



Environmental event materiality and decision making

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Abstract

Purpose – The purpose of this paper is to investigate environmental event materiality and user decision making, providing an empirical basis for reporting entities disclosures regarding material environmental events that further users' ability to make decisions.

Design/methodology/approach – A vignette describing an environmental event facing a company was provided to participants who were asked whether the event was deemed to be material and, second, whether the event would initiate an action or no action decision. The use of an experimental approach reveals results regarding the decision-making process of users rather than relying on respondents stating preferences.

Findings – Results indicate that user groups consider the environmental event to be material at a threshold of 6 percent. The determination of the event as material results in a "no action" decision that suggests isolated events of this size may not result in "action" decisions. The study has implications for policy makers and entities disclosing environmental events.

Research limitations/implications – The experimental research approach adopted is primarily limited by the specific contextual nature of the event.

Originality/value – Entity reporting of environmental events is receiving unprecedented levels of interest and this paper contributes to the materiality research and practice in this area.

Keywords Organizations, Decision making, Financial reporting, Information disclosure, Material environmental event, In-isolation events, Materiality discretions, User perspectives

Paper type Research paper

Introduction

The disclosure of material information, one of the most significant issues in accounting, is premised on the notion that materiality is central to the decision usefulness paradigm in accounting. The notion of materiality presupposes the accountants' ability to determine whether a judgement on materiality affects users' decisions. To this end, quantifiable heuristics have been employed to determine relevance of materiality. However, the quantifiable heuristics or thresholds that provide guidance on assessments of materiality have not been globally adopted. For example, the International Accounting Standards Board (IASB, 2008) does not recommend threshold measures while the Australian Accounting Standards Board (AASB) provides the following guidelines for the disclosure of economic events: above 10 percent material to decisions; below 5 percent immaterial to decisions; and, between 5 and 10 percent preparer discretion is to be exercised (AASB, 2009). Applying the heuristics across a variety of disclosure events is fraught with problems for the presentation of a true and fair view of accounting statements.

The issue is further complicated by an expanding reporting function brought about by users interested in not only financial and economic perspectives but also the environmental sustainability of an entity. The Climate Disclosure Standards Board



(CDSB Reporting Framework, 2009, p. 24) is grappling with the issues of what constitutes material disclosures:

In the absence of tests or standards to determine materiality, companies must evaluate their own circumstances and make disclosure decisions based on the characteristics of decision-useful information that convey the relative importance management attaches to the information.

Whilst the CDSB project relates specifically to disclosure of carbon there is relevance to the broader environmental effects that reporting entities have on the environment. Event materiality whether economic or environmental is a pervasive constraining variable in decisions regarding disclosure.

Currently, the effect of environmental event materiality on the decision-making process of users has received minor attention from researchers and would be the logical investigative realm (Dierkes and Antal, 1985). In this paper, the decision process of users is examined by considering event significance (materiality) in the context of an “action” or “no action” decision outcome. A decision outcome may take into account a succession or string of events that affect an entity or if an event is considered significant an isolated event may result in an “action” outcome. An in-isolation environmental clean-up event representing 6 percent of total revenue was provided to three user groups, including shareholders, shareholder/environmentalists and environmentalists. The experimental research model employed in this study evaluates the effect of a single or in-isolation event on the decision making of users which has implications for not only entity preparers but also regulators. The effect on the decision process is in terms of deeming the event significant in an environmental and economic context.

The ability to determine event significance (materiality) and thresholds from a user’s perspective are important considerations from a policy development perspective. This approach is valuable not only for users but also for preparers and regulators in making disclosure judgements of events in the range 5-10 percent. Accordingly, this paper provides an empirical basis for reporting entities providing disclosures regarding material environmental events that further a user’s ability to make decisions. The objectives of this paper are to:

- (1) determine the event materiality (significance), whether economic or environmental, of an in-isolation environmental event relating to a company from a user’s perspective;
- (2) test the action/no-action response of users who held shares (economic decision) to those who did not hold shares (environmental decision) of the company; and
- (3) identify the main implications for accounting reporting for preparers dealing with events in the range of 5-10 percent.

The paper is structured in the following manner. The literature review discusses decision usefulness, the decision process, user needs and event significance. The research method includes a description of the surveyed groups, experimental model and the material discretion matrix used to evaluate the decision and significance of preparer discretion. Results are discussed in terms of the effect on economic and environmental decisions. The conclusion describes the limitations, implications for users, preparers and regulators, and further research opportunities in the area.

Literature review

Decision usefulness

Whilst it may be presumed that the objective of financial reporting is the provision of relevant and reliable information to interested parties, the theoretical underpinning of financial reporting provides little insight into users, their decisions or disclosure issues. Theories that offer social accounting and reporting researchers insight have been drawn from social and political theory that include stakeholder theory, legitimacy theory and political economy theory. These theories are not seen as competing but rather as complementary (Gray *et al.*, 1995). However, from the perspective of users, the theories, whilst providing some justification for the provision of accounting information to groups other than groups whose interest is predominantly economic, offer little in respect of what, why and how information is used for decision purposes. Rather, the theories are predominantly about the interaction of power between society, management and users.

Descriptions of the term “decision usefulness” are embedded in accounting conceptual frameworks (AARF, 1990a) that narrowly depict useful information as that being relevant to economic decision making. The concept of accountability through the antecedent term, stewardship, also has connotations of economic utility. The relationship between decision usefulness, accountability and stewardship is expressed by Stanton (1997, p. 684) and reflects the narrow perspective held of the purpose of reporting and accountability:

Decision usefulness is the primary objective for financial reporting, having consumed the objective of accountability (stewardship), so long held to be the justification for accounting. As an objective, decision usefulness reflects the utilitarian philosophy underlying most conceptual frameworks: concern is for the efficient allocation of resources which is in the interest of society as a whole. Accountability, on the other hand, reflects concern for some individual interest.

Accountability has been identified with a broader social as well as economic purpose that may well be the case with the notion of decision usefulness reflecting changing ideological attitudes and philosophies (Goldberg, 1965). The reflection by Stanton that accountability is “concern for some individual interest” does not preclude that “interest” being decision making. It is contended that issues of accountability shape future thinking through retention of “memories” and, therefore, affect the individual decision process (Chambers, 1966). Asking users what is useful for their decision making seems to be a productive process identified by Dierkes and Antal (1985). In their seminal research into developing a model for environmental reporting Dierkes and Antal (1985) acknowledge this situation stating “that it is difficult for most people to envisage the potential usefulness and uses of a concept until it has been developed to a certain extent”. Later in the paper it is stated that:

In practice, key individuals in business and academics in particular have postulated information needs and determined how to meet them, with almost no attempts to obtain inputs and feedback from the potential target groups (Dierkes and Antal, 1985, p. 29).

However, the decision-useful approach has its detractors. Gray *et al.* (1996, p. 75) make the following statement:

Decision usefulness purports to describe the central characteristics of accounting in general and financial statements in particular. To describe accounting as useful for decisions is no more illuminating than describing a screwdriver as being useful for digging a hole – it is better than nothing, and therefore useful, but hardly what one might ideally like for such a task.

The subsequent issues that arise from the statement above include:

- that decision usefulness determines how information is disclosed and consequently who will use that information;
- the usefulness of accounting for decision making is deteriorating; and
- asking users to determine the usefulness of information is not a satisfactory research option.

The last issue, whilst not directly mentioned in the above statement, underpins prior discussion in Gray *et al.* (1996). Alternative terms to decision usefulness such as “user utility” (Guthrie and Parker, 1990) and “usefulness and use” (Dierkes and Antal, 1985) broaden the applicability of decision usefulness or user utility theory to include accounting for social and economic performance. This indicates that significant changes need to be made in areas such as accounting regulation and education. The changing demands on financial reporting, brought about by users interested not only in the economic performance of companies but also in the social performance, may present some interesting extensions to user utility theory. The plurality of purpose presently in financial reporting between decision usefulness and accountability is a dilemma that regulators and the profession need to sort out. A decision usefulness approach that allows for alternative decisions other than financial is considered a possible extension to user utility theory.

Decision making and materiality

An aspect of the decision process that is often disregarded is that the lack of action as a result of an event is a decision (no-action decision). It could also be construed that an action may be in response to a single disclosure of an event or a succession of events. This may not necessarily result in action but merely form part of a person’s memories that, in the future, may combine with other signals to create an outcome (action decision). Making decisions regarding an entity is often a complex process and rather than use one source of information users may avail themselves of a range of information from diverse sources. These “inputs” could be from external sources such as the state of world economies or from individual ideological belief structures. The notion of decision useful often implies some immediate decision outcome or action. In many instances, useful information may not result in an immediate outcome but form part of a future decision process. Users are individuals and may consider information differently, one individual may consider that an event warrants some form of negative action, another may consider the event positively and still another may consider the same event to be irrelevant. Accountants can merely disclose events as accurately as possible, within the constraints mentioned above, without bias and allow users to make their own judgements (Chambers, 1966; Sterling, 1967; Houghton, 1989).

A key facet of an event being decision useful is its significance or materiality. The Environmental Accounting Taskforce, ICAA (1998) chose the term “significant” as an alternative concept to “material” for environmental impacts of an entity. In conceptual framework projects a more legalistic description of materiality (AARF, 1990b) that connects disclosure with a consequence has been adopted as the following summation by Spacek (1969, p. 447) sets out:

A material fact is a fact to which an average, reasonably prudent person would attach importance in determining a course of conduct to be taken or followed upon learning the fact, such as in deciding whether or not to buy or sell stock, or to lend or refuse to lend money, or to cancel a loan.

The identified outcomes of “determining a course of action” are identified as, for example, buying or selling stock. Whilst supporting legalistic description of materiality, no accommodation is made for the decision that does not have an outcome. Deciding whether to buy or sell shares involves a third possibility which is to hold or to take no action. This particular decision, while it involves no action and has no immediate consequences is, from the user’s point of view, the result of conscious and deliberate choice.

The disclosure of material information, whether financial or environmental, is necessary for the protection of users and essential for the efficient functioning of capital markets and the forthcoming carbon trading market. Without adequate disclosure a significant market incentive for prudent management will be missing.

Materiality guidelines (AASB, 2009) describe an event that is less than 5 percent of the base amount as not material, whilst an event greater than 10 percent of the base amount would be considered material. An event or item falling between 5 and 10 percent of the base amount is material and the preparer, considering the nature of the event, must exercise judgement as to whether disclosure of the event is necessary. However, the preparer, following the guidelines, may consider that the nature of an event would not materially affect the decisions of users when, in fact, users in exercising their judgement may believe the information to be material. Unfortunately, if preparers make the decision not to disclose an event, then the utility of the information to users cannot be determined. The importance of research in this area to determine event significance (materiality) and thresholds, from a user perspective, would be valuable not only for users but also for preparers in determining disclosure of events in the range 5-10 percent.

The importance of the nature and size of an event has been acknowledged in the Australian Accounting Standards (AASB, 2009). The type of event that should be disclosed is one that would materially affect the decisions of users. To assist in determining whether an event may affect the decisions of user threshold guidelines, as described above, are provided for preparers. The approach to materiality described above is reasonable in a legal context and practical from an accounting perspective because it provides clear threshold rules. Whilst providing regulators and accountants with workable arrangements the interests of users have received minimal attention. Materiality judgements are crucial in decision making and failing to take account of user perspectives may render disclosures ineffectual for decision purposes. Conceptually, a broader description of materiality that includes the “no immediate action alternative” would be desirable and can only improve disclosure of material events.

Deegan and Rankin (1997) surveyed shareholders, stockbrokers, analysts, academics, financial institutions and review organisations “whether environmental issues are material to their decisions concerning a company”. The results indicate that a rather high percentage of the user groups surveyed would use environmental information (66.7 percent). The range between the economic-type decision groups (43.8 percent) and the non-economic-type decision groups (83.0 percent) is quite large. A study conducted by Faux (2002) asked users to indicate the threshold range for disclosure of environmental events. Five categories were provided: 0-3 percent; 4-6 percent; 7-9 percent; greater than 10 percent; and, should not be disclosed.

A total of 73.4 percent of users surveyed indicated that they would like disclosures to be made in the first two categories that is 0-6 percent. The difference between economic and non-economic user groups is blurred as a result of a mixed category but the economic user group indicated a preference for disclosure in the first two categories of 60.9 percent. Both the above studies suffer from respondents stating their preferences rather than revealing results through a case scenario requiring respondents to make a decision. Deegan and Rankin (1997) requested that respondents indicate: “real needs” rather than a “wish list”, but never the less results are still stated.

Studying the relationship between the regulated determination of the deeming of a material event and users’ determination as to the usefulness in their decision making of the deeming would extend the literature. In the light of the above studies (Deegan and Rankin, 1997, Faux, 2002) and the recommendations of the Interim Report of the Inquiry into Environmental Accounting and Reporting (Public Accounts and Estimates Committee of the Parliament of Victoria, 1999) this area of study would be particularly useful. The conceptual confusion over decision usefulness and accountability functions of entity disclosures only serves to make it more difficult to establish practical disclosure requirements that meet the needs of users, preparers and regulators.

The discussion of the disclosure of an event, from the preparer’s perspective, provides three possible situations:

- (1) The event is greater than 10 percent, is significant and material, and therefore will have an action decision outcome.
- (2) The event is in the 5-10 percent category and could be:
 - significant and material with an action decision outcome (Type 1 outcome);
 - not significant and not material with an action decision outcome (Type 2 outcome);
 - significant and material with a no-action decision outcome (Type 3 outcome); and
 - not significant and not material with a no-action decision outcome (Type 4 outcome).
- (3) The event is less than 5 percent is not significant or material and therefore will have no decision outcome.

The preparer’s decision in the first and third possibilities is prescribed in the guidance provided in the commentary to AASB (2009) and, therefore, quite clear. The second situation has several alternatives that may result in less than satisfactory disclosure of events from a user’s perspective. The preparer’s choice in deciding whether to disclose the event results in certain outcomes for users that have been described above. In Table I the choices available to preparers are presented in matrix form to enable visual

		Significance (material)		Preparer discretion at the 5-10 percent event disclosure thresholds
		Significant Type 1 Type 3	Not significant Type 2 Type 4	
Decision	Action			
	No action			

Table I.
Preparer discretion at the
5-10 percent event
disclosure thresholds

identification of the relationships that exist between event significance (materiality) and users' decisions.

The "Type 4" event occurrence is the non-disclosure of an event by preparers and is unlikely to have an effect on users' decision making. The non-disclosure would therefore be justified. The "nature" of the event in terms of a "Type 2" situation is more relevant than the amount being disclosed. The significance (materiality) may not relate to the magnitude of the event but rather the nature as AASB (2009) states:

In deciding whether an item or an aggregate of items is material, the nature and amount of the items usually need to be evaluated together. In particular circumstances, either the nature or the amount of an item or an aggregate of items could be the determining factor.

"Type 1" and "Type 3" events present preparers with a dilemma because users have deemed the event to be significant. If preparers disclose the event there is no problem. However, if the disclosure is not made then an event that affects decision making is not disclosed.

The issue becomes one of determining whether an environmental event in the 5-10 percent category would be considered by users to be materially significant and would the determination of significance cause an action or no-action decision.

Research method

The use of an experimental model has the benefit of revealing user intentions in a decision context whereas the studies of Deegan and Rankin (1997) and Faux (2002) suffer from respondents stating their preferences. However, generalising the findings is constrained by the lack of external validity when using an experimental model. Providing participants with a clean-up environmental event is also problematic in that there are numerous possibilities for describing an environmental event. Considering the decision context as an isolated event rather than a sequence or string of events may also weaken the findings. However, the experimental model employed does explore the relationship between event size and decision usefulness.

Two groups of users were surveyed in the experiment; shareholders and environmentalists. Shareholder participants were randomly drawn from the registries of three public companies, also selected at random, from the top 50 companies listed on the Australian Stock Exchange. The membership of a professional association of environmentalists served as the database of environmentalists and all members were surveyed. The survey was posted to 1,882 participants and valid responses were received from 876 (46.5 percent) respondents. Through a filter in the survey a further group who exhibited characteristics of both groups (shareholder/environmentalists) was established. Shareholder responses were 253, shareholder/environmentalists amounted to 240 and responses from environmentalists were 383.

The following demographic information provides a typical description of users within the three groups:

- (1) The typical shareholder is aged 60, male, has held shares for 13 years, has tertiary qualifications, has not worked in an environmental occupation, and does not belong to an environmental organisation.
- (2) The typical shareholder/environmentalist is aged 45, male, has held shares for ten years, has tertiary qualifications, has worked in an environmental occupation, and/or belongs to an environmental organisation.

- (3) The typical environmentalist is aged 44, male, does not hold shares, has tertiary qualifications, has worked in an environmental occupation, and/or belongs to an environmental organisation.

A description of an in-isolation environmental situation facing a company was provided to participants in the form of a vignette and they were asked whether the event was thought to be significant and whether the event would initiate an action or no-action response. The vignette concerned a company facing a “clean-up” event which had been extensively pre-tested and validated. The description of the event was approximately 20 lines in length which Milne and Chan (1999) describe as being the average length of an environmental disclosure.

The detail of the vignette described an Australian retail petroleum company that was listed on the Australian Stock Exchange and confronted with a situation whereby a significant number of its city petrol stations showed signs of deterioration (The Appendix). The vignette continued with an explanation of the assessment and grading of contaminated petrol stations that saw low- and medium-polluted sites sold at a loss and clean-up of high-polluted sites undertaken. The threshold for the event was 6 percent and the nature of the event can be easily identified as environmental allowing for the interpretation of the vignette and the making of environmental and economic decisions. The questions accompanying the vignette were as follows and allowed action and no-action decisions to be made:

- is the event described considered significant? (event significance);
- if no shares were held in the vignette company would you take an action on the basis of the environmental report? (environmental decision); and
- if shares were held in the vignette company would you take an action on the basis of the environmental report? (economic decision).

The significance of relationships between decisions (economic and environmental) and the user groups (shareholders, shareholder/environmentalists, and environmentalists) will be evaluated using χ^2 tests.

Results and discussion

The notion of expanding the user utility to include decisions other than financial was used in the possible response alternatives to the environmental and economic decisions. The environmental action decision provided a number of alternatives and the opportunity for respondents to specify an action decision they may take. The action alternatives were all coded one while the no-action response was coded zero. The economic action decision was to either reduce or increase the holding with either response coded as one. The no-action response was coded zero. The relationship between event significance and the dichotomised response to the environmental and economic decisions are shown in Table I. The analysis draws on the contentious discretionary disclosure of events in the 5-10 percent region discussed earlier.

Pearson χ^2 values for the environmental and economic decisions are 17.432 ($\chi^2 (1, N = 700) = 17.432, p < 0.05$) and 16.051 ($\chi^2 (1, N = 784) = 16.051, p < 0.05$) with a significance of 0.000 for both decisions. The significance values are well below the alpha level of 0.05 and are therefore significant. The variables are not independent. The minimum expected cell counts are 39.43 (environmental decision)

and 44.47 (economic decision) with no cells having an expected count less than 5. It can therefore be assumed that the assumption of χ^2 has not been violated. An examination of cell frequencies in Table II reveals that 83.5 percent of respondents identify the environmental decision as significant while 84.8 percent believe the economic decision is significant. However, 62.4 percent (environmental decision) and 59.7 percent (economic decision), respectively, would take no action after overwhelmingly identifying the event as significant. Further evaluation was undertaken across the user groups to add insight to this finding.

In Table III the relationship between an environmental decision and its significance is evaluated by shareholders (S), shareholder/environmentalists (S/E) and environmentalists (E) with some interesting outcomes. χ^2 tests were performed to establish the association between the three user groups and the environmental decision outcome. The results show that a statistically significant relationship occurs for both shareholder/environmentalist and shareholder ($p < 0.05$) and environmental decision, while the shareholder user group was not significant ($p > 0.05$).

The Type 1 event in Table III describes where the event is significant and an action decision is made. The Type 1 situation has been selected by just under one-third (31.4 percent) of total respondents, specifically, one-quarter (24.8 percent) of shareholders, 29.5 percent of shareholder/environmentalists and 37.7 percent of environmentalists.

Table II.
User response to economic and environmental decisions

	Economic decision		Total	Environmental decision		Total
	Significant	Not significant		Significant	Not significant	
<i>Action</i>						
Count	268	25	293	220	20	24.0
% within	40.3	21.0		37.6	17.4	
Total	34.2	3.2	37.4	31.4	2.9	34.3
<i>No action</i>						
Count	397	94	491	365	95	46.0
% within	59.7	79.0		62.4	82.6	
Total	50.6	12.0	62.6	52.1	13.6	65.7
<i>Total</i>						
Count	665	119	784	585	115	700
% within	100.0	100.0		100.0	100.0	
Total	84.8	15.2	100.0	83.5	15.5	100.0

Table III.
Event significance and environmental decision

Significance/decision	User	Significant			Not significant				
		S	S/E	E	Total	S	S/E	E	Total
Action	<i>n</i>	54	56	110	220	9	3	8	20
	Percentage of user group	24.8	29.5	37.7	31.4	4.1	1.6	2.7	2.9
	Tot. % dec. within group					28.9	31.1	40.4	34.3
No action	<i>User (n)</i>	118	102	145	365	37	29	29	95
	Percentage of user group	54.1	53.7	49.7	52.1	17.0	15.2	9.9	13.6
	Tot. % sig. within group	78.9	83.2	87.4	83.5	21.1	16.8	12.6	16.5
	Tot. % dec. within group					71.1	68.9	59.6	65.7

The Type 3 circumstance is where respondents believe the event to be significant but take no action. This was the most favoured outcome, with just over half of all respondents (52.1 percent) choosing this scenario. A breakdown of the results shows that 54.1 percent of shareholders, 53.7 percent of shareholder/environmentalists and 49.7 percent of environmentalists believed the event to be significant but thought the most appropriate strategy was to take no action. The results suggest that perhaps the event is deemed important but not “actionable” at this stage because the circumstance is an isolated occurrence, and will form part of the “memories”, as Chambers (1966) suggests, for a future decision. The determination by 83.5 percent of all users that the event is significant, regardless of the decision action, is intriguing and has ramifications for preparers in disclosing events of a size below the commonly applied heuristic.

In the Type 2 scenario respondents deem the event not to be materially significant but would take an action decision. The Type 2 situation would be a concern in a decision context that is not in-isolation where the collective effect of a succession of events, whilst not on their own significant, would, at some stage, trigger a decision. However, this is not the case as the situation is in-isolation and, therefore, it is difficult to interpret this result even though it is quite low (2.9 percent). It can only be assumed that Type 2 respondents have misunderstood the circumstance and/or the questions.

The Type 4 situation is where users believe the event to be neither materially significant to their decisions nor would they take any action. A total of 13.6 percent of respondents identified a Type 4 occurrence. The largest group within this category was shareholders (17.0 percent), followed by shareholder/environmentalists (15.2 percent) and finally environmentalists (9.9 percent). This perhaps reflects the greater concern of environmentalists. Respondents supporting a Type 4 situation would support the company if it chose not to disclose the event. This situation does not present a problem for preparers; if they disclose the event there is no effect and if they do not disclose the event there is no effect.

With regard to event significance and the environmental decision the cross-tabulation in Table III reveals that 83.5 percent (Types 1 + 3 total) of users believe the event is significant. This is an important finding given that the significance of the event is 6 percent and that the nature of the event is environmental and would support suggestions from the inquiry (Victoria Parliament, Public Accounts and Estimates Committee, 1999) that environmental disclosures should be quantified at lower levels than those for financial reporting (AASB, 2009). Even though a very high number of respondents identified the event as significant (material), 65.7 percent (Types 3 + 4 total) would take a no-action decision. This could mean that whilst respondents feel the event is significant to decision making they would like to wait and see what the company does with similar events or perhaps they feel that the company’s actions are positive.

The above results indicate that there is a relationship between the significance of the event and the environmental decision. Determination of the statistical significance of the relationship has been undertaken in Table IV and shareholder/environmentalist at 0.004 and the environmentalist at 0.013 categories are both significant.

In Table V the relationship between an economic decision and its significance is evaluated by shareholders (S), shareholder/environmentalists (S/E) and Environmentalists (E). χ^2 tests were performed to establish the association between the three user groups and the economic decision outcome. The results show that

a statistically significant relationship occurs for the user group: environmentalist ($p < 0.05$) and economic decision, while both shareholder/environmentalist and shareholder groups were not significant ($p > 0.05$).

The Type 1 event in Table V describes where the event is significant and an action decision is made. The Type 1 situation has been selected by just over one-third (34.2 percent) of total respondents, specifically, one-quarter (24.4 percent) of shareholders, 33.3 percent of shareholder/environmentalists and 41.5 percent of environmentalists. The Type 3 circumstance is where respondents believe the event to be significant but take no action. Similar to the environmental decision criteria, this was the most favoured outcome, with just over half of all respondents (50.6 percent) choosing this scenario. A breakdown of the results shows that 54.7 percent of shareholders, 52.2 percent of shareholder/environmentalists and 46.9 percent of environmentalists believed the event to be significant but thought the most appropriate strategy was to take no action. It would seem that despite the event being considered important (material significant), the nature of the event (isolated occurrence) may have led to a not “actionable” decision at this stage. As stated previously, this supports Chambers’ (1966) assertion that isolated occurrences form part of the “memories” for a future decision. The determination by 84.8 percent of all users that the event is significant, regardless of the decision action, raises queries regarding the thresholds for disclosing events of a size below the commonly applied heuristic.

In the Type 2 scenario respondents deem the event not to be materially significant but would take an action decision. Similar to the environmental decision context, it is difficult to interpret this result even though it is quite low (3.2 percent), thus the Type 2 respondents may have misunderstood the circumstance and/or the questions.

Table IV.
Relationships between user groups environmental decision using Pearson χ^2

User	Valid cases	Value (minimum expected count) ^a	df	Asymp. sig. (two-sided)
Shareholder	218	2.472 (13.29)	1	0.116
Shareholder/environmentalist	190	8.446 (9.94)	1	0.004
Environmentalist	292	6.212 (14.95)	1	0.013
	700			

Note: ^a0 cells (.0%) have expected count less than 5

Table V.
Event significance and economic decision

Significance/decision	User	Significant				Not significant			
		S	S/E	E	Total	S	S/E	E	Total
Action	<i>n</i>	57	69	142	268	11	8	6	25
	Percentage of user group	24.4	33.3	41.5	34.2	4.7	3.9	1.7	3.2
	Tot. % dec. within group					29.1	37.2	43.2	37.4
No action	<i>n</i>	128	108	161	397	38	22	34	94
	Percentage of user group	54.7	52.2	46.9	50.6	16.2	10.6	9.9	12.0
	Tot. % sig. Within group	79.1	85.5	88.4	84.8	20.9	14.5	11.6	15.2
	Tot. % dec. within group					70.9	62.8	56.8	62.6

The Type 4 situation also seems to possess some similarity between it and the environmental decision context. A total of 12.0 percent of respondents identified a Type 4 occurrence. The largest group within this category was shareholders (16.2 percent), followed by shareholder/environmentalists (10.6 percent) and finally environmentalists (9.9 percent). This perhaps reflects the greater concern of environmentalists. Respondents supporting a Type 4 situation would support the company if it chose not to disclose the event. This situation does not present a problem for preparers; if they disclose the event there is no effect and if they do not disclose the event there is no effect.

With regard to event significance and the economic decision the cross-tabulation in Table V reveals that 84.8 percent (Types 1 + 3 total) of users believe the event is significant. This suggests that slightly more respondents (84.8 percent for economic decision compared to 83.5 percent for environmental) believe that the current threshold for disclosure (10 percent) is too high for economic scenarios. This result reflects the growing trend towards greater disclosure (and transparency) of financial dealings which arose from the global financial crisis. Even though a very high number of respondents identified the event as significant (material), 84.8 percent (Types 1 + 3 total), 62.6 percent would take a no-action decision. This could mean that whilst respondents feel the event is significant to decision making they would like to wait and see what the company does with similar events or perhaps they feel that the company's actions are positive. The above results indicate that there is a relationship between the significance of the event and the economic decision.

With respect to event materiality and disclosure levels, the implication of these results seems to suggest that materiality is not a simple calculation but rather a determination of what will and what will not affect the decision of a knowledgeable investor given a specific set of circumstances. This implies that the AASB decision to apply a quantitative threshold on materiality may be better utilised as a guide only. In fact, the need for a quantitative figure seems to be in contrast to the recent trend towards fostering a whole new accounting terminology, where transactions are defined in words rather than simple percentages (Nolan, 2005).

The results in Table V indicate that there is a relationship between the significance of the event and the economic decision. However, the results in Table VI indicate that the statistical significance of the relationship is limited to the environmentalist category (0.000). The shareholder (0.252) and shareholder/environmentalist (0.197) categories are not statistically significant.

A summary of the findings determining the environmental event material significance and decision outcome are as follows:

User	Valid cases	Value(minimum expected count) ^a	df	Asymp. Sig. (2 sided)
Shareholder	234	1.314 (14.24)	1	0.252
Shareholder/environmentalist	207	1.666 (11.16)	1	0.197
Environmentalist	343	14.626 (17.26)	1	0.000
	784			

Note: ^a0 cells (0.0%) have expected count less than 5

Table VI.
Relationships between
user groups economic
decision using Pearson χ^2

- Environmental decision; event significance (Types 3 + 4) 83.5 percent of users.
- Environmental decision; no-action outcome (Types 1 + 3) 65.7 percent of users.
- Economic decision; event significance (Types 3 + 4) 84.8 percent of users.
- Economic decision; no-action outcome (Types 1 + 3) 62.6 percent of users.

The results for the event described are conclusive and suggest that further consideration be given by preparers and regulators to environmental disclosures in the 5-10 percent range. The preparedness of users to acknowledge the event as significant for environmental and economic decisions, and still take no action highlights the event's in-isolation nature. The no-action decision outcome reflects the need for more research on the decision process of users.

Conclusion

The findings support the proposition that, within the limitations indicated, disclosures should be made in the range 5-10 percent with the added proviso that a sequence of events of less than 10 percent will ultimately contribute to a material decision being made. As this project considered an in-isolation event further study that contributes to a sequence of events and that involves a variety of environmental events needs to be considered. Dierkes and Antal (1985) have suggested that whilst there is confusion regarding the best approach for deciding what and how to describe environmental events, asking users of reports is considered as the most likely method to result in outcomes in terms of decision making.

The intention in this study was to investigate the relationship between event significance (materiality) in a decision context. AASB 1031 requires certain levels of disclosure for economic events, and a suggestion from an inquiry (Victoria Parliament, Public Accounts and Estimates Committee, 1999) is that the accounting profession consider lower-threshold levels for disclosing environmental events. Studies have considered the issue of material significance but have emphasised stated user preference rather than revealed results obtained in this study. The limitations of the experimental research approach have been discussed and the specific contextual nature of the vignette and that the event described in the vignette is in-isolation restrict generalisation.

The findings indicate the importance of identifying "no action" as a decision response. Events between 5 and 10 percent, regardless of whether they are environmental or economic, need to be disclosed because they are deemed significant by the user groups investigated as affecting decision making. The results indicate that an in-isolation environmental clean-up event with a 6 percent threshold will affect the decisions of users in terms of the event significance and taking a course of action. This is an interesting finding for regulators as it confirms the suggestion stemming from the inquiry (Victoria Parliament, Public Accounts and Estimates Committee, 1999). Reporting entities should also be interested in the findings as it suggests they should be disclosing environmental events with much lower thresholds than 10 percent. The above points must be considered in the light of the study limitations. Further studies could consider, given the take no-action decision, a sequence of various environmental events with a range of thresholds.

References

- Australian Accounting Research Foundation (1990a), *SAC 2 – Objectives of Financial Reporting*, Accounting Standards Review Board and Public Sector Accounting Standards Board, Australian Accounting Research Foundation, Melbourne.
- Australian Accounting Research Foundation (1990b), *SAC 3 – Qualitative Characteristics of Financial Reporting*, Accounting Standards Review Board and Public Sector Accounting Standards Board, Australian Accounting Research Foundation, Melbourne.
- Australian Accounting Standards Board (2009), *Australian Accounting Standard AASB 1031: Materiality*, Australian Accounting Standard Board, Melbourne.
- Chambers, R.J. (1966), *Accounting, Evaluation and Economic Behaviour*, Scholars Book Co., Houston, TX.
- Deegan, C. and Rankin, M. (1997), “The materiality of environmental information to users of accounting reports”, *Accounting, Auditing & Accountability Journal*, Vol. 10 No. 4, pp. 562-83.
- Dierkes, M. and Antal, A.B. (1985), “The usefulness and use of social reporting information”, *Accounting, Organizations and Society*, Vol. 10 No. 1, pp. 29-34.
- Environmental Accounting Taskforce, ICAA (1998), *The Impact of Environmental Matters on the Accountancy Profession: Discussion Paper*, Institute of Chartered Accountants in Australia, Sydney.
- Faux, J. (2002), “A stakeholder perspective of material disclosure thresholds for environmental events”, *Asian Review of Accounting*, Vol. 10 No. 2, pp. 3-16.
- Goldberg, L. (1965), *An Inquiry into the Nature of Accounting*, American Accounting Association, Iowa, IA.
- Gray, R., Kouhy, R. and Lavers, S. (1995), “Methodological themes: constructing constructing a research database of social and environmental reporting by UK companies”, *Accounting, Auditing & Accountability Journal*, Vol. 8 No. 2, pp. 78-101.
- Gray, R., Owen, D. and Adams, C. (1996), *Accounting and Accountability: Changes and Challenges in Corporate and Social Reporting*, Prentice-Hall, London.
- Guthrie, J. and Parker, L. (1990), “Corporate social disclosure practice: A comparative international analysis”, *Advances in Public Interest Accounting*, Vol. 3, pp. 159-75.
- Houghton, K. (1989), “An empirical inquiry into the shared meaning of fundamental accounting terminology: Australian evidence”, paper presented to Accounting Association of Australia and New Zealand Annual Conference, Melbourne.
- IASB (2008), IASB, available at: www.iasb.org/NR/rdonlyres/464C50D6-00FD-4BE7-A6FF-1BEAD353CD97/0/conceptual_framework_exposure_draft.pdf (accessed 14 December 2009).
- Milne, M. and Chan, C. (1999), “Narrative corporate social disclosures: how much of a difference do they make to investment decision-making”, *British Accounting Review*, Vol. 31, pp. 439-57.
- Spacek, L. (1969), *A Search for Fairness in Financial Reporting to the Public*, Arthur Anderson & Co., Chicago, IL.
- Stanton, P. (1997), “Users’ rights to published accounting information: nature, justification and implications”, *Accounting, Auditing & Accountability Journal*, Vol. 10 No. 5, pp. 684-701.
- Sterling, R. (1967), “A statement of basic accounting theory: a review article”, *Journal of Accounting Research*, Vol. 5, Spring, pp. 95-112.

Victoria Parliament, Public Accounts and Estimates Committee (1999), "Interim report of the inquiry into environmental accounting and reporting", Thirty-First Report to Parliament, Victoria Parliament, Public Accounts and Estimates Committee, Melbourne.

Further reading

Diegling, P., Anderson, J. and Guthrie, J. (1996), "Accounting for public accounts committees", *Accounting, Auditing & Accountability Journal*, Vol. 9 No. 2, pp. 30-49.

Appendix. Vignette

An Australian retail petroleum company, listed on the Australian Stock Exchange, is confronted with a situation whereby a significant number of its inner city petrol stations are showing signs of deterioration. The sites have been held for many years. Last year, the company reported that it had assessed the polluted sites and placed them in three categories; low, medium and high pollution. During the current year the "low" and "medium" polluted sites have been sold off at a loss, and clean up has been started on the "high" polluted sites. Reclamation will take eight years. Petrol stations have been relocated in order to allow reclamation to begin and to avoid loss of sales. The company makes the following voluntary disclosure in its annual report for the current year.

Environmental report

The company is undertaking a clean-up of polluted retail sites which represent 60 hectares of the total retail outlet hectares of 1,000. About 21 hectares have been determined highly polluted and reclamation is costing \$8,000,000. Medium- and low-polluted sites have been sold. The transactions resulted in a loss of \$52,000,000.

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