

# Do Personal Values Influence the Propensity for Sustainability Actions? A Policy-Capturing Study

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**Abstract** Using a policy-capturing approach with a broad student sample we examine how individuals' economic, social and environmental values influence their propensity to engage in a broad range of sustainability-related corporate actions. We employ a multi-dimensional sustainability framework of corporate actions and account for both the positive and negative impacts associated with corporate activity—termed strength and concern actions, respectively. Strong economic values were found to increase the propensity for concern actions and the willingness to work in controversial industries. Individuals with balanced values were as likely as those with strong economic values to pursue positive economic outcomes, but without the same downside potential for concern actions. We also found significant gender effects, with females being less likely to engage in concern actions and more supportive of social and environmental strength actions.

**Keywords** Personal values · Corporate actions propensity · Sustainability · Policy-capturing · Gender

## Abbreviations

CFA Confirmatory factor analysis

KLD Kinder, Lydenberg, Domini Research & Analytics  
UI Usefulness index  
VVI Values variance index

The question of how to promote sustainable corporate practice is increasingly front of mind for business executives, politicians and management scholars alike. Climate change, ecological degradation, terrorism, corporate malfeasance and market instability represent global concerns that collectively may have grave implications for both human and non-human kind. Against this backdrop, it is not difficult to argue the merits of working simultaneously towards environmental, social and economic betterment, and some have even suggested that business is the best and perhaps only institution today capable of leading us to a more sustainable world (Hart 2005; Prahalad and Hart 2002). Whether business will in fact meaningfully advance the sustainability agenda necessarily depends on the specific actions corporations engage in, and whether those actions preserve or degrade environmental, social and economic integrity. It is therefore important to better understand the factors that contribute to different corporate actions and outcomes (Wood 1991).

The purpose of this research is to examine the role that personal values play in either promoting or undermining corporate sustainability outcomes. In particular, we wanted to assess how different types of individually held values relate to different types of corporate actions, with relevance for sustainability. For example, are certain values types or specific combinations of values (i.e., values profiles) more likely to result in corporate actions that preserve economic, social and environmental well-being over the long term? In

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contrast, can we identify values types or profiles that may be particularly problematic in achieving sustainability, broadly speaking?

The comprehensive conceptual framework guiding this research allows us to make a number of meaningful contributions to the literature. First, in line with recent calls (Andersson et al. 2013) we advance research aimed at understanding individual-level drivers of corporate sustainability actions. We also contribute to the values literature by employing a recently developed policy-capturing measure, and demonstrate its utility in assessing values profiles, which correspond more closely to theoretical conceptions of the values construct and provide unique insights into values impacts. Finally, our conceptual and methodological approach allows us to not only confirm and synthesize findings from related but previously disparate research streams, but also to shed new light on both within and cross-domain values-actions relationships that to date have remained largely unexplored. As such, we believe our study offers the most complete and coherent picture available of values-actions relationships within the context of corporate sustainability.

Despite a lengthy history of research examining firms' social and environmental actions, relatively few empirical studies have comprehensively and systematically assessed actions across what are typically considered the three domains of sustainability; economic, social and environmental (Choi and Ng 2011). Individual studies have also generally failed to account for both the positive and negative aspects of firm actions simultaneously. Instead, scholars have tended to focus on either the social dimension (e.g., Campbell 2007; Ford and McLaughlin 1984; Weaver et al. 1999) or the environmental dimension (e.g., Bazerman and Hoffman 1999; Cetindamar and Husoy 2007), often in relation to economic performance, and on either beneficial or harmful actions within those domains.

Given that sustainability is widely understood to encompass the environmental, social and economic realms (Adams 2006; Elkington 1998), there is a need for a more holistic assessment that examines actions across all three dimensions (Ketola 2007; Sheth et al. 2011), and with respect to both positive and negative outcomes. To better reflect the broad scope of sustainability, we employ a multi-dimensional framework of corporate actions and account for actions with positive impacts and also those that arguably undermine sustainable outcomes.

Although sustainability researchers have most often adopted an organizational or industry-level focus (Whiteman et al. 2012), we framed this research from a micro-behavioural perspective to provide an important and as yet understudied compliment to these more macro-level analyses (Andersson et al. 2013). The rationale here is straightforward. Corporate actions are a form of collective action that derive from the aggregated behaviours and

activities of individual organizational members (Barnard 1938), and understanding what drives behaviour at the individual level should thus help inform our understanding of corporate actions. This does not negate the importance of situational determinants of corporate activity such as regulatory standards, institutional norms or stakeholder pressures (Hoffman 1999; Kassinis and Vafeas 2006), though it seems evident that the influence of these factors on corporate actions is necessarily mediated by the actions of organizational members (Burke and Litwin 1992). That is, behavioural factors within the firm are more causally proximal to corporate actions than those are external influences, and as a result individual-level differences can be expected to shape the way in which external demands are interpreted and acted upon.

Amongst the many behavioural factors that could potentially contribute to variance in corporate actions, we chose to focus centrally on the construct of personal values for a number of reasons. First, consistent with the individual level of analysis, this research was informed by Locke's (1991) comprehensive framework of motivated behaviour where values are specified as one of the most basic drivers of human activity. Values are considered a key construct across all social science disciplines (Nonis and Swift 2001), and according to Locke (1991) form a motivational core that ultimately manifests in human behaviour. That is, values are a very fundamental, and hence, potentially powerful explanatory variable in understanding human activity. Although it is recognized that values are relatively distal and often poor predictors of very specific behaviours, they are particularly relevant when assessing general patterns and broad classes of behaviour (Pepper et al. 2009; Thøgersen and Ölander 2002) such as the corporate actions types we examine in this research.

We also chose to focus on personal values because, though held at the individual level, they are not exclusively an individual-level construct and have relevance across multiple levels of analysis (Agle and Caldwell 1999; Rokeach 1973). Values are central to macro institutional- and field-level analyses (Hoffman 2001; Scott 2007) and are also core to both strategic management and business ethics and their synthesis (Elms et al. 2010). Subsequently, the values construct provides a strong conceptual link to investigate the kind of multi-scalar and multi-domain phenomena typified in sustainability challenges.

Finally, management scholars have long implicated the role of values in their theoretical work related to sustainability (Hemingway and Maclagan 2004; Shrivastava 1995; Unsworth et al. 2013), and there is already considerable evidence that values are significantly related to particular sub-dimensions within the sustainability arena. For example, with respect to the environmental domain numerous

studies have confirmed that certain values underlie a range of pro-environmental behaviours (Thøgersen and Ölander 2002) at both the individual (Karp 1996) and organizational levels (Andersson et al. 2005). In the social realm, values have been shown to influence ethical decision making (Fritzsche and Oz 2007) and unethical workplace behaviour (Suar and Khuntia 2010). Importantly, there appears to have been little if any empirical work directly examining how values relate to the economic dimension of sustainability. Whether certain values or values sets tend to promote or undermine economic outcomes is largely an open question.

A related gap in the literature stems from the normative implications of research relating environmental values to ecologically sustainable corporate initiatives (Andersson et al. 2005; Bansal 2003; Egri and Herman 2000). This work suggests that to improve environmental performance managers should promote the development of stronger environmental values within the firm; but, by how much or to what extent? If stronger environmental values decrease individuals' propensity to take economically sound actions, such efforts might inadvertently harm the business. The same goes for the promotion of social values. Without a full assessment of the behavioural implications of different values types, managerial prescriptions to promote particular values could be premature. Our objective in this paper is to begin answering some of these outstanding questions by holistically evaluating both within- and cross-domain sustainability relationships between multiple values and actions types.

The paper proceeds as follows. We begin by describing our main study constructs of corporate actions propensity and personal values, and develop our theoretical dimensions for each of these to reflect the broad domain of sustainability. Next, we advance our hypotheses relating different values types to our multi-dimensional framework of corporate actions types. The policy-capturing study designed to test the hypotheses is described, and we report findings largely supportive of the hypotheses. We conclude with a discussion of the practical implications of this research.

## Construct Definition and Typological Development

### Corporate Actions Propensity

Our goal was to examine how personal values relate to a broad range of corporate actions across the sustainability domains. Although previous research has often focussed on narrow subsets of corporate activity (i.e., social, environmental, ethical, illegal, etc.), we employed a comprehensive six-type classification of corporate actions developed

in a related research project (Marcus 2012). Consistent with a sustainability orientation and Elkington's (1998) notion of the triple-bottom-line, actions are first categorized according to the environmental, social and economic types, defined simply in terms of primary or first order impacts. According to this schema, environmental actions are those that have a primary impact on the natural environment or ecological realm. For example, actions related to a firm's pollution control, energy usage, greenhouse gas emissions, environmental policies, and the like are considered environmental in nature. Similarly, social actions are those that have a first order impact on human well-being both within and outside the firm (e.g., employee outcomes, ethics, human rights issues, etc.), and economic actions relate primarily to a firm's financial activities (e.g., profit outcomes, investment practises, etc.). This comprehensive approach to categorizing firm actions aligns with related theoretical work (Ketola 2007) and responds to recent critiques that sustainability research suffers from a paucity of holistic analyses (Sheth et al. 2011).

To account for the fact that corporate actions have the potential to cause benefit, as well as harm, actions were further classified according to whether they have a positive or negative impact within their given domain. In defining these categories we chose to adopt terminology from the Kinder, Lydenberg, Domini Research & Analytics (KLD) ratings criteria (Kinder, Lydenberg, Domini Research & Analytics 2007), which is one of the few existing frameworks to capture both the positive and negative poles of corporate activity, and which has been widely used in management research (Deckop et al. 2006; Hart and Sharfman 2012). The KLD labels these poles strength and concern, respectively. Subsequently, we define strength actions as those associated with a positive impact that help to build a stronger, more sustainable society. Strength actions preserve or build value within their respective domain and can be loosely equated with the concepts of sustainable, responsible and ethical action. In contrast, concern actions are those that have the potential for, or result in, real harm within a given dimension. This represents the negative pole of corporate actions, as actions associated with decreased economic, social or environmental value are, from a societal standpoint, cause for concern. Crossing the three sustainability domains with positive/negative valence results in a six-type classification of corporate actions consisting of: (1) economic-strength; (2) economic-concern; (3) social-strength; (4) social-concern; (5) environmental-strength, and; (6) environmental-concern. In Appendix A we provide sample items for each of the sub scales used in this research.

Undoubtedly, one of the main reasons previous research has tended to focus on narrow subsets of corporate actions is the sheer magnitude of actions that corporations engage

in. Because our goal was to examine how personal values relate to different types of corporate actions, working with direct measures of corporate actions would have been highly restrictive given that individuals may only participate in a small number of actions due to limitations of job scope, the nature of their business or industry, and so forth. To overcome this we chose to focus on the construct of corporate actions propensity, defined as the propensity to engage in, support, or endorse a given type of corporate action.

Behavioural propensity is closely related to the concept of behavioural intention within the theory of reasoned action (Ajzen and Fishbein 1980). However, we do not attempt to obtain a firm behavioural intent, but rather a probabilistic estimate of an individual's likelihood of engaging in a particular action if they were in a situation where that action was relevant. In this approach we are not restricted to the limited array of actions an individual may have actually been exposed to in a work environment, and can subsequently survey a comprehensive set of actions across the sustainability domains.

#### Personal Values

Organizational behaviour scholars consider personal values to be a key construct underlying human motivation and behaviour (Locke 1991). Human values are thought of as trans-situational goals (Latham 2007), and are defined as “an enduring belief that a specific mode of conduct or end-state of existence is personally or socially preferable to an opposite or converse mode of conduct or end-state of existence” (Rokeach 1973, p. 5). Thus, embedded within personal values are both desired ends and the desired means to achieve those ends. Comprehensive reviews of the values construct in relation to business, society and environment issues can be found elsewhere in the literature (Agle and Caldwell 1999; Hemingway 2005; Meglino and Ravlin 1998).

Research examining values-actions relationships in the context of social and environmental issues has most often employed the general values classifications developed by Rokeach (1973) and Schwartz (1992). Although the validity of these classification schemes and their related measures are well established, empirical work has found that not all value types are equally relevant to social or environmental phenomena (Karp 1996; Thøgersen and Ölander 2002). In the past there have been calls for values researchers to seek a higher degree of congruence between the values under investigation and the general phenomena of interest (McDonald and Gandz 1991).

In this study we respond to this call and, as with the corporate actions propensity construct, use the tripartite

sustainability framework to structure our values typology. This approach extends work by Sully de Luque et al. (2008) who studied differences between economic and stakeholder values within the context of leadership style. Although the stakeholder measure used by these researchers included both social and environmental items, a broader sustainability framing suggests that the social and environmental domains are sufficiently distinct and should be treated as separate constructs (Collins et al. 2007; Ketola 2007; Marcus et al. 2010; Sheth et al. 2011). Because economic, social and environmental values each imply a different outcome orientation and differing means of attaining desired objectives, individual differences in values can be expected to play an important role in determining ones' propensity to engage in either strength or concern actions across the three domains.

#### *Economic Values*

Consistent with neo-classical economic theory, economic values give pre-eminence to profit maximization and shareholder value creation as the desired end goal (cf. Jensen 2002). Financial outcomes and indicators hold primacy within economic and management theory, exemplified in the prominent agency perspective which sees acting in ones' rational self-interest as the behavioural means to achieving superior financial ends (Freeman 1999; Jensen and Meckling 1976). As such, economic values are primarily self-oriented rather than other-oriented.

From an economic perspective, business decisions and corporate actions should be fully guided and ultimately justified by the firms' resultant financial position. The normative orientation towards profit maximization is not applied only to core business activities, but extends to anything a firm does, including social and environmental initiatives (Siegel 2009). Reflecting conventional economic reasoning, Donald Siegel has stated that: “In my opinion, executive decision-making should be focused exclusively on profit maximization, or more precisely, on shareholder wealth maximization” (Waldman and Siegel 2008, p. 118). Extending this idea to the domain of corporate social responsibility he further argues: “Managers have a moral obligation to pursue profit and to engage in social responsibility only when there is a clear return on this investment” (Waldman and Siegel 2008, p. 119). In sum, economic values relate to financial objectives and the use of rational and quantifiable means to their attainment.

#### *Social Values*

The dominant concern underlying social values is with the well-being of people both individually and collectively. They are predominantly altruistic or other-oriented in nature. At their most basic level, social values relate to the

sanctity of human life and the meeting of human needs, such as those for existence, relatedness and growth (Alderfer 1972). The means to achieving social well-being include acting ethically and morally, with respect of all persons, especially the least advantaged, and protecting and advancing basic human rights (Reichert 2011). These values are consistent with a stakeholder view that sees all stakeholders as having intrinsic moral worth (Donaldson and Preston 1995). Individuals with strong social values are oriented towards maintaining positive social relations and improving human well-being.

#### *Environmental Values*

As with social values, environmental values have an externally directed focus. The primary objective underlying environmental values, referred to by some as ecological values (Bansal and Roth 2000), is to maintain the integrity of the earth's biophysical systems upon which life depends. The means to achieving environmental integrity include minimizing environmental impacts, reducing resource consumption and waste, and acting with precaution in human development initiatives (Gibson 2001). Nature is seen to have intrinsic worth, and in the extreme, strong environmental values reject the premise that humans occupy a privileged place in nature (Gladwin et al. 1995, p. 886). Human needs, aims and objectives should thus be subject to the overarching goal of maintaining biophysical systems that support both human and non-human species (Whiteman et al. 2012). In sum, environmental values relate to the desired end state of natural systems integrity and the means of human adaptation to, rather than domination over, the natural environment.

#### *Balanced Values*

Though conceptually distinct, economic, social and environmental values are not mutually exclusive (Stern et al. 1993). Individuals are capable of pursuing multiple objectives simultaneously, and may have concurrent enduring beliefs regarding the desirability of financial outcomes, human well-being and environmental integrity. Whereas the values discussed so far imply a dominant orientation towards one of economic, social or environmental domains, it is possible for individuals to have a relatively balanced values profile across the three domains. Balanced values, therefore, can be defined as the enduring belief that economic, social and environmental objectives are mutually desirable and interrelated. As such, balanced values are potentially more commensurate with the end goal of sustainability. Because society is practically represented within the firm's stakeholder complex, the behavioural means associated with balanced values can be

conceptualized as acting with regard for all stakeholder interests, financial and otherwise. That is, financial concerns are not given ultimate precedence, but are balanced within a holistic framework of various stakeholder needs, interests and demands. From an empirical perspective, the balanced values concept implies a relatively equal weighting of economic, social and environmental values.

### **Theoretical Development and Hypotheses**

According to Rokeach (1973), values are hierarchically ordered into relatively enduring value systems. Thus, individuals can vary with regards to the values they hold most strongly, and with regards to the strength in which particular values are held relative to other values. Because values act as normative guides for appropriate behaviour, the variance in individual's values profiles can be expected to differentially affect the propensity to engage in certain types of corporate action. Importantly, values are not equivalent to behaviour or action, but rather the enduring belief that certain outcomes and actions are personally or socially preferable (Rokeach 1973). Furthermore, although values act as generalized guides to behaviour, individuals do not always act in accordance with even strongly held beliefs, and subsequently the correspondence between values and actions will be less than perfect. It is, however, possible to consider the types of actions that may tend to follow from each of the three values described above.

As discussed, the pursuit of profit through rational and calculative means is central to economic values. Strong form economic values imply a singular focus on financial outcomes and indicators of corporate performance (Jensen 2002). If one believes that only the numbers count, there is little reason to consider organizational impacts that are non-quantifiable and/or not documented in corporate financial reports. Thus, individuals with strong economic values may be little attuned to or show minimal concern for the social or environmental consequences of firm actions. According to strong economic reasoning, there is no justification for engaging in actions that do not have clear economic payoffs (Siegel 2009). Because the links between social and environmental issues and financial performance are often unclear, managers may fail to take remedial action even when negative societal impacts are quite obvious. Furthermore, the pre-eminence of financial outcomes within an economic value system suggests that individuals may act to promote their own financial welfare to the exclusion or detriment of other stakeholder interests. In this respect Campbell notes that:

There are plenty of examples of firms who, in the pursuit of profit, have exhibited all sorts of socially



irresponsible corporate behaviour, such as deceiving customers, swindling investors, exploiting and even brutalizing employees, putting consumers at risk, poisoning the environment, cheating government and more (2007, p. 2).

Individuals with strong economic values may be inclined not only to act with little regard for social and environmental standards but also to engage in actions that are financially detrimental to a firm if they perceive it to be in their immediate self-interest to do so. For example, the extensive cases of corporate accounting fraud witnessed in the early 2000s (e.g., Enron, WorldCom, etc.) readily demonstrate the lengths that some individuals will go to maintain the illusion of profit in the face of massive financial losses, and the grave societal implications of those actions. The relationship between strong individual profit motives and financially questionable actions also appears to underlie the sub-prime mortgage crisis that began in 2008 and has precipitated ongoing turmoil in global financial markets. Based on the abovementioned we hypothesize the following:

**Hypothesis 1a** Economic values will be positively related to economic strength actions propensity, and negatively related to social and environmental strength actions propensity.

**Hypothesis 1b** Economic values will be positively related to concern actions across all dimensions.

According to our definition, individuals with strong social values are oriented to making the quality of human life better and are especially attuned to the human impacts of corporate actions. Related research has shown that personal values tend to decrease unethical workplace behaviours such as claiming credit for others' work and falsifying reports (Suar and Khuntia 2010). Similarly, Fritzsche and Oz (2007) found that altruistic values promote ethical decision making in situations involving bribery, coercion, deception, theft and unfair discrimination. It is reasonable to expect that social values, being essentially other-oriented, have similar effects across other facets of the social domain not strictly related to questions of right or wrong. That is, in addition to ethical considerations, the concern for human welfare should have implications for issues as far reaching as workplace health and safety, labour relations and diversity of the workforce.

The goal of advancing human well-being transcends within-firm operations, and individuals with strong social values should also be concerned with how firm activities impact social welfare throughout the supply chain. This could lead, for example, to procurement strategies that avoid sourcing from conflict zones or from firms employing child labour. Research in the consumer behaviour

literature, for example, has found that socially conscious purchasing is a function of pro-social values (Pepper et al. 2009). Socially-minded individuals may also use the corporation as a vehicle for enacting positive social change such as fostering community support initiatives and philanthropic donations to advance human rights causes. Choi and Wang (2007) theorize that philanthropy is a function of benevolence and integrity values, and Buchholtz et al. (1999) found that managerial values partially mediated the relationship between firm resources and corporate philanthropy. In sum, the body of existing theory and research examining values in relation to facet dimensions of the social domain suggests the following more global prediction with respect to corporate social actions:

**Hypothesis 2** Social values will be positively related to social strength actions propensity, and negatively related to social concern actions propensity.

Evidence from a variety of fields has shown that personal values are an important predictor of environmentally relevant behaviours. Karp (1996) found that individuals with self-transcendent/openness to change and universalism/biospheric values were more likely to take personal actions such as recycling or contributing to environmental groups. A number of studies focused on consumer behaviour and ecologically sustainable consumption patterns have confirmed these findings (Collins et al. 2007; Fraj and Martinez 2006; Thøgersen and Ölander 2002). General management scholars have also highlighted the importance of managerial values in relation to corporate environmental actions (Sharma 2000; Shrivastava 1995). For example, research has found that leaders of environmental firms have significantly different values compared to leaders of other types of firms (Egri and Herman 2000), that organizational values are an important determinant of company responses to environmental issues (Bansal 2003), and that perceived corporate environmental values promote ecologically sustainable operations (Andersson et al. 2005).

Taken together, these findings indicate that the strength of individuals' environmental values has an important influence on the propensity to engage in pro-environmental corporate actions. Because environmental values are based on the desired outcome of environmental integrity, individuals with these values should be more attuned to environmental consequences and the implications of firm actions. When individuals with strong environmental values recognize that firm actions are inconsistent with natural systems integrity, they should be more likely to take remedial action to rectify the perceived problem. Furthermore, individuals with strong environmental values will have a heightened need to pursue proactive initiatives that lessen the firm's environmental impact, and to take precautionary measures when the overall environmental

impact of a given action is uncertain. We expected our findings to align closely with the existing values–actions theory and research concerning the natural environment:

**Hypothesis 3** Environmental values will be positively related to environmental strength actions propensity, and negatively related to environmental concern actions propensity.

Individuals with balanced values recognize the desirability of outcomes across multiple domains. In addition, to valuing financial outcomes, individuals with balanced values should place importance on a variety of other stakeholder concerns. As such, they are inclined to take actions that promote rather than degrade stakeholder interests. For example, when confronted with the enormous impact his carpet manufacturing company was having on the natural environment, Interface CEO Ray Anderson implemented a comprehensive initiative that fundamentally reoriented the company's focus, product and processes (Anderson 1998). Interface is now widely regarded as a leader in corporate sustainability.

Because they are attuned to the multiplicity of interests within the stakeholder complex, individuals with balanced values should be inclined to act responsibly across all sustainability dimensions. When the interests and demands of different stakeholder groups conflict, these individuals will work towards achieving a tenable balance rather than the subject interests of some stakeholders to those of others. Balanced values imply that profit pursuits are desirable insofar as they do not compromise, and act to promote other highly valued outcomes. Subsequently, we expected that the actions propensities for individuals with balanced values would contrast sharply with individuals holding strong economic values, except in relation to economic strength actions where we expected no difference:

**Hypothesis 4a** Individuals with balanced values will have a greater propensity to engage in social and environmental strength actions as compared to individuals with strong economic values, but will not differ in their propensity for economic strength actions.

**Hypothesis 4b** Individuals with strong economic values will have a greater propensity to engage in concern actions across all dimensions as compared to individuals with balanced values.

The hypotheses specified thus far have focused on actions of societal strength and societal concern without considering the basic nature of the business within which those actions take place. In addition to the sustainability impacts of specific actions, however, there are a number of industries that are themselves socially controversial (Cai et al. 2012; Jo and Na 2012). Controversial industries pose a significant real or

perceived hazard to society, and are typically screened by social ratings agencies. For example, leading social indices including KLD's Domini 400, the Dow Jones Sustainability Index (DJSI) World, and FTSE4Good have exclusionary screens for tobacco, firearms and weapons and nuclear power. Domini 400 and DJSI World also screen out firms in the alcohol and gambling industries.

In addition to influencing individuals' propensity to engage in certain types of corporate action, values have also been shown to affect job choice decisions (Judge and Bretz 1992). Individuals with strong economic values may be inclined to work in industries that present considerable financial opportunity even if there exists a significant potential for negative social and environmental impacts. Given their principal focus on rational means and financial outcomes, these individuals may have little concern or awareness of the negative societal impact or the controversial nature of a given industry. In contrast, individuals with balanced values should have greater awareness of and concern for the controversial nature of certain industries, and consequently, may resist employment within these industries if given the choice. Based on these ideas we posit the following hypotheses:

**Hypothesis 5** Individuals with strong economic values will be more willing to work in controversial industries (alcohol, firearms and weapons, gambling, nuclear power, tobacco) than individuals with balanced values.

## Method

### Setting, Sample and Procedure

We conducted the current research using a broad student sample at a mid-sized university in Southwestern Ontario, Canada, and included both undergraduate and graduate students. Although there are well-known problems associated with using student samples in organizational research, in this case a student sample is justified in that we are testing a within-person behavioural process linking an individual's core values and the corporate actions they are likely to support or engage in. As stated earlier, our choice to examine corporate actions propensity as opposed to a direct measure of corporate actions corresponds to the wide breadth of actions that we wanted to sample across the sustainability domains. The outcome variable of behavioural propensity keeps our analysis strictly within-person, and as such students represent a valid sample with which to initially test our hypotheses.

Participants were enrolled in a variety of academic programs including business, social work, sociology, environmental studies and geography. The business students included in the sample participated through an established research

participation system (RPS) within their program, and received partial course credit in exchange for study participation. For students involved in the RPS, surveys were administered in a classroom setting but outside of regular class hours. Because the RPS was available only to business students, we sought and received permission from course instructors to sample all other participants during regular course hours. These students did not receive additional course credit.

All respondents participated voluntarily and only after completing informed consent forms, which indicated that the purpose of the study was to examine the relationship between the types of corporate actions individuals are likely to support, and how they rate an organization's overall effectiveness when provided with multiple indicators of organizational performance. We intentionally masked the purpose of the values measure so as not to prime respondents to think consciously about their values and provided a debriefing form outlining the true nature of the research after all surveys were completed. In addition, confidentiality of responses was assured, and all data were collected anonymously.

A total of 351 students completed the actions propensity measure and 330 completed the values measure. We screened the data following established procedures (Tabachnick and Fidell 1996) and retained 282 matching surveys that could be used to test the hypotheses relating values to corporate actions propensity. For the final sample, respondent ages ranged from 18 to 58 years, with mean age = 22.3 years ( $SD = 5.93$ ). Forty-nine percent of respondents were female, and 74 % self-identified as Canadian to an open ended question on nationality. Mean full-time work experience was between 1 and 5 years and 88 % had previous work experience. Seventy-four percent of respondents were enrolled in a business-related programme, 14 % in social work or sociology, 9 % in environmental studies or geography and 3 % were enrolled in other programs.

We collected the data through two temporally spaced pen-and-pencil surveys. The first survey included the measures of corporate actions propensity and controversial industry involvement along with a number of demographic items. The second survey contained the values measure and was administered ~2 weeks after the initial questionnaire. Both surveys took ~30 min to complete.

## Outcome Measures

### *Corporate Actions Propensity*

We used a measure of corporate actions propensity that was developed and validated in related research by the lead

author (Marcus 2012). This self-report measure contains a total of 41 items with the six sub-scales (i.e., three domains  $\times$  both strength and concern) containing 6–8 items each (see Appendix A). All items were rated on an 11-point Likert-type scale ranging from 0 % (completely disagree) to 100 % (completely agree).

We conducted a confirmatory factor analysis (CFA) and found that a six-factor solution had good model fit with  $\chi^2(764) = 1,607.47$ ,  $p < 0.001$ ,  $RMSEA = 0.056$  and  $CFI = 0.875$ . The six-factor model also had a significantly better fit to the data than four theoretically viable alternative models used for comparison. Internal consistency of the scales was also deemed to be good with alpha coefficients ranging from 0.76 to 0.90.

### *Willingness to Work in Controversial/Control Industries*

A measure of individuals' willingness to work in controversial industries was developed based on industries commonly identified as controversial in social ratings indices. These include the alcohol, firearms and weapons, gambling, nuclear power and tobacco industries. Respondents were asked to indicate how willing they would be to work in a given industry assuming that an attractive job was available, but the controversial nature of these industries was not mentioned directly. As a control measure, five additional industries not typically considered controversial within social ratings indices were also rated. Control industries sampled include apparel, automotive, construction, oil and gas, and telecommunications. Responses were captured through an 11-point Likert-type scale ranging from 0 % (completely unwilling) to 100 % (completely willing).

Again, we performed a CFA and found clear evidence of a two-factor solution ( $\chi^2(38) = 199.79$ ,  $p < 0.001$ ,  $RMSEA = 0.076$  and  $CFI = 0.926$ ), which had significantly improved fit as compared to the nested one-factor model ( $\chi^2(40) = 449.81$ ,  $p < 0.001$ ,  $RMSEA = 0.118$  and  $CFI = 0.812$ ;  $\chi^2D(2) = 250$ ,  $p < 0.01$ ). However, this solution was based on the removal of alcohol and oil from the controversial and control groups, respectively, as these items did not load as expected. This is not particularly surprising given that alcohol is unlikely controversial within the student population sampled, and the widely held view that oil is a 'dirty' industry due to its negative environmental impacts. With these two industries removed, scale reliabilities for the four-item controversial and control industries scales were 0.82 and 0.77, respectively. Notably, the mean score on the controversial scale (3.64) was considerably lower than the control industries mean (6.69), as would be expected.



## Predictor Measures

### *Economic, Social, and Environmental Values*

We wanted participants to provide insight into their values without directly asking about their personal values. This is because directly probing values has the potential to increase social desirability bias, whereby respondents report the values they think they should have or would like to have as opposed to the values they truly hold (Meglino and Ravlin 1998). To help circumvent this problem, economic, social and environmental values were measured using a policy-capturing method, which is a within-person idiographic regression-based technique commonly used to understand how individuals differentially weight informational cues (Aiman-Smith et al. 2002; Zedeck 1977). A policy-capturing method allows for an implicit assessment of respondent values and overcomes a number of limitations with the normative and ipsative techniques commonly used to measure values (Meglino and Ravlin 1998). In related research (Marcus and Sulsky 2011) this measure has also been found to show convergent and discriminant validity with the economic and stakeholder values measures used by Sully de Luque et al. (2008).

To further minimize the possibility that individuals would think consciously about their values, the policy-capturing procedure was masked as an organizational ratings task and respondents were provided with a series of organizational profiles containing triple-bottom-line performance information. In all, respondents rated 68 organizational profiles including four duplicate profiles that allowed for an assessment of intra-rater reliability. For each hypothetical organization both descriptive and numerical ratings (or cues) were provided for each of the economic, social and environmental dimensions, and respondents were then asked to provide global evaluations based on those cues (see Appendix B). Cue values were experimentally manipulated across the profiles to create a fully-crossed design. By regressing respondent judgements on the cue values, this fully-crossed design allowed for an unambiguous assessment of the degree to which each cue contributed to the overall respondent ratings (Karren and Barringer 2002). Because individuals pay attention to the cues that they feel are most important when rating the organizations, the resultant beta weights were interpreted as measures of respondents' underlying values.

We employed two versions of the policy-capturing survey with the second version being a simple split-half reversal of the question ordering. The two versions were equally distributed in the sample. Average  $R^2$  for the entire sample was 0.77 and was the same for both versions of the survey indicating highly consistent responding across versions and that the linear model did a good job of capturing

the variance in respondent ratings (Hobson and Gibson 1983). The inclusion of four duplicate scenarios allowed us to assess within-rater consistency of judgments (Hammond et al. 1975; Kristof-Brown et al. 2002) and was found to be very high (0.91). Duplicate scenarios were removed for all additional analyses. A follow-up survey to the policy-capturing questionnaire indicated that respondents found the policy-capturing task both realistic and enjoyable.

### *Balanced Values*

The measure of balanced values reflects a profile assessment of respondents' economic, social and environmental values and was created through a two-step process. First, the beta weights derived from the policy-capturing regressions were converted to a usefulness index (UI; Darlington 1968) calculated as the ratio of variance accounted for by a given variable to the total variance accounted for by the model. As such, with uncorrelated predictors, the UI measures the relative importance of each variable as a predictor of an individual's overall rating.

In the second step, UI scores were used to create a values variance index (VVI) reflecting the relative discrepancy between individuals' economic, social and environmental values. The VVI was calculated as the sum of all absolute differences between a respondent's UIs. Because UIs are calculated in percentage terms, VVI scores potentially range from 0 to 200. For example, in a case where only the economic cue predicts variance in the criterion (i.e., accounting for 100 % of the variance), the resulting VVI score would equal 200 ( $(100\% \text{eco} - 0\% \text{soc}) + (100\% \text{eco} - 0\% \text{env}) + (0\% \text{soc} - 0\% \text{env}) = 200$ ). In the other extreme, if all cues were weighted equally (i.e., perfectly balanced values), the resulting VVI score would equal 0 ( $(33.33\% \text{eco} - 33.33\% \text{soc}) + (33.33\% \text{eco} - 33.33\% \text{env}) + (33.33\% \text{soc} - 33.33\% \text{env}) = 0$ ). In order to facilitate interpretation the index was reverse scored so that the higher values indicate more balanced values.

### *Group Membership*

Group membership for strong economic and balanced values groups was calculated from the raw UI scores and the VVI, respectively, using an 80th percentile cut-point. This cut-point allowed for unambiguous assignment to each of the groups, maintained the distinctiveness of values profiles between groups, and ensured sufficient sample size within each group. The strong economic group ( $n = 58$ ) contained individuals whose UI scores were in the top 20th percentile on the economic variable. Likewise, the balanced values group ( $n = 53$ ) contained individuals whose VVI scores were in the top 20th percentile.

## Control Measures

Previous research has shown that individual values may significantly relate to various demographic variables (Meglino and Ravlin 1998; Warr 2008). As such, we assessed a number of demographic factors including gender, age, work experience and nationality, and used them as control variables in subsequent analyses. Given that students from different programs of study may hold different value orientations, we also included program enrolment as a control variable, distinguishing between students in business, social work/sociology and environmental studies/geography programs.

## Analysis and Results

Zero-order correlations, means and standard deviations for the study variables are provided in Table 1. Statistically significant relationships were found between many variables and, in particular, all relationships between the three primary values types and the actions propensity variables were found to be highly significant ( $p < 0.01$ ). Social strength and social concern actions propensity share a strong negative correlation ( $r = -0.51$ ,  $p < 0.001$ ), as do environmental strength and concern actions propensity ( $r = -0.62$ ,  $p < 0.001$ ). Notably, the relationship between economic strength and economic concern actions propensity was not statistically significant ( $r = 0.08$ , *ns*).

For hypothesis testing, in addition to simple correlation analysis, we ran a series of hierarchical regressions (using the six mean subscale scores from the corporate actions propensity measure as the criterion variables) with the control variables entered into the first step of each analysis. The regression analyses provide a more stringent test of our hypotheses given the inclusion of control variables and other competing values. In all cases, an assessment of the Durbin–Watson test statistic and a visual review of the standardized error distribution, normal probability plot and residuals scatterplot confirmed that the assumptions of multiple regression were not violated (Tabachnick and Fidell 1996).

Hierarchical regression analyses including controls and main study variables accounted for between 18 and 35 % of the variance in the criterion, and all model  $F$ s were highly statistically significant (Table 2). In all but one case the inclusion of the values variables into the regression equation resulted in a statistically significant improvement in the model, above and beyond the control variables.

Hypothesis 1a predicted that economic values would positively relate to economic strength actions propensity, and negatively relate to social and environmental strength actions propensity. As expected, the relationship between economic values and economic strength propensity was positive and significant ( $r = 0.42$ ,  $p < 0.001$ ), and economic values had a significant negative relationship with both social strength propensity ( $r = -0.30$ ,  $p < 0.001$ ) and environmental strength propensity ( $r = -0.33$ ,  $p < 0.001$ ). The regression analyses reveal that economic values were also found to be highly predictive of economic strength actions ( $b = 0.305$ ,  $p < 0.01$ ), though they did not significantly predict either social or environmental strength actions. Thus hypothesis 1a was only partially supported by the regression analysis.

Similarly, mixed results were found for hypothesis 1b. The pattern of relationships conformed to expectations with economic values having a strong positive correlation with economic concern ( $r = 0.31$ ,  $p < 0.001$ ), social concern ( $r = 0.48$ ,  $p < 0.001$ ) and environmental concern ( $r = 0.44$ ,  $p < 0.001$ ) actions propensity. However, hypothesis 1b was not supported by the regression analyses as economic values were not found to significantly predict any of the concern action types. Overall then, hypotheses 1a and b were fully supported by the correlational evidence but only partially supported by the regression analysis.

Hypothesis 2 addressed the relationship between social values and the social dimension of the actions propensity typology. This prediction was fully supported through the pattern of correlations as well as the regression analyses, with social values positively predicting social strength actions ( $b = 0.283$ ,  $p < 0.001$ ) and negatively predicting social concern actions ( $b = -0.155$ ,  $p < 0.05$ ). Similarly, the correlational findings support our third hypothesis relating environmental values to action propensity and the regression analyses confirmed the predicted relationships with  $b = 0.217$ ,  $p < 0.01$  for environmental strength actions and  $b = -0.216$ ,  $p < 0.01$  for environmental concern actions.

Hypotheses 4 and 5 are group-based predictions of differences in actions propensity for individuals with strong economic values compared to individuals with balanced values. We conducted independent samples  $t$ -tests to test these hypotheses (Table 3). Individuals with strong economic values were found to have a significantly greater propensity to engage in concern actions across all dimensions compared to individuals with balanced values. In contrast, the balanced values group have significantly higher mean scores for social and environmental strength actions. No difference was found in the propensity for economic strength actions. This pattern of findings provides full support for hypotheses 4a and b.

**Table 1** Means, standard deviations and zero-order correlations of main study variables and control variables

	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8
<b>Main study variables</b>										
Economic values	0.48	0.19								
Social values	0.48	0.12	-0.64***							
Environmental values	0.47	0.13	-0.64***	0.32***						
Balanced values	-0.71	0.46	-0.03	0.35***	0.44***					
Economic strength	7.89	1.6	0.42***	-0.23***	-0.19***	0.15**				
Economic concern	3.12	1.70	0.31***	-0.30***	-0.17**	-0.11	0.08			
Social strength	8.14	1.34	-0.30***	0.35***	0.20***	0.12	0.10	-0.48***		
Social concern	3.35	1.82	0.48***	-0.39***	-0.31***	-0.06	0.27***	0.73***	-0.51***	
Environmental strength	7.75	1.40	-0.33***	0.18**	0.34***	0.13*	0.05	-0.40***	0.66***	-0.48***
Environmental concern	2.58	1.88	0.44***	-0.33***	-0.36***	-0.13*	0.17**	0.68***	-0.50***	0.72***
Controversial industries	3.63	2.78	0.42***	-0.28***	-0.30***	-0.05	0.30***	0.46***	-0.27***	0.55***
Control industries	6.68	2.38	0.30***	-0.14*	-0.15*	0.03	0.30***	0.26***	-0.04	0.32***
<b>Control variables</b>										
Gender	0.52	0.50	-0.42***	0.32***	0.24***	0.05	-0.27***	-0.40***	0.36***	-0.48***
Age	22.38	5.70	-0.30***	0.22***	0.05	-0.12*	-0.26**	-0.25***	0.16**	-0.29***
Work experience	0.11	0.31	-0.23***	0.15*	0.09	-0.02	-0.26***	-0.12*	0.05	-0.15**
Nationality	0.68	0.46	-0.05	-0.01	0.05	-0.09	-0.01	-0.10	-0.04	-0.08
Business	0.64	0.48	0.50***	-0.24***	-0.32***	0.13*	0.43***	0.29***	-0.19***	0.47***
Social work/sociology	0.15	0.36	-0.43***	0.35***	0.08	-0.19**	-0.48***	-0.34***	0.21***	-0.40***
Environmental studies/geography	0.09	0.28	-0.21***	-0.11	0.32***	-0.09	-0.10	0.01	0.03	-0.08
	9	10	11	12	13	14	15	16	17	18
<b>Main study variables</b>										
Economic values										
Social values										
Environmental values										
Balanced values										
Economic strength										
Economic concern										
Social strength										
Social concern										
Environmental strength										
Environmental concern	-0.62***									
Controversial industries	-0.25***	0.42***								
Control industries	0.01	0.28***	0.59***							

Table 1 continued

	9	10	11	12	13	14	15	16	17	18
Control variables										
Gender	0.33***	-0.42***	-0.48***	-0.23***						
Age	0.20***	-0.30***	-0.19***	-0.20	0.22***					
Work experience	0.19*	-0.15**	-0.05	-0.05	0.18**	0.65***				
Nationality	0.04	-0.13*	0.05	0.05	0.03	0.11*	0.08			
Business	-0.29***	0.45***	0.36***	0.34***	-0.37***	-0.48***	-0.32***	-0.07		
Social work/sociology	0.18**	-0.37***	-0.29***	-0.24***	0.32***	0.61***	0.43***	0.18**	-0.58***	
Environmental studies/geography	0.19***	-0.16**	-0.09	-0.08	0.06	-0.14**	-0.12*	0.13**	-0.43***	-0.14**

Coding for dummy variables: gender (male = 0, female = 1); work experience (0 = <5 years, 1 = 5 years or more); nationality (0 = other, 1 = Canadian)

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Similar results were found with respect to willingness to work in controversial industries. In support of hypothesis 5, individuals with strong economic values are more willing to work in controversial industries than individuals with balanced values ( $t = 2.25$ ,  $p < 0.05$ ). This finding is strengthened by the fact that no statistically significant difference was found between groups for the control industries.

Although support was found for the majority of hypotheses in this study, the control variable of gender was also found to be a highly significant explanatory variable. An analysis of gender group differences (Table 4) strongly indicates that being male increases the propensity to engage in concern actions and decreases the propensity for social and environmental strength actions.

## Discussion

Our research findings confirm that peoples' basic values have implications for the types of corporate actions they are likely to support or engage in, and subsequently for the sustainability challenges we are currently facing across the economic, social and environmental domains. Our use of policy-capturing to measure respondents' values implicitly without direct rater awareness differs from the explicit normative and ipsative measures typically used in values research (Meglino and Ravlin 1998). Policy-capturing allowed us to minimize the threat of common-method/common-source bias, which can artificially inflate the relationship between variables measured using the same method with the same raters, and subsequently increases the confidence in the statistically significant relationships found here. Policy-capturing also allows for an evaluation of individuals' overall values profiles. As compared to evaluating each values type independently, profile assessments better reflect the way values are actually structured within an individual's psychological makeup (cf. Rokeach 1973). Yet, very few studies have taken this approach (see Nonis and Swift 2001 for a rare exception), and to our knowledge this is the first to examine values profiles in relation to a broad array of sustainability outcomes.

Although the broad conceptual framing and unique methodological approach differentiate this study from previous values-actions research, our findings largely replicate what is already known with respect to social and environmental actions generally. We extend these findings to the corporate actions domain, and show that the stronger an individual's social or environmental values, the greater their likelihood of adopting beneficial (and avoiding harmful) social and environmental firm actions respectively. The fact that our findings align with research from a variety of behavioural fields provides some support for the



**Table 2** Hierarchical multiple regressions of values as predictors of actions propensity

Predictors	Criterion variable																	
	Economic strength			Economic concern			Social strength			Social concern			Environmental strength			Environmental concern		
	$\Delta R^2$	$\beta$		$\Delta R^2$	$\beta$		$\Delta R^2$	$\beta$		$\Delta R^2$	$\beta$		$\Delta R^2$	$\beta$		$\Delta R^2$	$\beta$	
Step 1	0.277***			0.201***			0.167***			0.318***			0.165***			0.283***		
Gender		-0.032			-0.275***			0.297***			-0.285***			0.234***			-0.248***	
Age		0.136			-0.028			0.073			-0.077			0.091			-0.095	
Work experience		-0.073			0.038			-0.087			0.118			0.003			0.078	
Nationality		0.079			-0.034			-0.102			0.013			-0.012			-0.021	
Business		-0.088			0.217			-0.097			0.258*			-0.143			0.328*	
Social work/Sociology		-0.517***			-0.005			-0.054			-0.027			-0.099			0.042	
Environmental studies/Geography		-0.134			0.164			0.011			0.082			0.054			0.076	
Step 2	0.032**			0.021			0.058***			0.050***			0.042**			0.054***		
Economic values		0.305**			-0.042			0.076			0.062			0.011			-0.063	
Social values		0.096			-0.154*			0.283***			-0.155*			0.037			-0.144*	
Environmental values		0.045			-0.063			0.064			-0.092			0.217**			-0.216**	
Full model statistics																		
F	12.12***			7.73***			7.89***			15.77***			7.04***			13.80***		
Adjusted R <sup>2</sup>	0.28			0.19			0.20			0.35			0.18			0.31		
Standard error	1.32			1.48			1.26			1.46			1.27			1.51		
Degrees of freedom	271			271			271			271			271			271		

<sup>a</sup> Standardized regression weights  
 \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

**Table 3** Mean differences between strong economic and balanced values groups<sup>a</sup>

Variable	Strong economic values ( <i>n</i> = 58)		Balanced values ( <i>n</i> = 53)		<i>t</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
Economic strength	8.61	1.13	8.45	1.01	0.80
Economic concern	4.04	1.63	3.24	1.72	2.51*
Social strength	7.44	1.70	8.17	1.52	-2.38*
Social concern	4.65	1.75	3.91	1.71	2.27*
Environmental strength	6.88	1.52	7.65	1.51	-2.68**
Environmental concern	4.01	1.93	2.87	1.81	3.21**
Controversial industries	5.37	2.90	4.09	2.62	2.25*
Control industries	7.34	2.14	7.12	2.23	0.54

<sup>a</sup> Two-tailed tests\*  $p < 0.05$ , \*\*  $p < 0.01$ **Table 4** Mean differences between male and female groups<sup>a</sup>

Variable	Male ( <i>n</i> = 144)		Female ( <i>n</i> = 138)		<i>t</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
Economic values	0.569	0.179	0.402	0.182	7.81*
Social values	0.445	0.132	0.527	0.111	-5.64*
Environmental values	0.440	0.145	0.505	0.110	-4.22*
Balanced values	-0.748	0.512	-0.701	0.418	-0.86
Economic strength	8.365	1.209	7.474	1.850	5.37*
Economic concern	3.836	1.698	2.474	1.435	8.07*
Social strength	7.620	1.448	8.635	1.164	-7.20*
Social concern	4.264	1.700	2.535	1.510	10.07*
Environmental strength	7.269	1.484	8.186	1.176	-6.37*
Environmental concern	3.416	1.864	1.839	1.568	8.52*
Controversial industries	5.019	2.585	2.378	2.322	10.07*
Control industries	7.262	2.175	6.165	2.461	4.40*

<sup>a</sup> Two-tailed tests\*  $p < 0.001$ 

integrity of the relatively new measures used in this research, and adds credibility to the confirmed hypotheses that are unique to this study. What is perhaps more interesting is the distinct pattern that emerged between the two other-oriented values types in the regression analysis. Although both predicted strongly as expected within their relevant actions domain, only social values was a significant cross-domain predictor, negatively predicting both environmental concern and economic concern actions. This indicates the value of our holistic approach to assessing values–actions relationships in regards to sustainability outcomes (Ketola 2007; Sheth et al. 2011), and adds further

evidence that social and environmental values are best represented as separate values types (Collins et al. 2007) rather than encapsulated into a single stakeholder values type as in previous research (Sully de Luque et al. 2008). It is also notable that only social values negatively predicted all concern actions types. According to these results, stronger social values may be particularly valuable in helping guard against corporate actions that could compromise sustainability goals.

Our findings in relation to economic values were not so clear-cut, but it seems evident that economic values act somewhat differently than social or environmental values. An important finding of this work is that economic values have a strong positive relationship, not only with economic strength actions but also with economic concern actions. However, although the pattern of simple Pearson coefficients fully supported the hypotheses, the more stringent test using hierarchical regression was largely unresponsive of our hypotheses relating to economic values. In particular, economic values did not significantly predict a number of the criterion variables with other predictor variables entered into the model. We suspect that this has to do with the relatively strong relationships between economic values and a number of demographic variables (compared to the other values; see Table 1), and in particular, the gender variable. Below we give further consideration to the role of gender in understanding values and action propensity, and outline why, despite the highly significant gender impacts, we believe they supplement rather than diminish our findings in relation to values. Furthermore, it is worthwhile to note that in a separate regression analysis run only with the main study variables (i.e., without controls) economic values was found to be the unique positive predictor of the three concern actions domains.

Our group-based analyses comparing economic and balanced values groups also highlight the increased propensity that individuals with strong economic values have to engage in corporate actions that undermine long-term sustainability and to work in socially controversial industries. We conducted a series of additional group-based tests comparing the strong economic values group to both a strong social values group and a strong environmental values group. With the exception of the economic strength domain where social and environmental values groups were found to have significantly less propensity, the results were identical to those for the balanced values group comparison. Notably, individuals with balanced values were not found to differ significantly from those with economic values with respect to economic strength actions. It appears that individuals with balanced values are as likely as those with strong economic values to pursue positive economic outcomes but without the same downside potential for concern actions.

Contrary to how some might interpret our findings, these results suggest that it is not economic values per se that are problematic, but rather the relative strength of economic values within an individual's overall values profile. This could be indicative of a threshold effect, such that economic values are only problematic if they become overly dominant within an individual's values complex. In fact, it is quite possible that each of the individual values types, in the extreme, could interfere with sustainability objectives. The radical actions of eco-terrorists (Liddick 2006), for example, though ostensibly motivated by strong environmental values, are designed to inflict both economic and social harm. Similarly, the negative relationship between social/environmental values and economic strength actions suggests that, at the limits, the over-promotion of these values could compromise financial well-being. Although the reality of modern corporate practice suggests that these limits are more theoretical than observed, our results indicate that profile assessments shed important light on values–actions relationships that are not evident when values are assessed independently.

We also contribute to an ongoing debate regarding the effects of gender on ethical behaviour. Although a number of studies report no gender effect in this regard, when significant effects are found they almost exclusively indicate that males are more likely to engage in unethical behaviour as compared to females (Robin and Babin 1997; Roxas and Stoneback 2004). The fact that we did not set out to explore gender issues, yet found such strong gender effects across a wide variety of concern actions, is highly supportive of this latter work.

However, it is important to note that despite the strong role that gender appears to play with respect to corporate actions propensity, it does not negate the findings related to values. The general support for the hypotheses, while controlling for gender indicates that values do play a crucial role in determining the corporate actions an individual is likely to support, endorse or engage in. Furthermore, in post hoc gender-specific group analyses we found that values effects were particularly strong for males, who on the whole appear more likely to engage in what might be considered unsustainable actions. These findings are especially noteworthy given that male dominance within key industries and over the most influential executive leadership positions is a persistent and pervasive feature of the modern business world (Bertrand et al. 2009; Bertrand and Hallock 2001; Hoobler et al. 2009).

### Limitations and Research Extensions

The limitations of this research provide a number of additional opportunities for future research that would help

extend the findings here. As mentioned throughout, this work was conducted exclusively with a student sample population with limited life and work experience. Because the theory developed and tested here concerns the within-person relationship between values and behavioural propensity, students are a valid sample with which to perform an initial test of the hypotheses. It is even possible that student propensity responses more accurately reflect individual's true scores, uncontaminated by environmental factors such as organizational and industry behavioural norms. That is, students might respond as if they have more freedom to act than is actually the case when embedded within a real organizational context. If so, student responses should relate most closely to positions with relatively greater autonomy, including high-level management and executive leadership positions—the types of positions that are likely to have the greatest impact on a firm's sustainability culture and actions (Egri and Herman 2000; Holliday 2010; Schein 2004).

The reality, of course, is that the most employees are faced with strong normative constraints on their individual behaviour in the workplace, and given the nature of our sample we are subsequently cautious in generalizing the results to active working populations, to individuals with considerably more life experience, or beyond the cultural confines of North America. Although we could reasonably expect the within-person values–actions propensity relationship to hold across contexts, it is obviously of interest to see if the results here can be replicated with other sample populations.

Most immediately this could be done with a sample of individuals employed full-time, preferably from a variety of industries and sectors. A replication of this sort would allow for both an additional test of the hypotheses and further examination of the gender effects associated with the values and corporate actions propensity. This could prove particularly interesting given results from related research on gender and ethical behaviour. Specifically, work by Robin and Babin (1997) showed that significant differences in behavioural intent for males and females from student samples did not hold for individuals within professional samples. They speculate that over-riding factors within the occupational context or (self-) selection processes may be responsible for homogenizing the ethical intent of females and males in professional settings. Given that the corporate actions typology used here is related to, but considerably broader than the domain of ethical actions, it would be interesting to see if corporate actions propensity is similarly non-differentiated within select professional samples. Future research with working individuals from different industries and across the private, public and not-for-profit sectors would give insight into the relative influence of values, gender and occupational context on corporate actions propensity in different settings.

This research is also limited in that it focuses solely on individual-level variables. Because behaviour is a function of both the person and the environment (Lewin 1936) a complete understanding of what motivates a given course of action must necessarily address contextual factors as well. There is great opportunity for future research to explore how contextual variables such as leadership style, incentive programmes, regulatory structures, various stakeholder activities, industry, and so forth relate to the strength-concern actions typology used in this research. Of course, a particularly important situational factor from a behavioural perspective is social context—the values, norms, assumptions and expectations commonly held by members of the relevant work group—often defined in terms of organizational culture or climate (Denison 1996). Because the policy-capturing values measure used here is applicable across multiple levels of analysis, it could be usefully employed to examine how the contextual factor of organizational values influences the corporate actions propensity of organizational members.

## Implications and Conclusion

Our application of novel measures aligned with holistic sustainability frameworks for each of our main study variables helps to advance a number of research streams. In addition to contributing to the values literature and the literature concerning individual-level processes affecting corporate sustainability, our findings inform an ongoing debate regarding gender and ethical behaviour. However, despite our obvious interest in promoting more sustainable social and environmental outcomes, we believe the findings of this research are just as relevant for managers whose primary aim is to maximize firm financial profit. In some sense our results imply a negative corollary to the so-called ‘win–win–win’ (Elkington 1994) and ‘doing well by doing good’ (Laszlo 2008) hypotheses that suggest better social and environmental performance leads to better financial performance. That is, our findings indicate that the same individuals who are the most likely to compromise corporate social and environmental performance are also most inclined to engage in actions that undermine the financial integrity of the firm. A corporate culture that attracts individuals with very strong economic motivations or encourages the development of overly strong economic values may actually increase the financial risk of the firm. In such contexts, the promotion of other-oriented social and environmental values may both reduce financial risk and have additional sustainability side benefits.

Beyond purely economic concerns, the findings of this research do have important practical implications for organizations faced with shifting stakeholder expectations

and increasing pressure to account for the broad impacts of their actions, economic and otherwise. Evidence to date suggests that achieving operational changes within corporations that correspond to real, meaningful improvements with respect to social and environmental impacts is no easy feat. Many organizations, it seems, opt for only the most superficial changes, and confine their primary social and environmental efforts to the domains of advertising and public relations, or less graciously, to corporate spin and ‘greenwashing’ (Laufer 2003). Despite the global trends towards corporate social and environmental reporting (Kolk 2003) and the wide embrace of the sustainability concept, at the broad system level business impacts are found to be increasingly unsustainable (Kallio and Nordberg 2006; Welford 1998).

Turning this tide will require more than changes in corporate rhetoric, and a shift towards substantive actions that can be traced to meaningful improvements in social and ecological conditions. According to the results here, organizations that wish to move in this direction and engage in a broader array of strength actions across the three domains are more likely to be successful when the basic values of organizational members align with those actions. This research indicates that when economic values are particularly strong throughout the organization, there may be difficulty getting employees to support or engage in social and environmental initiatives. Subsequently, assessing and understanding employee values prior to adopting these initiatives could be of great help to managers. Efforts to bring values in line with the proposed actions, for example, through employee education or hiring, could make the difference between an initiative that ultimately burdens the organization with more costs in terms of reporting requirements, management layers, decreased employee morale, and so on, and one that achieves significant improvements both for the organization and broader society.

Our findings with respect to economic strength and economic concern actions are particularly interesting from a management practice perspective. As discussed above, there appears to be a trade-off between individuals with strong economic values who will push to maximize financial returns but are more likely to engage in risky or even illegal economic activities, and those with stronger social and environmental values who will not unduly compromise the financial integrity of the firm but are less inclined to seek profit maximizing outcomes. In the extreme, individuals with very strong social and environmental values may fail to protect corporate interests if they neglect the economic requirements of organizational survival. However, given that business is characterized by strong norms towards profit maximization, and the likelihood that individuals with very strong social and environmental values pursue careers outside the corporate world, the risks associated with overly



strong economic values appear somewhat more salient; particularly in light of the seemingly endless instances of corporate malfeasance and the ongoing global economic challenges they have precipitated.

**Appendix A**

Sample Items from the Corporate Actions Propensity Measure

*Economic-Strength*

1. I would support efforts to make a financial return for shareholders.
2. I would act to improve the economic outcomes of my organization.

*Economic-Concern*

1. I would endorse corporate actions that maximize short-term profit (e.g., quarterly, yearly), even if that might jeopardize long-term returns.
2. I can imagine supporting policies that compromise shareholder returns if it resulted in a better financial outcome for me.

*Social-Strength*

1. I would support innovative initiatives related to labour rights in the supply chain or particularly good labour relations outside North America.
2. I would endorse a strong diversity program to ensure the inclusion of women and visible minorities within my company’s workforce.

*Social-Concern*

1. I can imagine ‘turning a blind eye’ to breaches of my company’s code of ethical conduct.
2. I would have little problem endorsing significant employee layoffs if the need arose.

*Environmental-Strength*

1. I would endorse my company making a superior commitment to environmental management systems.
2. I would support the significant use of renewable and clean energy within my company.

*Environmental-Concern*

1. Under some circumstances, I would endorse dealing improperly with hazardous waste.
2. I can imagine engaging in corporate activities that have a negative impact on the natural environment.

**Appendix B**

Partial Instructions and Sample Policy-Capturing Scenarios

*Instructions*

Below you are provided with 68 profiles of large, public, multi-national, for-profit companies, prepared by a panel of expert analysts... Using your own judgement and the information provided in each scenario, your task is to assign each organization an overall rating.

**Example Company 1:** The analysts noted a significant financial loss, an incidence of employee brutality, and a robust environmental training program as indicative of the company’s performance. They provided the following ratings:

		Economic		Social		Environmental						
		Poor		Very Poor		Good						
Overall rating:		-5	-4	-3	-2	-1	0	1	2	3	4	5
Very Poor					Poor				Good			Very Good

**Example Company 2:** The analysts noted financial outcomes in line with industry average, significant efforts to promote social justice, and the development of environmentally friendly products/services as indicative of the company’s performance. They provided the following ratings:

		Economic		Social		Environmental						
		Good		Very Good		Very Good						
Overall rating:		-5	-4	-3	-2	-1	0	1	2	3	4	5
Very Poor					Poor				Good			Very Good

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