcomes (Corsi and Arru, 2021; De Villiers et al., 2016; Hristov et al., 2019; Kerr et al., 2015; Morioka and De Carvalho, 2016). In particular, it has been shown that a BSC can be used to address sustainability issues which are strategically relevant by linking them directly or indirectly to financial performance (Hristov et al., 2019). Therefore, looking at the different sustainability issues companies integrate (or could integrate) into a BSC yields important information on a company's strategy. The survey results show that social indicators and especially employee-related ones emerged as being considered more strategically relevant for the sample companies (in that they were either deemed important and/or actually integrated). This may indicate that managers saw clearer roles for these indicators. For other social indicators, factors such as size and industry contributed to the range of stakeholders covered. Thus, incorporating a broader range of stakeholders may eventually lead to better performance in these companies. For instance, larger companies are under more scrutiny to assess their suppliers' social performance and potential negative social impacts in the supply chain so need to address these issues to retain their social licence.

The survey results also highlight the potential importance of materiality assessments of sustainability indicators. Similar to the materiality concept in external reporting, the importance of an indicator for a company's performance can determine its integration into business strategy. The fact that a company chooses to report an indicator externally does not influence managers integrating them internally. This shows, worryingly, that the sustainability reports of companies surveyed are not linked to their strategy. There are clearly sustainability issues that companies disclose to satisfy the needs of external stakeholders or to deal with pressure from competitors' disclosures. However, these aspects do not appear to managers to be part of the company's value creation process. These results further support Gray (2010), who claims that sustainability reporting is a disclosure of materials often

gathered on an ad hoc basis and is not part of the regular management planning cycle. This, therefore, has implications for the role that sustainability reports play such as informing organisational strategy, or dealing with the constant pressures organisations face (Jollands et al., 2018).

The aim of a sustainability BSC is to provide a framework to enable management control and integrate sustainability into the daily activities of a company so as to create opportunities for managers to achieve their sustainability goals (Hristov et al., 2019). Companies, though, will only integrate sustainability indicators if they consider them relevant to their strategy. However, sustainability reporting may not link to a company's corporate strategy as companies may feel the need to disclose areas that are 'not applicable' to their performance due to external pressures to legitimise their business (Jollands et al., 2018). Therefore, it could be argued that these companies' sustainability reports do not provide an integrated view of the company in terms of its sustainability priorities and how it aims to achieve cleaner production in practice.

6.1 Implications for theory and practice

This study used practice theory (Jalas et al., 2017) to better understand the factors influencing the integration of sustainability indicators into a company's PMS. To do this the paper examines the influence that sustainability managers' perceptions have on the integration of internal and external sustainability indicators in two countries, Australia and New Zealand. The survey also includes other factors such as company size, type and industry, as these can shed light on why managers may or may not integrate sustainability indicators into their PMS in practice. Thus, this study contributes to sustainability research by asking managers about the importance of sustainability indicators to their company's performance and whether or not they integrate them into their PMS. As Morioka and Carvalho (2016) suggest, ideally internal and external sustainability indicators would have a high level of synergy, which would reduce the amount of work for both managers and readers interpreting sustainability reports and improve information consistency. This study shows that, in practice, there is a disconnect between sustainability indicators reported externally and their integration internally,

highlighting the need to improve this synergy. This is an important contribution as company's need to better integrate sustainability indicators of performance into their decision-making process to enable long term survival and growth (Hristov et al., 2019).

6.2 Limitations

The results of this study should be generalised with caution as the integration of sustainability indicators into a PMS was examined within the context of Australian and New Zealand companies. Therefore, the results may not be generalised to other countries. Future research can expand on the findings of this study by including organisations from other countries around the world.

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