

**Business sustainability
practices during the recession:**

The Growing Sustainability Divide

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Report Highlights

- The study represents one of the first national surveys tracking the impact of the global recession on sustainability practices. Results include data on the sustainability practices of New Zealand businesses from 2003 to 2010.
- The impact of the recession has been that companies surveyed that are not members of Sustainable Business Network (SBN) reduced most environmental practices; for SBN companies surveyed, most environmental practices showed an increase in uptake revealing a “sustainability divide” with the two groups moving in opposite directions.
- Social sustainability practices took the biggest hit during the recession. From 2003 to 2006 there was a general increase in the uptake of social practices, but in 2010, there is a marked decrease in every social sustainability practice, with most below 2003 levels.
- Despite the recent national and international negative press regarding New Zealand’s “clean green” branding, the survey results showed the number of companies marketing based on environmental claims such as, “clean, green New Zealand,” continues to steadily growing from 17% in 2003 to 30% in 2010.
- The number of senior managers citing personal values and beliefs as a positive influence in adopting social practices declined from a high of 46% in 2006 to 29% in 2010. It seems when managers are fighting for the survival of their business, the values shift from treating their workers and community well to trying to keep the business afloat.
- Firm size was one of the best predictors of the uptake of environmental practices with small firms less likely to adopt environmental and social practices. In addition, during the recession, small firms had a bigger decrease in sustainability practices compared to large firms. In a country like New Zealand with 99% of businesses small or medium sized, the results mean it will be difficult to achieve national social and environmental objectives, particularly during an economic decline.

Overview

Sustainability refers to business incorporating social and environmental strategies into its overall economic bottom-line (Elkington, 1997). The business case for sustainability is the idea that when business adopts practices that are good for people and good for the planet, those strategies can provide a competitive edge and increase profits (Day and Arnold, 1998).

Two sets of stories are told about sustainability during an economic downturn; one supportive of the business case and one not. One version is that sustainability is considered by business as “nice to do” and social and environmental considerations will be jettisoned during difficult financial times. Another version is that sustainability will be adopted by even more businesses during a recession because, for example, cutting energy use or waste disposal is good for the financial bottom-line too. In a recession businesses have to run a lean, efficient organisation.

In late 2009 and early 2010, a national survey of managing directors in New Zealand was conducted to find out what happened to sustainability practices during one of the worst global economic recessions in recent history. There was a 30% response rate. Out of the 736 respondents, 15% had responded to a similar survey conducted in 2003 and again in 2006 (Collins, Roper & Lawrence, *In Press*). This allowed a tracking of individual companies over a 7-year period.

In addition to finding out what happens to sustainability practices during a recession, the research examines who in an organisation is responsible for developing sustainability strategy. The study also analyses the drivers and barriers to adopting environmental and social practices.

Before the recession, the national trend was an increase in the adoption of sustainability practices by business. The results from the 2003 and 2006 surveys showed an overall increase in the number of companies in New Zealand adopting environmental practices and social practices with social practices more commonly adopted. The results of the 2010 survey

would determine if this trend continued in spite of, or because of, the recession.

The report begins with details about the method used for the survey, followed by results from the 2010 survey. Survey results are reported first by the overall 2010 results, then comparing 2010 to 2006 and 2003. Survey data are also presented by firm affiliation or membership and finally by firm size. The report begins with an explanation of environmental practices, followed by social practices, and then internal and external pressure to adopt sustainability practices is discussed, concluding with drivers and barriers to adoption.

Method

Our key research question is: **What is the nature and extent of business adoption of sustainability practices in New Zealand?** In addition, the research details:

- Changes/trends in practices from 2003 to 2010;
- Organisational responsibility for policy development and implementation of practices;
- Internal and external pressure to adoption of practices;
- Drivers and barriers to adopting ‘sustainability’ practices, and;
- Businesses’ perception of the importance of such issues in the future.

National surveys have been undertaken in 2003, 2006 and 2010. The same survey instrument was used in 2003 and 2006. It was modified and additional questions were added to the 2010 survey (see Appendix 1 for the survey). In addition, in 2004/05 and 2009, a series of interviews and focus groups were conducted across the country with a random sample of survey respondents.

The 2010 survey was sponsored by the Chartered Institute of Management Accountants (CIMA) based in the United Kingdom. CIMA is particularly interested in finding out about the role of the management accountant in the formulation of sustainability practices. The Sustainable Business Network (SBN) is a non-financial partner and has been involved

in the research since the beginning. In addition to CIMA, the New Zealand Business Council for Sustainable Development (NZBCSD) is a new partner (non-financial) for the latest survey. NZBCSD is interested in exploring the social sustainability practices of business, particularly cross-sector collaborations.

Profile of Respondents

The latest survey was conducted in late 2009 and early 2010. Surveys were e-mailed and sent out by post and respondents could fill in the survey online or post a hard copy. Surveys were sent to the managing director of the organisation. Surveys were sent to SBN members, CIMA members, NZBCSD affiliated polling panel members¹, and companies from the Kompass database. There was a 30% response rate. Out of the 736 respondents, 15% had responded to a similar survey conducted in 2003 and again in 2006. Membership of the respondents was:

- 38% SBN
- 9% CIMA
- 7% NZBCSD
- 54% None of the above

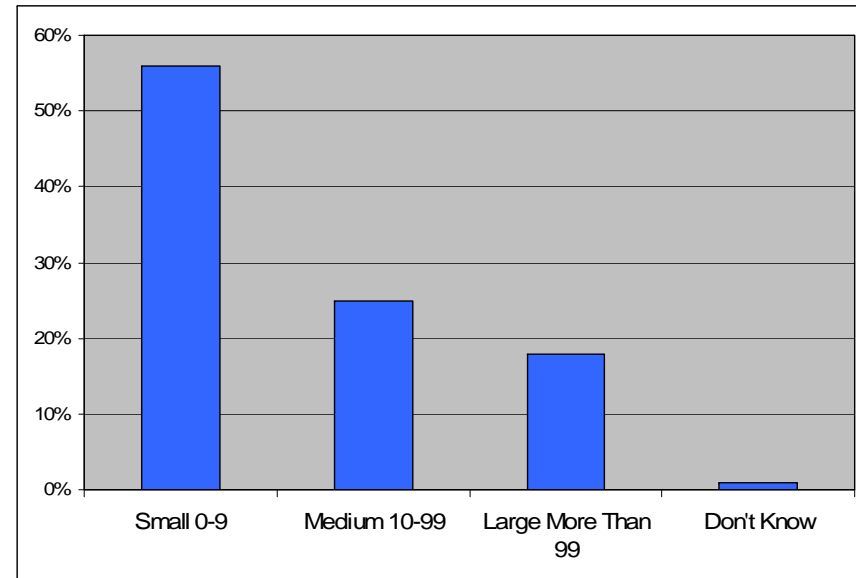
With its high proportion of small and medium-sized enterprises (SMEs), New Zealand's business profile differs from that of other developed countries like Britain or the United States. SMEs, defined in New Zealand as those with less than 20 employees, represent 99 percent of the country's total business population (Ministry of Economic Development, 2009). Our classification of SME differs from that of the Ministry of Economic Development because we want to be able to analyse differences between small and medium-sized enterprises. Figure 1 shows the categories of firm size used for this study and the percentage of respondents in each category.

The industry sector the survey respondents self-identified with was:

- 18% Finance, property and business services
- 12% Manufacturing
- 11% Retail, hotel, restaurants

- 7% Community, social and personal services
- 6% Transport
- 5% Construction
- 4% Agriculture, hunting, forestry & fishing
- 2% Electricity, gas and water
- 0% Mining and quarrying
- 34% Other

Figure 1
Firm Size of Respondents – 2010



The most common responses in the "other" category included information technology, government, education and media/film/photography.

The following section details the environmental practices of respondents.

¹ NZBCSD runs ShapeNZ as a national online survey panel to allow public and business input on major sustainability-related issues.

Environmental Practices

2010 Survey Results

The survey found that the most common environmental practice was recycling, with 79% of firms indicating that they have a recycling programme. Recycling would be considered the “low hanging fruit” of environmental practices so it is not surprising the uptake is large.

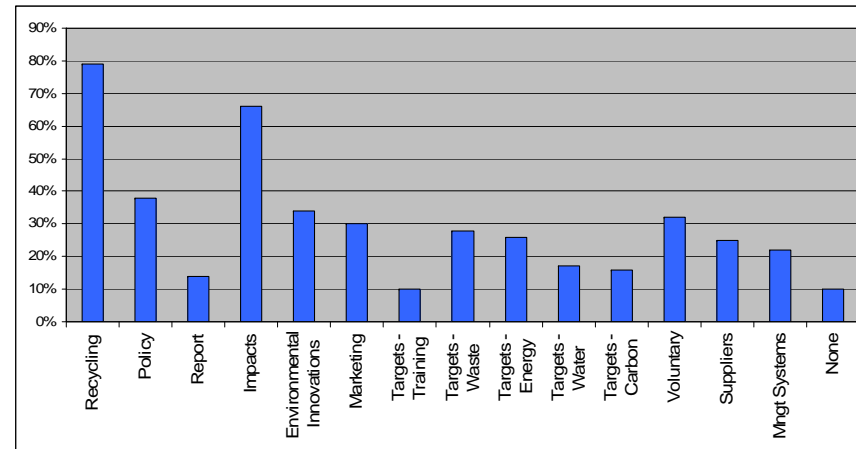
Sixty-six percent of respondents consider the environmental impact of their products, processes and/or services. Interviewees in 2006 and 2009 indicated “consider” meant weighing up future risks and the ability to access markets. Only 28% of respondents have measurable waste targets and 26% energy targets.

With water in New Zealand beginning to be viewed as a limited resource, we added a question about targets for reduction in water use. Only 17% of respondents stated they did have water use reduction targets.

In light of the recently passed emissions trading scheme, for the first time we queried firms about whether they had carbon reduction targets and only 16% did.

Figure 2² details the responses regarding environmental practices.

**Figure 2
Environmental Practices – 2010**



The Role of the Management Accountant

Not a lot is known about who within an organisation is responsible for developing sustainability strategies and whether or not the management accountant plays a significant role. Sixty-four percent of respondents stated managing directors were responsible for environmental strategy, with accountants participating in only 4% of the responding companies. Considering that this result might be due to firm size, the data were analysed for just the larger companies. For firms with more than 99 employees, the managing directors’ role in environmental strategy dropped from 64% to 48%. Thirty-two percent of respondents indicated the organisation had an environmental manager with operations managers the next most actively involved at 24%. Only 5% of respondents indicated the management accountant played a role, 14% reported no one in the company is responsible for environmental strategies.

² The following is a complete list of environmental practices a respondent could choose from: Has a recycling programme; Has a company environmental policy statement; Produces a public environmental and/or sustainability report; Considers the environmental impact of our products, processes and/or services; Develops product and service innovations based on environmental benefits; Marketing or image based on environmental claims (e.g. clean, green NZ); Has measurable targets for: Employee training programs related to our environmental goals; Reducing waste; Reducing water; Reducing carbon; Participates in a voluntary environmental program; Has an environment-focused supplier program; Has environmental management systems; Don’t know; None; Other (please specify)

Overall, most companies have not modified accounting systems to integrate environmental costs and savings. Only 11% had modified or revised their accounting systems, increasing slightly for large companies at 12% and 14% for CIMA members.

The Impact of the Recession on Environmental Practices

**Figure 3
Environmental Practices 2003-2010**

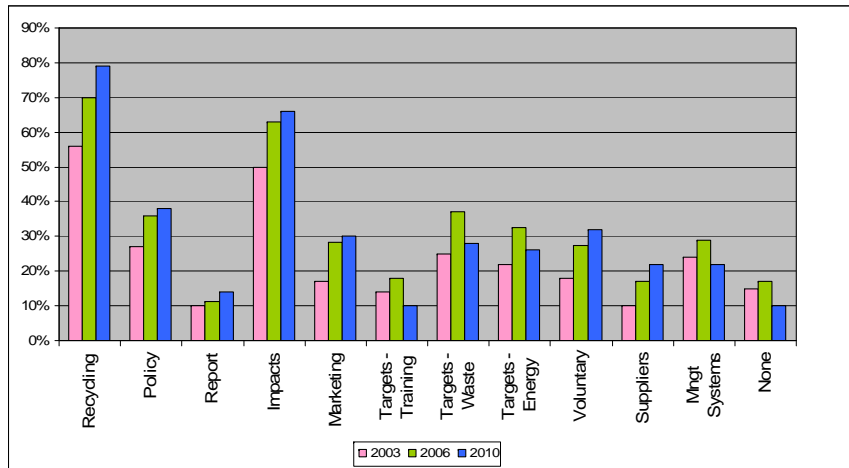


Figure 3 illustrates the changes in the adoption of environmental practices by New Zealand businesses since 2003.

Despite the economic downturn, there was an increase in seven of the eleven environmental practices.

However, these results do not tell the full story. When the data is analysed by firm affiliation, the results are not nearly as positive. Data analysis by firm affiliation follows the section on analysis by firm size.

Interestingly, considering the positive short-term economic benefits, waste and energy targets were two practices that decreased in 2010. Although Figure 3 includes all of the respondents from 2010, the 113 companies who responded to the survey in 2003 and/or 2006 did not show significantly different results.

Nationally and internationally, there has been some negative press regarding New Zealand's "clean green" branding. Press reports question New Zealand's commitment to the environment (Cumming, 2010; The Economist, 2010; Pearce, 2009). Nevertheless, the survey results show the number of companies marketing themselves based on environmental claims such as, "clean, green New Zealand," continues to grow steadily from 17% in 2003 to 30% in 2010.

The number of companies marketing themselves based on environmental claims such as, "clean, green New Zealand," continues to grow steadily from 17% in 2003 to 30% in 2010.

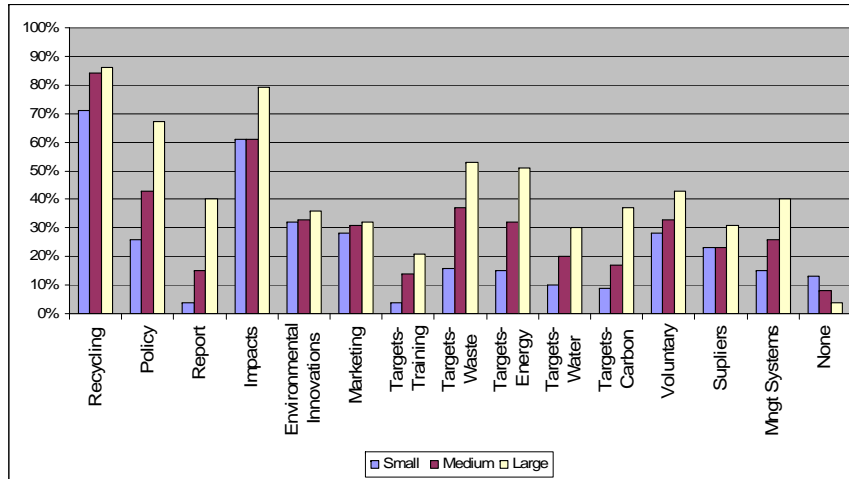
Environmental Practices by Firm Size in 2010

What we found in the 2003 and 2006 surveys was that firm size was the number one predictor of the uptake of environmental practices. The larger the business, the more likely it would be to adopt environmental practices. Large companies were the least likely to report that they had adopted no environmental practices. The 2010 results are consistent with our earlier findings.

In every single category, the larger the firm, the larger the uptake was of environmental practices.

These results are consistent with international findings related to firm size (Gerstenfeld and Roberts, 2000). Figure 4 details the uptake of environmental practices by firm size.

**Figure 4
Environmental Practices by Firm Size – 2010**



Overall, large New Zealand firms are significantly more likely to engage in environmental activities compared to small and medium sized firms, although there were no differences in size relating to developing product and service innovations based on environmental benefits, marketing or image based on environmental claims (e.g. clean, green N.Z), and environment-focused supplier programs. Overall, smaller sized firms are more likely to have no environmental practices (11%) compared with medium sized (4%) and large sized (3%) firms (see Appendix 2 for ANOVA results).

As a country, what makes these results challenging, as stated before, is that the majority of our businesses are small businesses. This means that small businesses have to be engaged to achieve any national environmental objectives.

As shown below, the recession had the biggest negative impact on small business with a decline in the uptake of most environmental practices.

Environmental Practices by Firm Size Recession Impact

**Figure 5
Environmental Practices of Small Firms 2003-2010**

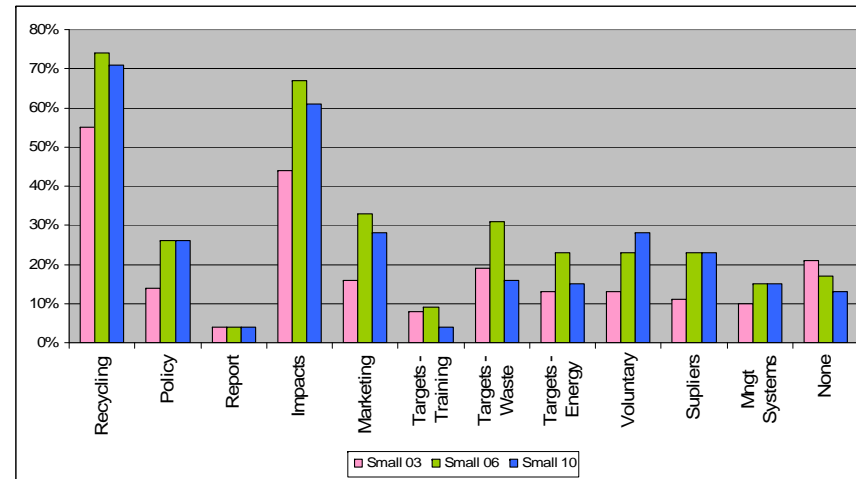


Figure 6
Environmental Practices of Medium Firms 2003-2010

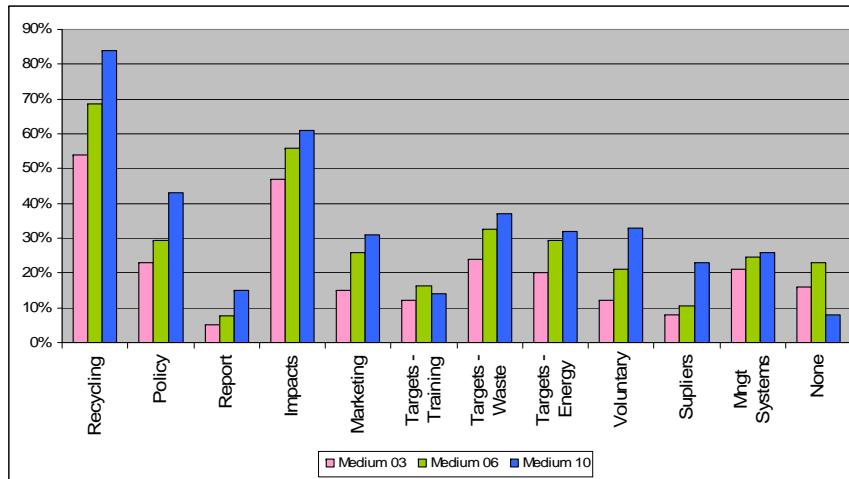
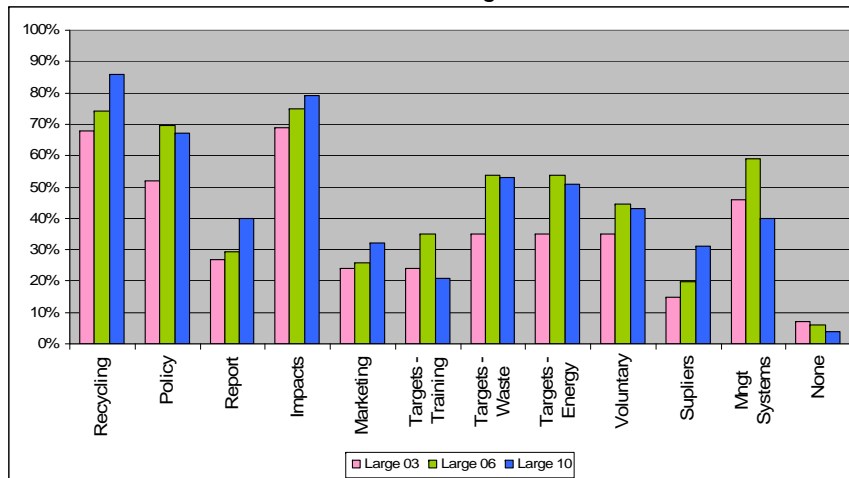


Figure 7
Environmental Practices of Large Firms 2003-2010



Figures 5, 6 and 7 compare environmental practices from 2003 to 2010 by firm size. While overall there was a slight increase in the uptake of environmental practices between 2006 and 2010, analysing the data by firm size presents a different picture.

Figure 5 demonstrates that the recession had the biggest impact on small firms with a decrease in six environmental practices in 2010.

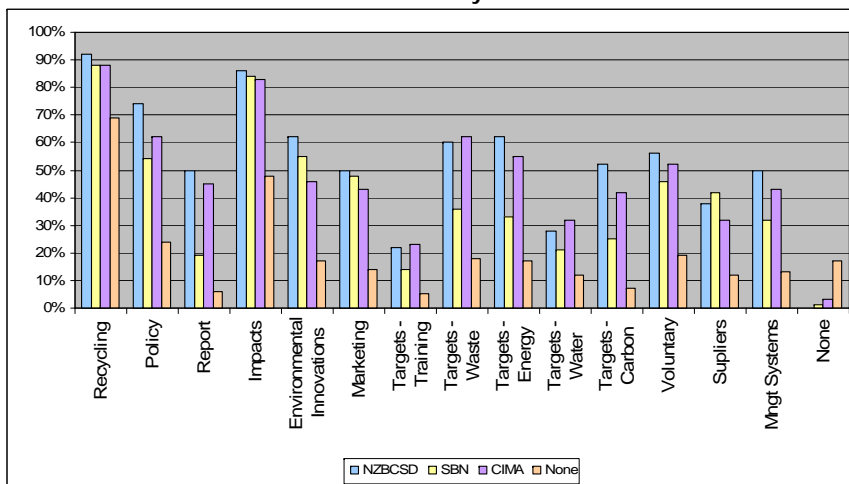
The results for small businesses are the exact opposite of the profile for medium businesses where Figure 6 shows an increase in the uptake of all but one environmental practice.

For large firms the results are mixed. Members of the NZBCSD are required to report and their members are most often large companies. This could explain the increase in reporting. There is also an increase in recycling which saves waste costs for large companies and the recycling infrastructure continues to improve. It is possible that the decrease in other environmental practices reflects cost cutting during the recession.

Environmental Practices by Affiliation

The sample for our survey was not random. As stated in the profile of respondents, we surveyed members of two organisations (SBN and NZBCSD) who have more of an interest, and therefore presumably will be more engaged, in sustainability practices. The extent to which SBN and NZBCSD members' uptake of environmental practices varied from the non-affiliated respondents would determine how much our overall results might be biased. We compared the results of environmental practices to see the variation by affiliation. CIMA is a membership for accountants rather than having any overt sustainability focus so we expected CIMA results to be similar to the non-affiliated respondents. It is also important to keep in mind that some respondents are members of more than one organisation. Figure 8 illustrates the uptake of environmental practices by affiliation.

Figure 8
Environmental Practices by Affiliation – 2010



CIMA member companies compared favourably with the members of both sustainability organisations, but that could be because of selection bias. Because of confidentiality concerns, we were not able to send a survey to all CIMA members in New Zealand, but instead asked them to volunteer for the survey. This could mean that CIMA members most actively engaged in sustainability were also most likely to request the survey.

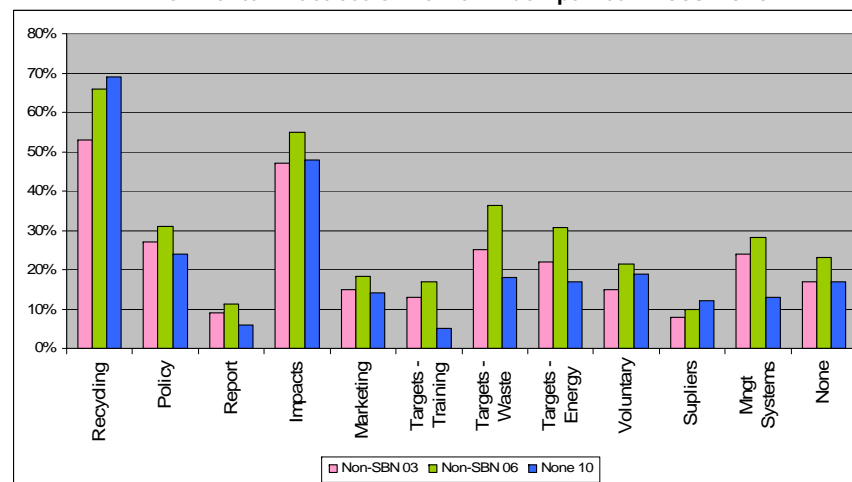
The 404 businesses with no affiliation are probably more representative of New Zealand businesses generally. These results paint a much different national picture regarding the uptake of environmental practices. The firm size of this sub-group is typical of New Zealand's economic profile with 62% small business, 24% medium and 13% large.

Overall, New Zealand firms that are affiliated with sustainability networks are significantly more likely to engage in ALL environmental activities compared to firms that are not affiliated (see Appendix 3 for T-Test results). Overall, only one percent of affiliated firms have no environmental practices compared with 17% of non-affiliated firms.

The SBN, but not the NZBCSD, was part of the 2003 and 2006 surveys. Therefore, comparisons were made between SBN and non-SBN members.

As shown in Figure 9, few environmental practices are adopted by more than 20% of unaffiliated businesses and 17% have adopted no environmental practices at all in 2010.

Figure 9
Environmental Practices of Non-SBN Companies 2003-2010



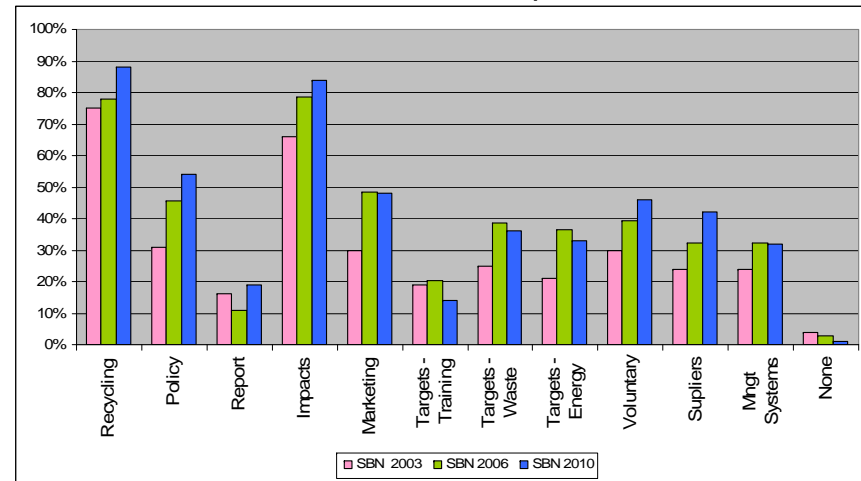
In 2006, survey results showed that while all companies across the sample increased their uptake of environmental practices compared to 2003, as shown in Figures 9 and 10, SBN members had a significantly greater increase. For example, for SBN members from 2003 to 2006 there was a 15% increase of companies adopting an environmental policy (4% for non-SBN), a 17% increase in waste targets (11% for non-SBN) and a 15% increase in energy targets (9% for non-SBN).

Although the survey results overall showed a slight increase in environmental practices despite the recession, if you remove the members of SBN (Figure 9), making the sample more representative of New Zealand businesses, then the results show a significant decrease in all but two environmental practices.

Figures 9 and 10 reveal a growing “sustainability divide.” Whereas the results between SBN and non-SBN from 2003 to 2006 showed a difference in the increase in environmental practices, both groups increased practices. Figures 9 and 10 highlight the fact that the two groups are now moving in opposite directions. The impact of the recession has been that non-SBN companies surveyed reduced most environmental practices, for SBN companies surveyed, most environmental practices showed an increase in uptake.

Figures 9 and 10 reveal a growing “sustainability divide.” The impact of the recession has been that non-SBN companies surveyed *reduced* most environmental practices, for SBN companies surveyed, most environmental practices showed an *increase* in uptake.

**Figure 10
Environmental Practices of SBN Companies 2003-2010**



Whereas the digital divide refers most commonly to the difference in access to information technology, the sustainability divide refers to the difference between those taking advantage of the latest global trend, sustainability, and those who are falling behind. The business case for sustainability suggests that there are economic gains from reducing costs as well as from gaining a competitive edge. Some companies have figured out how to benefit from the trend; some companies have not. At the beginning of the report we said there were two sets of stories told about sustainable business practices during an economic downturn. The results of this study show that both stories are true.

Some writers argue that sustainability issues will force a fundamental change for business (as did globalisation or information technology). Those companies that are not able to adapt, will not survive (Hart & Milstein, 1999).

Responses to the survey suggest that SBN members may have sustainability more deeply embedded in their overall corporate strategy. For example, a question we added to the 2010 survey asked companies if they developed product or service innovations based on environmental benefits. Fifty-five percent of SBN members responded that they did innovate based on environmental benefits, compared to 17% of companies indicating no affiliation. Similarly, 74% of SBN members surveyed thought that environmental management would be more important or much more important to their business in the next five years compared to 38% non-SBN members.

Although sustainability is most commonly thought of as incorporating environmental strategies, social sustainability is another key area. The uptake of social sustainability is detailed in the next section.

Social Practices

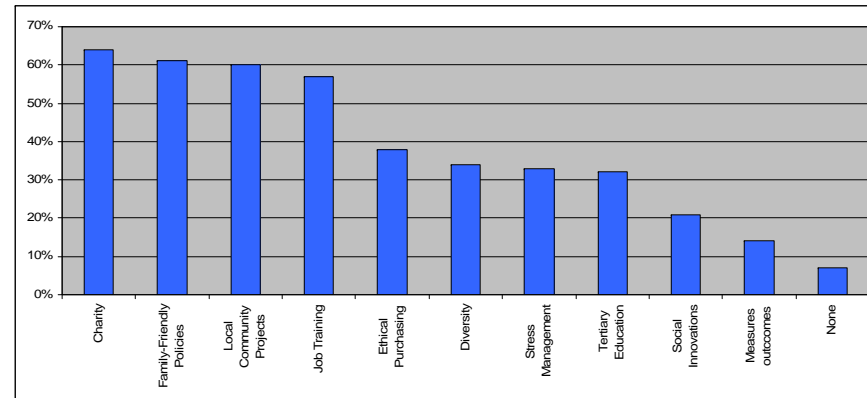
2010 Survey Results

Social sustainability refers to how a firm treats its employees and its community.

New Zealand businesses were more engaged in social practices compared to environmental practices.

Sixty-four percent of companies surveyed contributed time, money, products or services to charity, with 60% indicating these activities occurred at the local level³. Sixty-one percent of businesses indicated they had family friendly policies (e.g. flexi time). Figure 11 highlights the social practices of the 2010 survey respondents.

**Figure 11
Social Practices – 2010**



Business is sometimes seen as a key player in solving social ills. Internationally, the development of alliances with non-commercial organisations, such as government agencies and voluntary associations, to deliver social and environmental outcomes is a recent phenomenon (Roper & Cheney, 2005; Bendell, Collins & Roper, In Press). In New Zealand that new trend is not in much evidence. Most companies (65%) did not have community development programmes or social projects for communities, but those that did (30%) did so at the local (53%) rather than regional (22%) or national (25%) levels. The most common motivation for selection of partners was shared values and goals. There was also a strong emphasis from respondents on programmes that benefited young people.

The managing director (67%) plays the most dominant role in social sustainability strategies with the next most active being the human resources manager (12%). However, 13% of firms indicated they had no one responsible for these strategies.

³ The following is a complete list of social practices a respondent could choose from: Provides job training; Provides assistance for employees to obtain tertiary education; Gives time, money, products or services to local community projects; Contributes time, money, products or services to charity; Considers diversity in hiring decisions; Has family-friendly policies; Has stress management initiatives; Has ethical purchasing policies; Measures outcomes/impacts of socially-related initiatives; Develops product and service innovations based on social benefits; Don't know; None; Other (please specify)

The management accountant was active in social strategies in only 3% of the responding firms, going up to 14% in CIMA member companies, but only 2% when a firm has more than 99 employees. In the large firms, besides the managing director (47%), the human resource manager (38%) is most commonly involved and 21% include the marketing manager. Policies regarding employees are a logical fit with human resources and a marketing department can help ensure that companies get the most brand value from their charitable giving.

In April 2008 in New Zealand, legislative changes came into effect changing the way charitable donations are taxed, removing the tax rebate cap for companies. Fifty-eight percent of respondents indicated they were aware of this change, but 80% reported it did not influence donations or the level of donations.

Also, similar to environmental strategies, only 7% of companies had modified accounting systems to integrate the costs and saving from social initiatives.

Social Practices by Firm Size

Figure 12
Social Practices by Firm Size – 2010

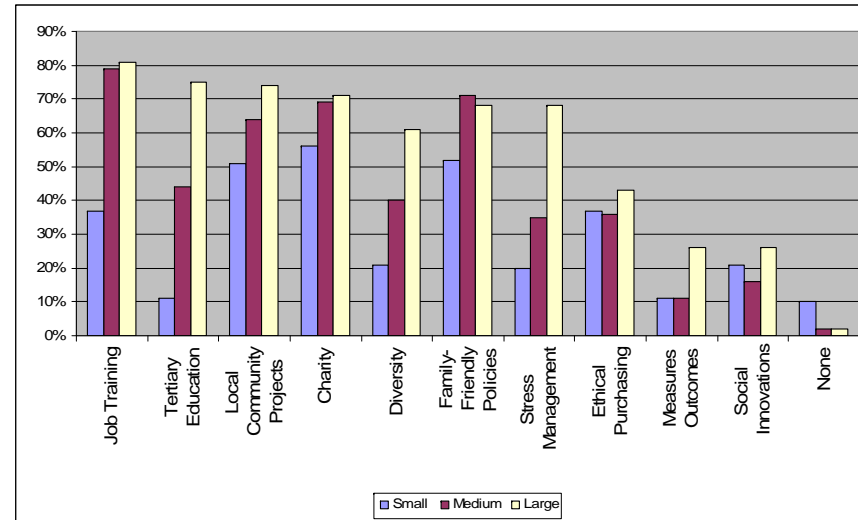


Figure 12 shows social practices analysed by firm size. Overall, large New Zealand firms are significantly more likely to engage in socially-related activities compared to small sized firms towards almost all social activities, with only ethical purchasing policies being similar amongst all sized firms (and similarly low 36%-42%). While large firms are also more likely to engage in social activities than medium sized firms, there are similarities in levels of activity between medium and large sized firms. Overall, smaller sized firms are more likely to engage in no social activities (10%) compared with medium sized (2%) and large sized (2%) firms (see Appendix 4 for ANOVA results).

Social Practices by Affiliation

In light of the importance of affiliation to the results of environmental practices, we analysed social practices by affiliation in Figure 13.

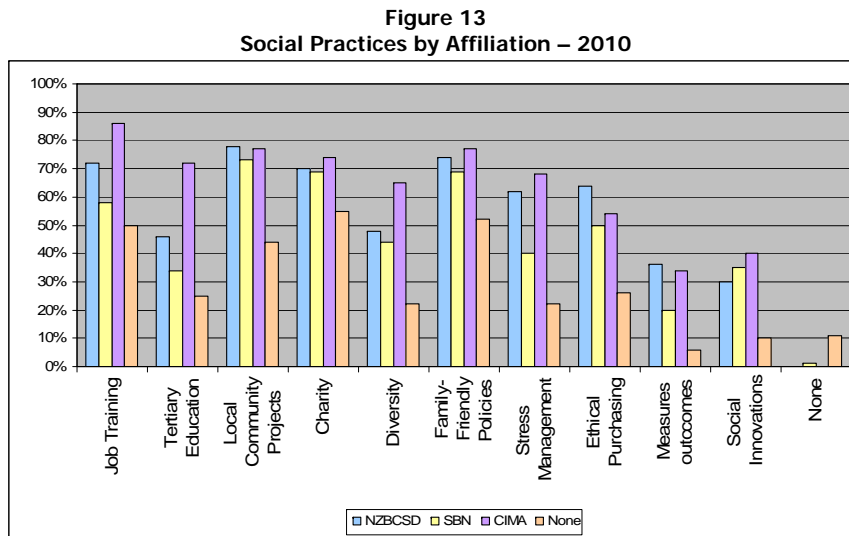


Figure 13 illustrates CIMA members who responded to the survey as the most engaged in social practices. Similar to the results related to the environmental practices, companies with no affiliation rank the lowest for uptake in every social sustainability category.

Overall, New Zealand organisations that are affiliated with sustainability networks are significantly more likely to engage in ALL socially-related activities compared to organisations that are not affiliated. Overall, only one percent of affiliated firms engage in no socially-related activities compared with 11% of non-affiliated organisations (see Appendix 5 for T-Test results).

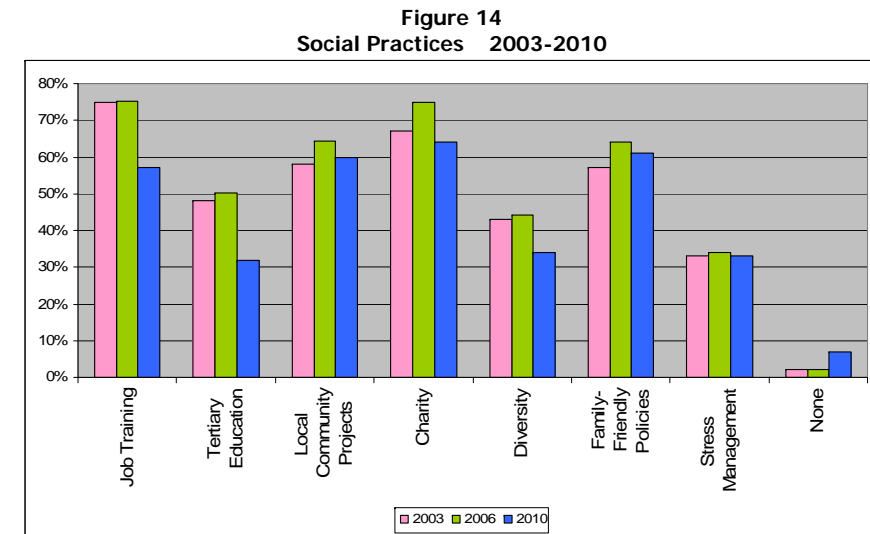
The next question is: What is the impact of the recession on social sustainability?

The Impact of the Recession on Social Practices

Figure 14 is a stark illustration of which sustainability strategies take a hit during an economic decline.

From 2003 to 2006 there was a general increase in the uptake of social practices, but in 2010, there is a marked decrease in every social sustainability practice, with most below 2003 levels.

The decline in social practices is greater than the decline in environmental practices.



The 2010 survey results most likely reflect the fact that there is no longer a tight labour market. Recruitment and retention of employees was a top driver for adopting sustainability strategies at 32%, but in 2006 that figure was 44% and 2003 it was 47%.

Social Sustainability and the Recession by Affiliation

In light of the results about environmental practices, Figures 15 and 16 analyse the data by affiliation. Figure 15 illustrates the impact of the recession on non-SBN companies related to social practices.

Figure 15
Social Practices of Non-SBN Companies 2003-2010

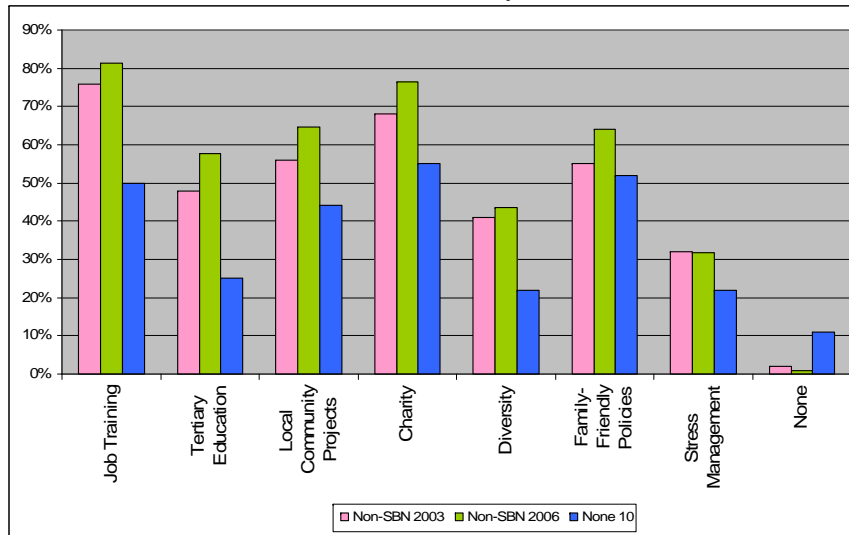
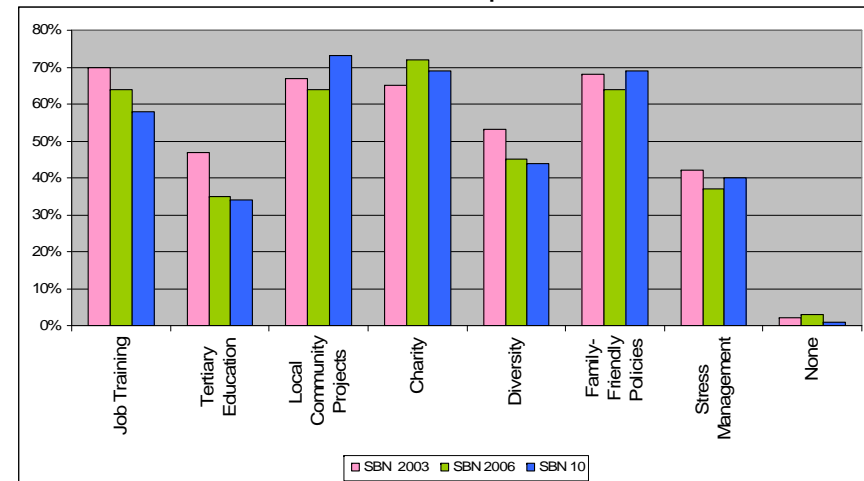


Figure 16 shows the results for the SBN members surveyed in 2003, 2006 and 2010. Results are similar to the environmental findings practices. While Figure 15 showed a 20% drop in most social practices for non-SBN firms, Figure 16 shows that while SBN members also showed a decrease in engagement with social practices, the decrease for most practices is 5% or less. And interestingly, while giving to charity did decrease from 72% in 2006 to 69% in 2010, supporting local community projects increased from 64% in 2006 to 73% in 2010.

Also, similar to environmental practices, SBN members have a different view from non-SBN respondents about the strategic importance of social issues.

Forty-nine percent of SBN respondents thought social issues would become more important or much more important, compared to only 21% of non-SBN respondents. While SBN respondents did not innovate based on social benefits to the extent they did with environmental benefits, still 35% responded affirmatively compared to only 10% of non-SBN members.

Figure 16
Social Practices of SBN Companies 2003-2010



The next section looks at the internal and external pressure related to the adoption of sustainability practices.

Internal and External Pressure

To get a better idea of why companies do or do not adopt social and environmental practices, the survey included questions on drivers and barriers. We asked the question in two different ways. For social and environmental practices we asked companies if they were receiving internal and/or external “pressure” to improve environmentally. Then, for a different perspective, we were interested in what motivated or prevented companies from adopting sustainability practices and inquired about drivers and barriers to adopt practices.

Internal and External Pressure to Improve Environmentally

Figures 17 and 18 illustrate the responses regarding internal and external pressure to improve environmentally. The majority of firms, reported some type of internal pressure, however a large number, 40%, reported no internal pressure at all. Figure 18 shows that for external pressure there was an even larger number of companies (53%) reporting no pressure.

Pressure to adopt environmental strategies was most commonly reported to come from personal values and beliefs of senior management (44%).

Although there are reports about “green consumers,” only 26% of companies stated they were getting pressure from consumers to adopt green practices. This could reflect the gap in consumers’ self-reported purchasing values as opposed to what they actually purchase.

Figure 17
Internal Pressure to Improve Environmentally – 2010

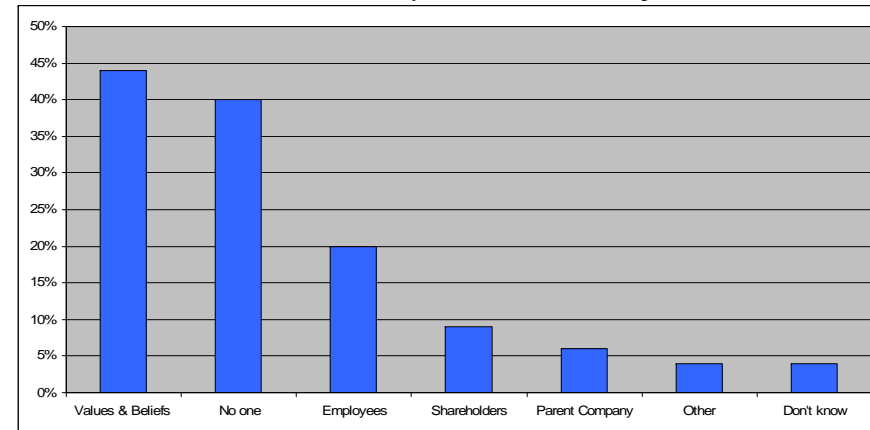
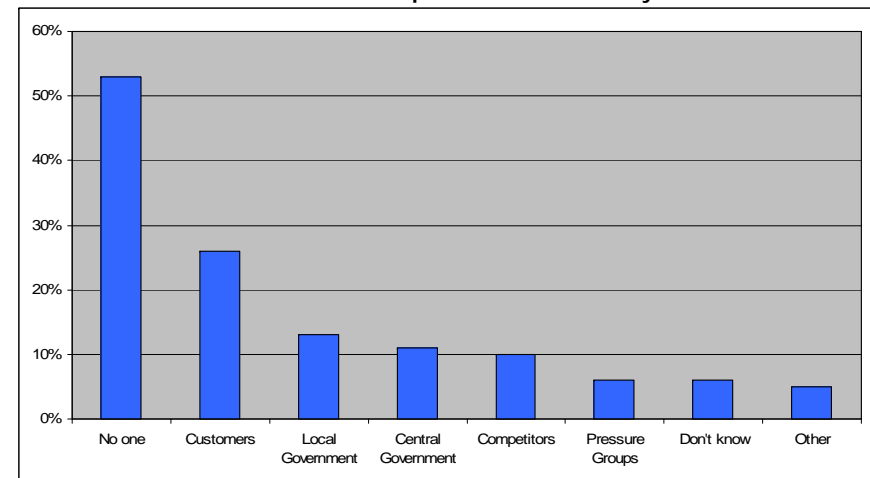
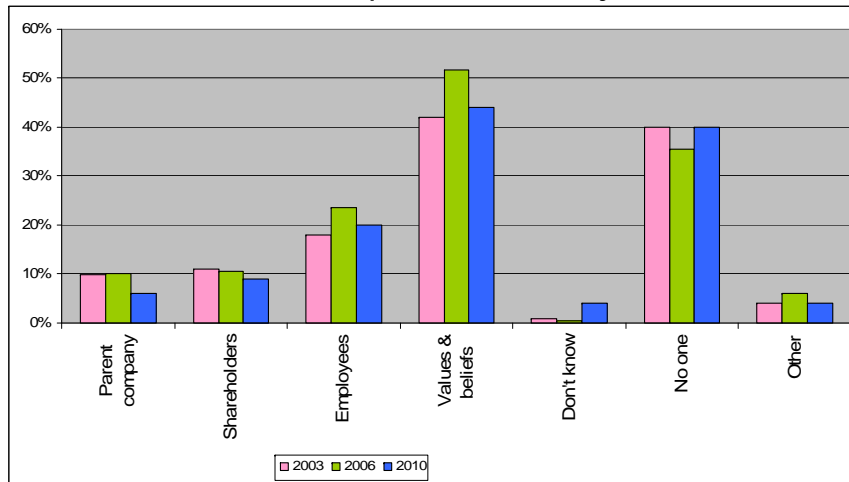


Figure 18
External Pressure to Improve Environmentally – 2010



Sustainability and environmental issues are in the news much more in 2010 than when we started the survey in 2003. Figures 19 and 20 shows the change in pressure over time to improve environmentally.

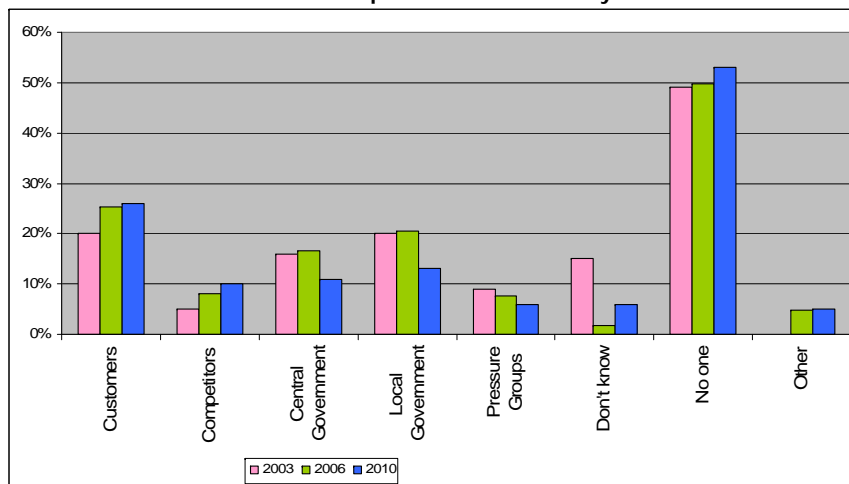
Figure 19
Internal Pressure to Improve Environmentally 2003-2010



The increased government and media attention did not result in a significant increase in pressure. The biggest increase was externally, with slight increases in companies feeling pressure from customers and competitors. With the passage of the emissions trading scheme and the resistance to the legislation by a lot of businesses, we expected companies to report increased pressure from government, but in fact, companies reported a decrease in pressure in 2010 compared to earlier surveys. This could reflect the change in government since the last survey. The previous, Labour-led, government had sustainability high on its policy agenda, but the current, National-led government, has not openly pushed the sustainability agenda to the same degree.

Another surprise was the significant drop in the role of values.

Figure 20
External Pressure to Improve Environmentally 2003-2010



In 2003, 42% of managers reported values as a key reason for adopting environmental strategies, this figure went up to 52% in 2006, but decreased to 44% in 2010. It appears that the values of managers are significantly impacted during an economic downturn instead of staying constant. To test whether the drop in values was a result of new respondents of the survey, the longitudinal group was analysed. Out of the 113 longitudinal respondents, 13 additional companies reported values as a positive influence, but 27 companies who had previously cited values did not cite values as a factor in 2010. This means the drop in values cannot be attributed to new survey respondents, but reflects a wider trend.

Figures 21 and 22 shows the data results sorted by affiliation. It is obvious from the two figures, that the companies with no affiliation who we reported earlier as being less engaged in environmental practices, are similarly feeling less pressure to adopt these practices internally or externally. A question then is whether there is really less pressure for non-affiliated companies or whether, for some reason, they are not picking up on the pressure.

Figure 21
Internal Pressure to Improve Environmentally By Affiliation – 2010

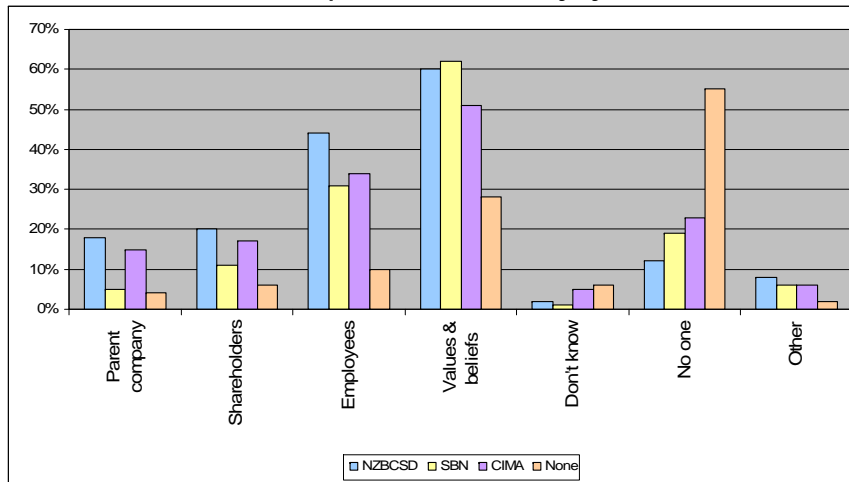
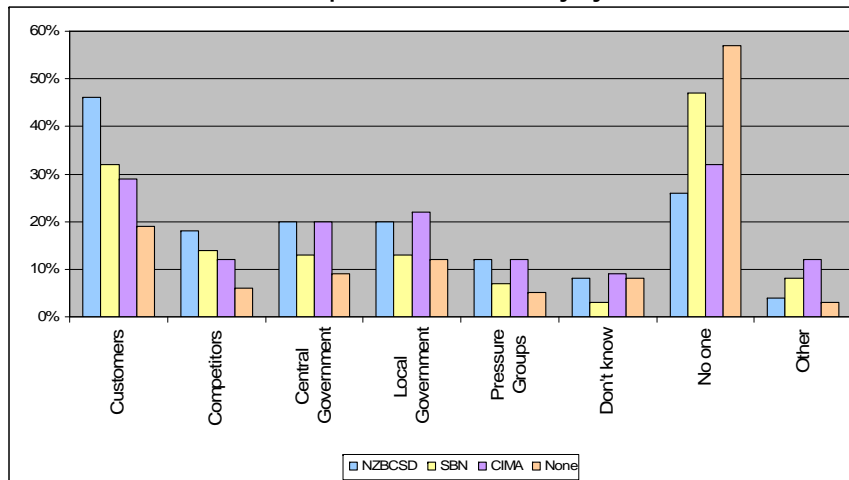


Figure 22
External Pressure to Improve Environmentally By Affiliation – 2010



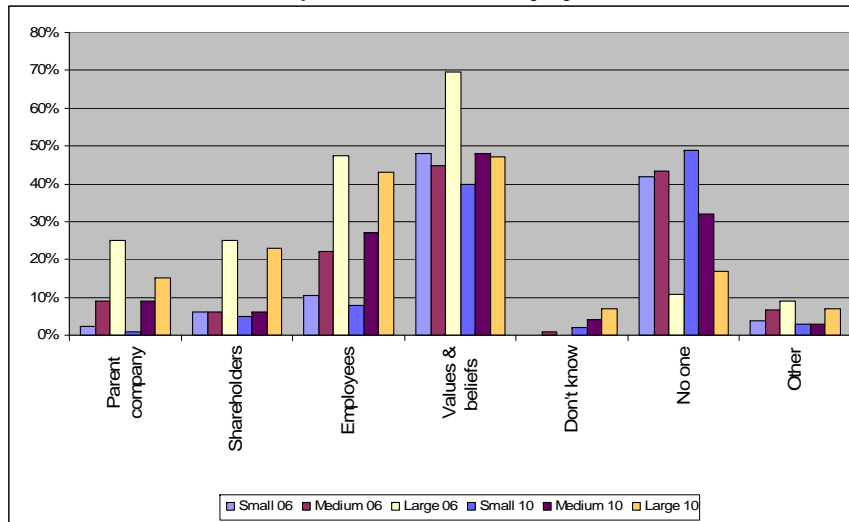
The other result that is striking is the number of NZBCSD respondents (46%) who report feeling pressure from customers. This result could reflect the fact that NZBCSD has a lot of large companies as members. Analysis by firm size is presented below.

Another point to make about NZBCSD respondents, members have imposed rules that, within thirty-six months of membership, members procure related to sustainability criteria from 6 of their top 10 suppliers. In this context, and related to their size in terms of the New Zealand economy, this is significant in terms of providing a force for change in the supply chain. Their leadership could have significance given their market influence.

Overall, New Zealand organisations that are affiliated to sustainability networks are significantly more likely to feel internal **and** external pressures toward engaging in environmental activities compared to organisations that are not affiliated. Overall, 20% of affiliated firms felt no internal pressures towards improving environmentally compared to 55% of non-affiliated firms. Furthermore, 45% of affiliated firms felt no external pressures towards improving environmentally compared to 58% of non-affiliated firms (see Appendix 6 for T-Test results).

Figures 23 and 24 details the results of internal and external pressure by firm size.

Figure 23
Internal Pressure to Improve Environmentally By Firm Size 2006-2010

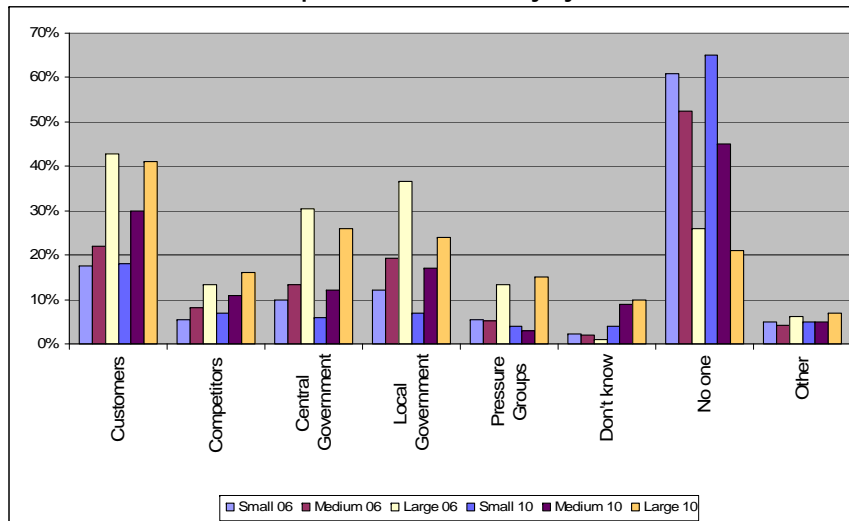


A couple things stand out when the data are analysed by firm size. For example, there may be an impression that it is small businesses that are driven by the values of management to adopt environmental strategies, but it is clear from Figure 23 that values is a key driver for large firms as well, although it decreased with the recession.

Overall, large New Zealand firms are significantly more likely to perceive internal and external pressure towards improving environmentally compared to small and medium sized firms, although there were no differences in pressures from personal values, beliefs and/or commitments of management. Overall, smaller sized firms are more likely to report having no internal pressures (49%) compared with medium sized (32%) and large sized (17%) firms. Furthermore, smaller sized firms are more likely to report having no external pressures (65%) compared with medium sized (45%) and large sized (21%) firms (see Appendix 7 for ANOVA results).

It is striking that in 2010, 65% of small businesses felt no external pressure to improve environmentally compared to only 21% of large businesses.

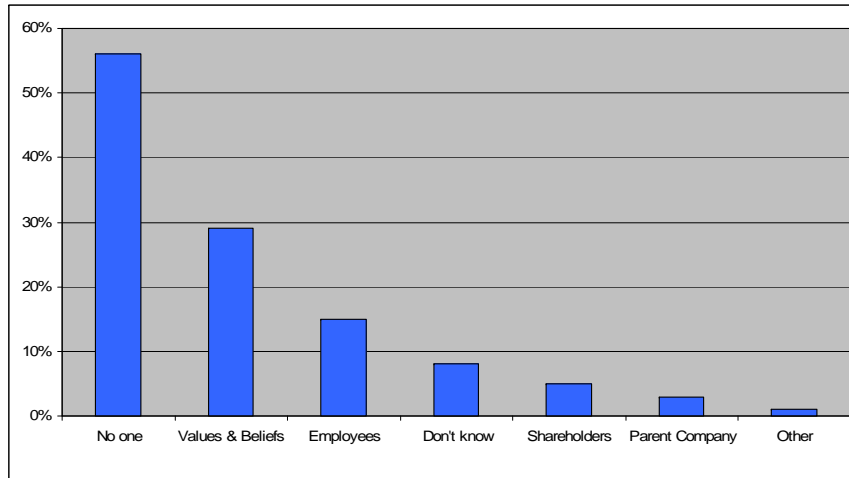
Figure 24
External Pressure to Improve Environmentally By Firm Size 2006-2010



Internal and External Pressure to Improve Socially

Although New Zealand businesses were more engaged in social sustainability, they reported less pressure to adopt these strategies compared to environmental practices. Seventy-two percent of companies reported no pressure to adopt social practices and, similar to environmental practices, 29% of managing directors reported the main pressure to be their own values and beliefs. Figures 25 and 26 illustrate the results of the survey regarding internal and external pressure to improve socially.

Figure 25
Internal Pressure to Improve Socially – 2010



One thing that is clear, survey respondents are reporting a decrease in pressure and that could be because of changing expectations during a tough economic environment.

Similar to environmental practices, there is a significant decrease in managers reporting values as a driver to adopt social practices. As we stated regarding environmental practices, values appear to shift during tough economic times. Several managers wrote on the survey "we are just trying to survive."

It seems when managers are fighting for the survival of their business the values shift from treating their workers and community well, to trying to keep the business afloat.

Figure 26
External Pressure to Improve Socially – 2010

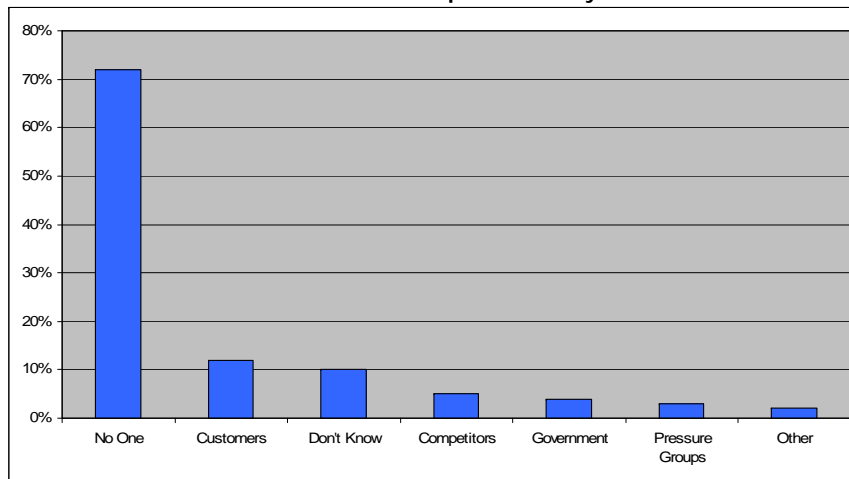
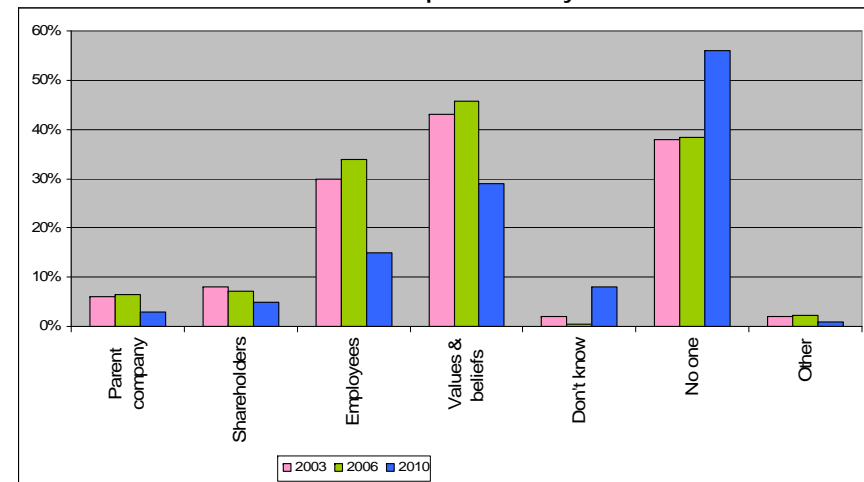
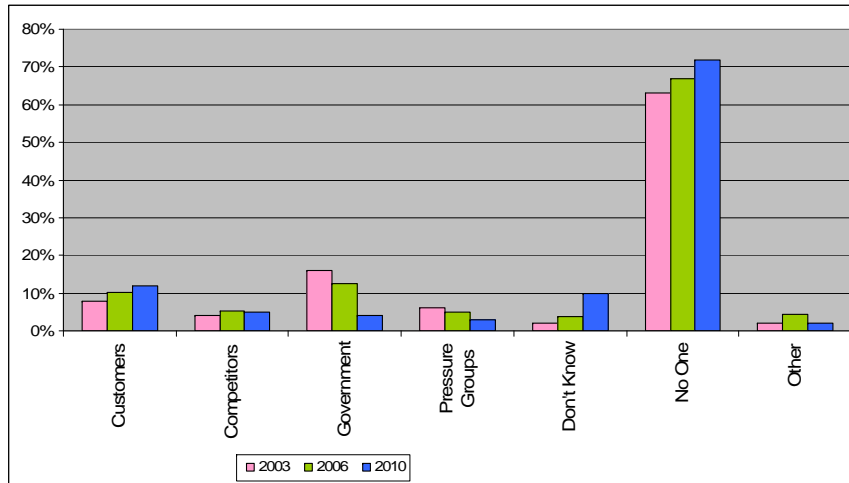


Figure 27
Internal Pressure to Improve Socially 2003-2010



Figures 27 and 28 report on the changes from 2003 to 2010 on internal and external pressure to improve socially.

Figure 28
External Pressure to Improve Socially 2003-2010



Figures 29 and 30 illustrate internal and external pressure by affiliation. The results are similar to environmental pressure with the non-affiliated companies reporting significantly less pressure than affiliated companies.

Overall, New Zealand organisations that are affiliated to sustainability networks are significantly more likely to feel internal **and** external pressures toward engaging in socially-related activities compared to organisations that are not affiliated. However, there is no difference in internal pressures from a parent company and from external pressures from government or pressure groups. Overall, 41% of affiliated firms felt no internal pressures towards improving socially-related activities compared to 66% of non-affiliated firms. Furthermore, 7% of affiliated firms felt no external pressures towards improving socially-related activities compared to 11% of non-affiliated firms (see Appendix 8 for T-Test results).

Seventy-three percent of non-affiliated respondents reported no external pressure to adopt social practices.

Figure 29
Internal Pressure to Improve Socially By Affiliation – 2010

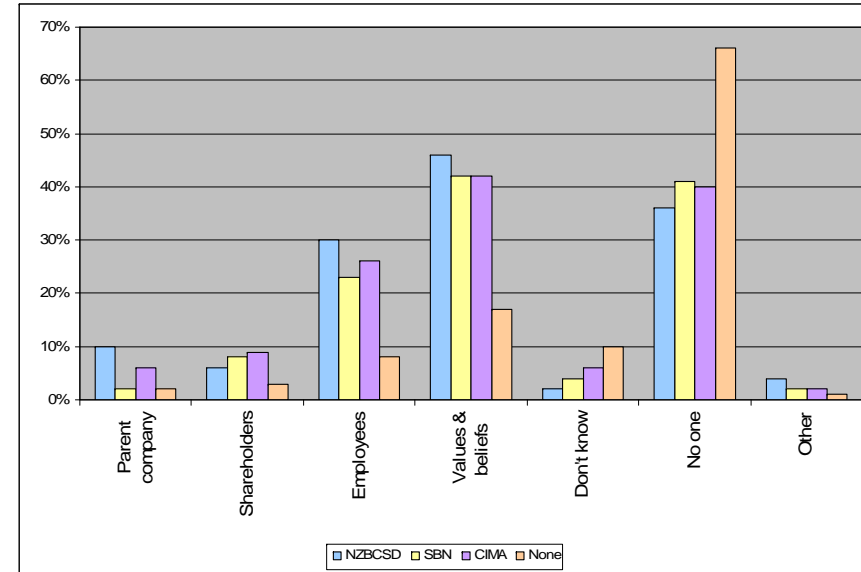


Figure 30
External Pressure to Improve Socially By Affiliation – 2010

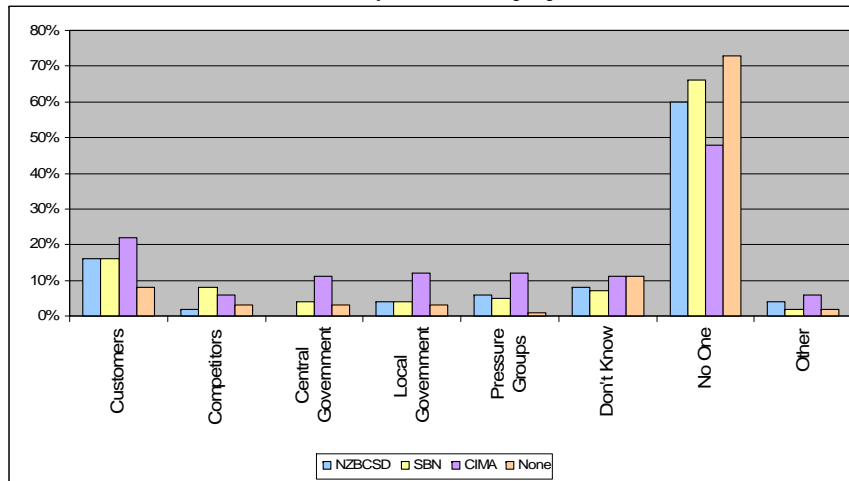
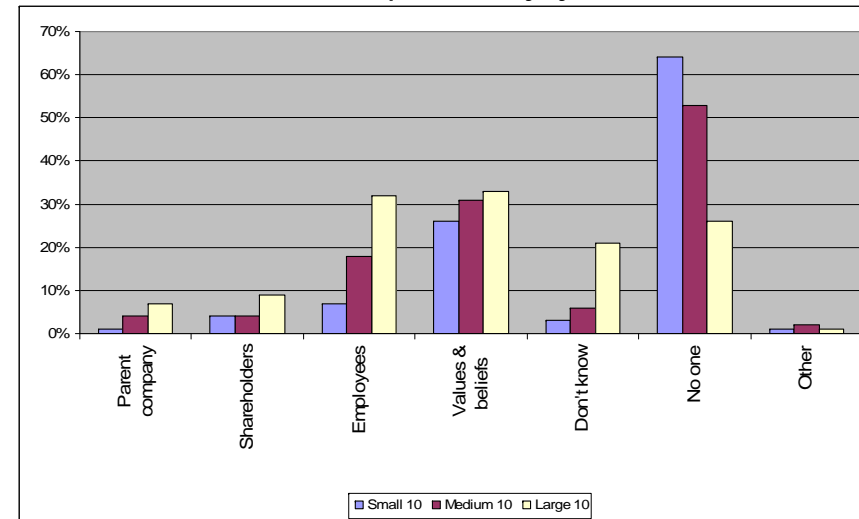
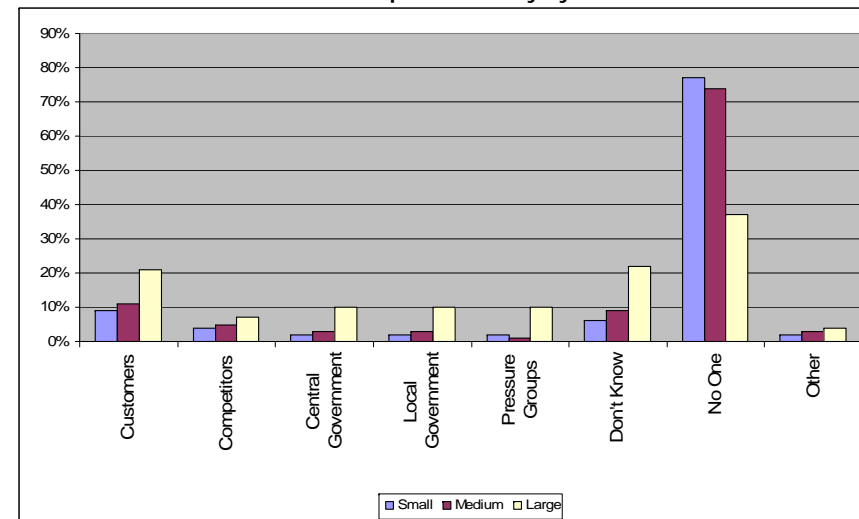


Figure 31
Internal Pressure to Improve Socially By Firm Size – 2010



Figures 31 and 32 show the survey results by firm size. Overall, large New Zealand firms are significantly more likely to perceive internal and external pressure towards providing socially-related activities compared to small and medium sized firms, although there were no differences in pressures from (1) shareholders, (2) personal values, beliefs and/or commitments of management, and (3) competitors. Overall, smaller sized firms are more likely to report having no internal pressures (64%) compared with medium sized (53%) and large sized (26%) firms. However, large sized firms are more likely to report having no external pressures (22%) compared with medium sized (9%) and small sized (6%) firms (see Appendix 9 for ANOVA results).

Figure 32
External Pressure to Improve Socially by Firm Size – 2010



But even for large companies, respondents report not feeling much pressure to adopt social practices.

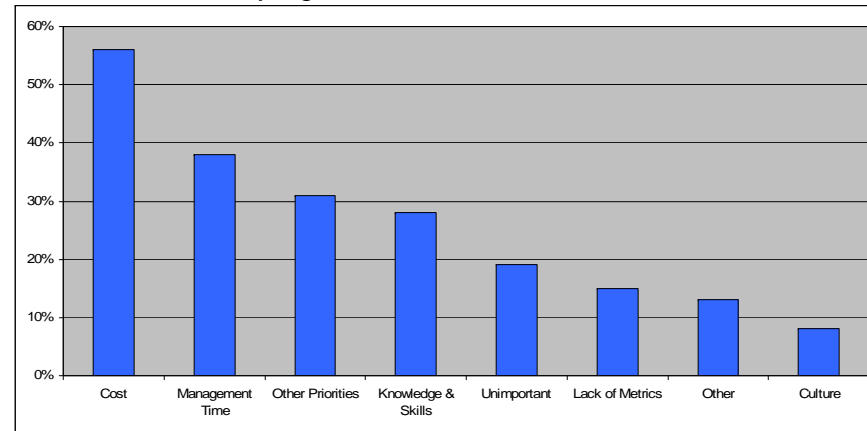
Drivers and Barriers

One of our key research questions was about the drivers and barriers associated with adopting environmental and social practices. Figures 33⁴ and 34⁵ show the survey results.

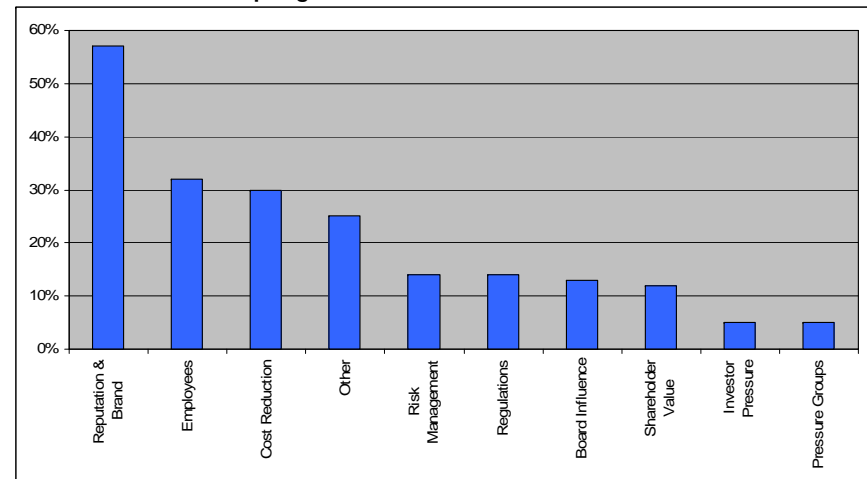
Not surprisingly, cost was reported as the most common barrier (56%) to adopting sustainability strategies. However, cost was also reported as one of the top drivers (30%).

This result reflects the complex nature of the perceived costs and benefits related to sustainability. Companies can often get quick payback from some sustainability strategies. For example, investing in an energy audit and making the necessary changes to save energy can lead to immediate savings to the bottom-line. However, extensive capital investment, for example installing solar panels, may have positive long-term financial benefits, but may be too costly in the short-term for most firms to adopt the strategy. On the social side, companies may find that offering flexi-time is a low-cost family-friendly strategy that lowers turnover of workers trying to balance work and family. However, assisting employees to obtain tertiary education, while giving a company a more educated work force, may again be too costly for many firms.

**Figure 33
Barriers to Adopting Environmental and Social Initiatives – 2010**



**Figure 34
Drivers to Adopting Social and Environmental Initiatives – 2010**



⁴ The following is a complete list of barriers a respondent could choose from: Cost implications; Knowledge and skills; Not seen an important to the organisation; Other priorities more important; Management time; Lack of metrics to establish a business case; Culture of the organisation; Other

⁵ The following is a complete list of drivers a respondent could choose from: Cost management/reduction; Improved shareholder value; Investor pressure, including socially responsible investing; Board influence; Outside pressure groups; Attractiveness to employees; Reputation and brand; Risk management; Government regulations; Other

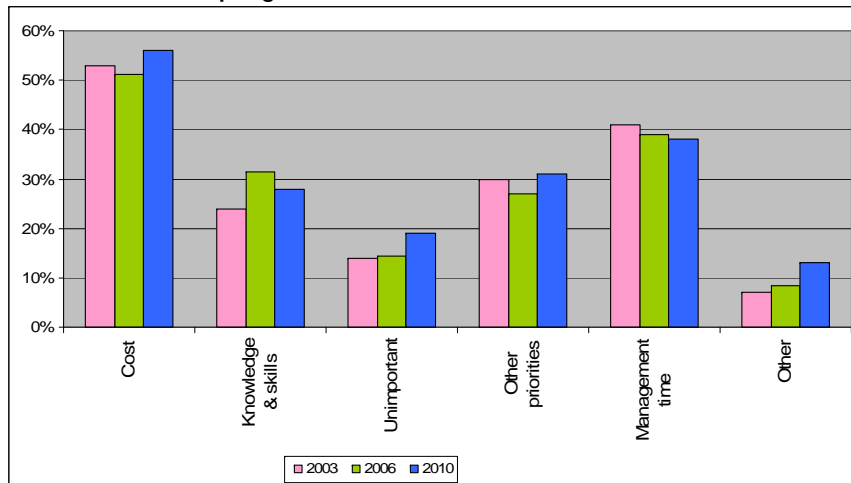
Besides cost, management time (38%), other priorities (31%) and lack of knowledge and skills (28%) were the most commonly reported barriers. Only 15% of companies reported the lack of metrics to establish a business case for sustainability as a barrier.

As shown in Figure 34,

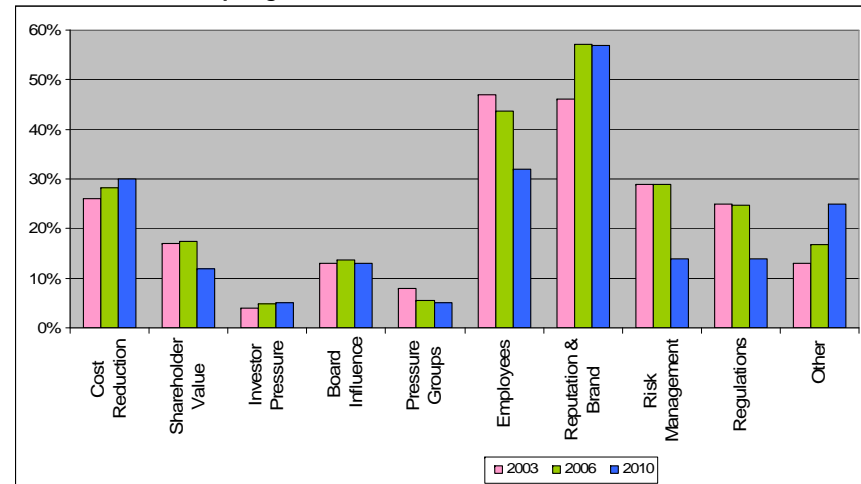
the most common driver to adopting sustainability strategies was by far reputation and brand (57%).

Adopting these strategies as a way to recruit and retain staff was the second most common driver (32%), followed by cost management/reduction (30%). Government regulation was reported by only 14% of the respondents as a driver.

**Figure 35
Barriers to Adopting Environmental and Social Initiatives 2003-2010**



**Figure 36
Drivers to Adopting Environmental and Social Initiatives 2003-2010**



Figures 35 and 36 show the changes in drivers and barriers from 2003 to 2010. There might be a presumption that there are increased barriers to adopting sustainability strategies during a recession, but the fluctuations are only minor. For example, cost being cited as a barrier increased only 5% from 2006 to 2010. Similarly, there are not many differences in drivers, with reputation and brand continuing to be a strong driver. There is an overall downward trend in most of the drivers, with a 15% drop from 2006 to 2010 in companies citing risk management as a driver, followed by a 12% drop for those same years for employees as a driver and 11% decrease for regulations.

Figure 37
Barriers to Adopting Environmental and Social Initiatives By Affiliation – 2010

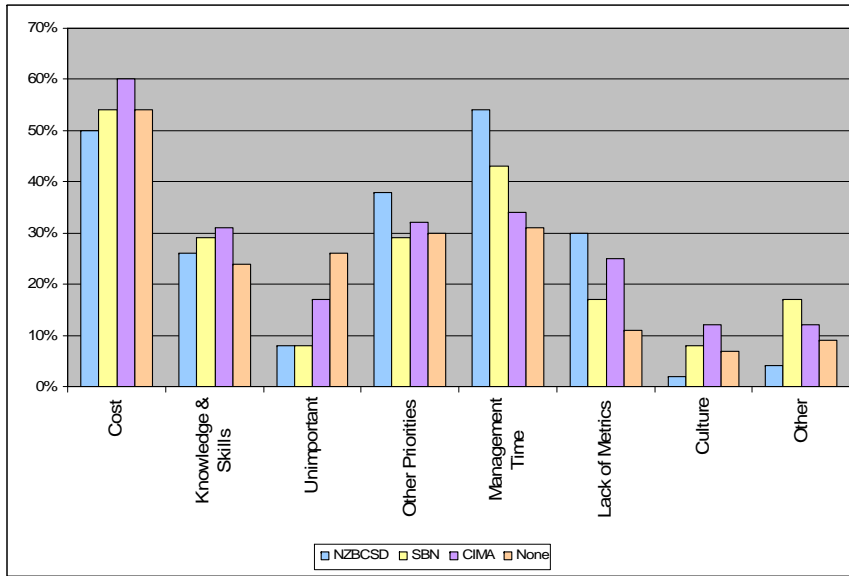
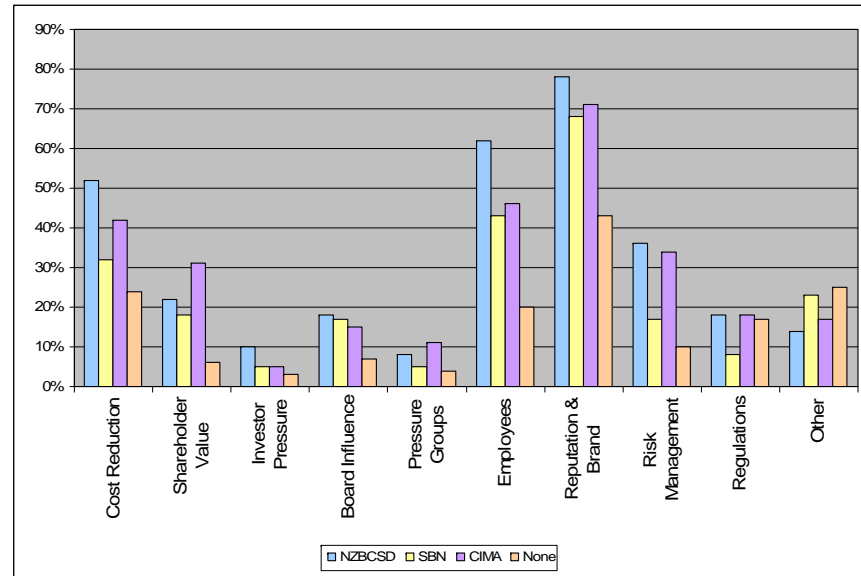


Figure 38
Drivers to Adopting Environmental and Social Initiatives By Affiliation – 2010

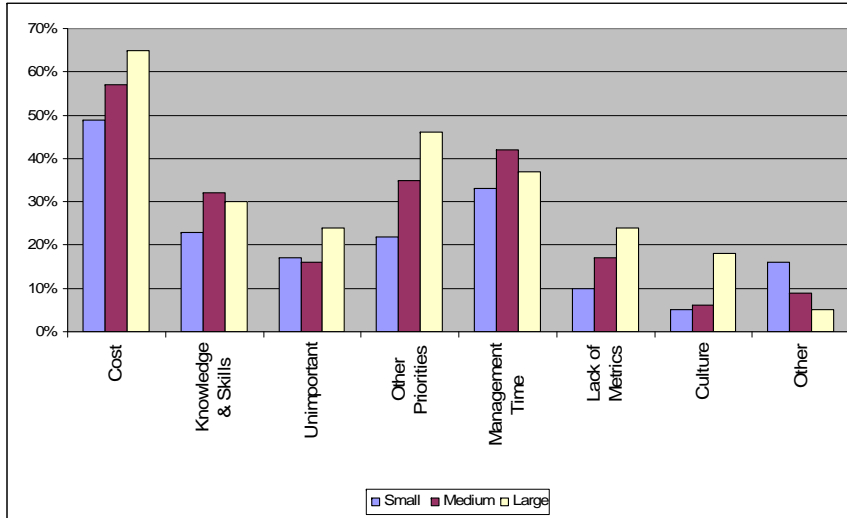


Figures 37 and 38 detail the survey results of drivers and barriers by affiliation. We expected that because non-affiliated companies adopted significantly fewer environmental and social practices, they would also be more likely to cite barriers such as cost or management time. But just the opposite was true. Non-affiliated companies cited fewer barriers, except for one telling one: they were more likely (26%) to say that sustainability was unimportant, compared to NZBCSD and SBN respondents, both with only 8% citing lack of importance as a barrier and CIMA at respondents at 17%. On the other hand,

Overall, New Zealand organisations that are affiliated to sustainability networks are significantly more likely to view management time and lack of metrics to establish a business case as barriers towards environmental and socially-related activities, compared to organisations that are not affiliated. Non-affiliated firms are more likely to see these activities as not being important than affiliated firms. Towards drivers, affiliated firms perceive the drivers as significant over non-affiliated firms except towards outside pressure groups (same), and government regulations, where non-affiliated firms see these drivers as significantly higher than affiliated firms (see Appendix 10 for T-Test results).

members of the NZBCSD were more likely to cite drivers, particularly attractiveness to employees at 62% and a whopping 78% cite reputation and brand as a key driver.

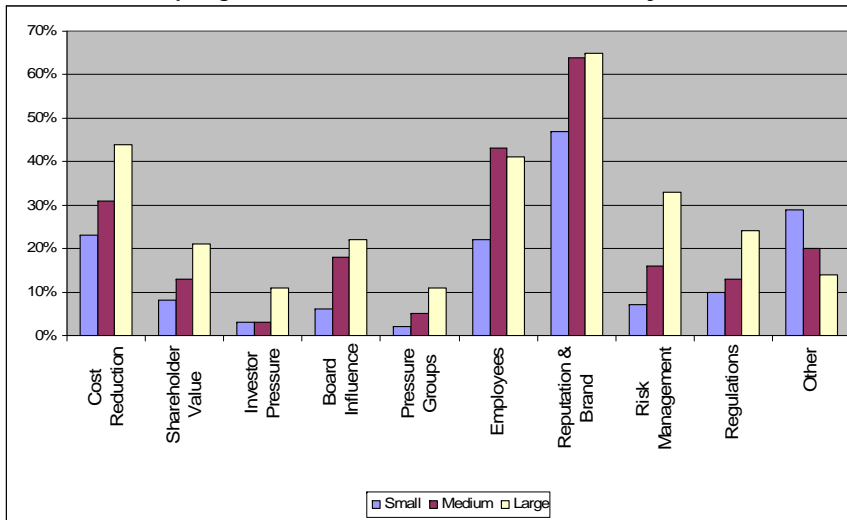
Figure 39
Barriers to Adopting Environmental and Social Initiatives By Firm Size – 2010



Figures 39 and 40 sort the responses to drivers and barriers by firm size. Similar to the profile of non-affiliated respondents, small businesses, although less engaged in social and environmental practices, also cited fewer barriers and fewer drivers.

While findings analysed by firm size are somewhat mixed related to barriers, overall, the significant differences typically relate to large New Zealand firms and probably represent the scope required to adopt some of these activities i.e. it is easier if you are smaller. Overall, related to drivers, large New Zealand firms reported higher levels of agreement toward ALL drivers (see Appendix 11 for ANOVA results).

Figure 40
Drivers to Adopting Environmental and Social Initiatives By Firm Size – 2010



Conclusion

As a longitudinal study that spans times of economic growth and recession, the survey results presented in this report are set to have significant impacts, both in practical terms as well as theoretical. The implications are important for businesses as well as for governments, nationally and internationally.

Sustainability has long been 'sold' through the business case of profits to be made through reduction of costs and, for leaders and trend setters, the economic benefits of competitive advantage. However, well over a decade ago, academics predicted that once the new trend in sustainability took hold, the flip side of the business case would also be apparent: those that did not embrace sustainability would eventually be the losers. There is a narrow window of opportunity for obtaining a competitive advantage, which closes as others adopt the same practices. Eventually, what once constituted competitive advantage becomes mainstream. With global companies such as Marks and Spencer and Walmart increasingly demanding sustainability credentials of all its suppliers, indications are that this will be the case, especially for exporters.

For the first time, this study appears to be revealing a growing "sustainability divide" that may eventually prove or disprove that early prediction. We can reasonably safely assume that members of the Sustainable Business Network (SBN) and of the New Zealand Business Council for Sustainable Development (NZBCSD) are either already engaged in sustainability practices and/or have joined these organisations in order to learn how to do more in this area. Even if they have joined primarily for reputation purposes, they are still accepting of the benefits to be had and will be responsive to peer pressure to engage in practice, lending substance to the reputation. This trend, however, may decrease as the current National-led government has cut government funding of the SBN. On the other hand, our results show that those who are not members of these organisations are significantly less actively engaged in sustainability practices. More importantly, this

latter group of companies represent the majority of New Zealand businesses.

CIMA members are also shown to be actively engaged with sustainability issues. However, not much is known about the role of the management accountant in the development of sustainability strategies. The survey showed that organisations who were CIMA members had a higher rate of accountants participating in sustainability strategy than non-member companies, but still it was a minor role compared to the managing director, environmental, human resources and marketing managers. One reflection in the lack of engagement by accountants is the majority of companies reported that there had been no adjustments to accounting systems reflecting the costs and savings from environmental and social initiatives. More significant are the low levels of sustainability reporting, especially when compared to global levels. As sustainability reporting is often the domain of accountants, it is not surprising that CIMA members had the highest levels of reporting, along with NZBCSD members. The latter organisation requires its members to report.

Because NZBCSD members were not included in the 2003 and 2006 surveys, we cannot show changes in this group over time. However, the results between the Sustainable Business Network (SBN) respondents and non-SBN respondents from 2003 to 2006 showed a difference in the degree of increase in environmental practices, with both groups demonstrating an increase. By 2010, the two groups are moving in opposite directions. The impact of the recession has been that non-SBN companies surveyed reduced most environmental practices, while the SBN companies showed an increase in uptake of most environmental practices. If the predictions of the sustainability divide prove true, the non-engaged companies stand to lose financially in the long term.

A further issue for the New Zealand economy, in the long term, may be that while the survey shows steady growth in the number of companies marketing their products or services on a basis of environmental claims such as, "clean, green New Zealand," the majority of New Zealand companies – those that are not affiliated with the SBN, NZBCSD or CIMA - are actually reducing their uptake of sustainability practices. This could

substantially damage the country's national branding and current competitive edge. The problem is exacerbated by the fact that firm size was one of the best predictors of the uptake of environmental practices, with small firms less likely to adopt environmental and social practices. During the recession, small firms had a bigger decrease in sustainability practices compared to large firms. Ninety-nine percent of New Zealand businesses are small or medium sized. The nation, as a whole, stands to suffer from being on the wrong side of the global sustainability divide.

While environmental practices overall showed divergent trends and a developing sustainability divide, all social practices showed a decrease in 2010, with some dropping to below 2003 levels. There is a range of possible reasons for this, including growth in unemployment levels. Most reasons, however, link back to the economic recession. Beyond the direct effects of reduced capital, however, the economic recession has effected a change in managers' values. The number of managers citing personal values and beliefs as a positive influence in adopting social practices declined from a high of 46% in 2006 to 29% in 2010. Comments written on the survey included statements like, "we are just trying to survive." It seems when managers are fighting for the survival of their business the values shift from treating their workers and community well to trying to keep the business afloat.

The next phase of the study will be follow-up semi-structured interviews with senior executives and management accountants with between 5-10% of the survey respondents. The interviews will go over the survey for additional detail from the ticked responses. In addition, interviewees will be queried about the development of strategies related to sustainability.

Appendix 1 – Survey Questions

Company Characteristics

How many people are employed in your business full time (or full time equivalence)?

- 0-9
- 10-99
- More than 99

Is your business family-owned and/or family-operated? *(please fill in one circle)*

- Yes
- No

What percentage of your business is owned by

New Zealand interests _____ %

International interests _____ %

Which best describes the geographic scale of your business? *(Please fill in one circle)*

- Local
- Regional
- National
- International

Which of these industry groups best describes the core activity of your business? *(Please fill in one circle)*

- Agriculture, Hunting, Forestry and Fishing
- Mining and Quarrying
- Manufacturing
- Electricity, Gas and Water
- Construction
- Wholesale and Retail Trade, Restaurants and Hotels
- Transport, Storage and Communication
- Finance, Property and Business Services
- Community, Social and Personal Services
- Other (please specify): _____

Is your business (or staff) a member of *(please fill in the circles for all that apply)*:

- Chartered Institute of Management Accountants (CIMA)
- New Zealand Business Council for Sustainable Development (NZBCSD)
- Sustainable Business Network (SBN)
- None of the above

1. My business engages in the following activities related to the environment *(please fill-in the circles for all that apply)*:

- Has a recycling programme
- Has a company environmental policy statement
- Produces a public environmental and/or sustainability report
- Considers the environmental impact of our products, processes and/or services
- Develops product and service innovations based on environmental benefits
- Marketing or image based on environmental claims (e.g. clean, green N.Z)

Has measurable targets for:

- Employee training programs related to our environmental goals;
- Reducing waste;
- Reducing energy;
- Reducing water;
- Reducing carbon;
- Participates in a voluntary environmental program
- Has an environment-focused supplier program
- Has environmental management systems
- Don't know
- None
- Other (please specify): _____

2. Has your company's accounting system been modified to integrate environment costs and savings?

- Yes
- No

3. Who in your company is responsible for strategies related to environmental initiatives? *(please fill-in the circles for all that apply)*:

- Managing Director or CEO
- Accountant
- Human Resources Department
- Public Relations Department
- Marketing
- Operations
- Health and Safety
- Environmental Manager
- Other

Please specify: _____

4. Thinking about the future, in the next five years, environmental management will become *(please fill-in one circle):*

- No more important to my business
- Marginally more important to my business
- More important to my business
- Much more important to my business
- Unable to determine

5. My business is getting internal pressure to improve environmentally from *(please fill-in the circles for all that apply):*

- Parent company
- Shareholders
- Employees
- Personal values, beliefs and/or commitments of management
- Don't know
- No one
- Other (please specify):

6. My business is getting external pressure to improve environmentally from *(please fill-in the circles for all that apply):*

- Customers
- Competitors
- Central government
- Local government
- Pressure groups
- Don't know
- No one
- Other (please specify):

7. My business engages in the following socially-related activities *(please fill-in the circles for all that apply):*

- Provides job training
- Provides assistance for employees to obtain tertiary education
- Gives time, money, products or services to local community projects
- Contributes time, money, products or services to charity
- Considers diversity in hiring decisions
- Has family-friendly policies
- Has stress management initiatives
- Has ethical purchasing policies
- Measures outcomes/impacts of socially-related initiatives
- Develops product and service innovations based on social benefits
- Don't know

- None
- Other (please specify):

8. Has your company's accounting system been modified to integrate the costs and savings from social initiatives?

- Yes
- No

9. Who in your company is responsible for strategies related to social initiatives? *(please fill-in the circles for all that apply):*

- Managing Director or CEO
- Accountant
- Human Resources Department
- Public Relations Department
- Marketing
- Operations
- Health and Safety
- Environmental Manager
- Other

Please specify: _____

10. Does your company have community development programmes or social projects for communities where you operate?

- Yes
- No

If yes, at what level(s)?

- Local
- Regional
- National

Please give a description including your key partner(s) and motivation for selecting the partner(s):

11. On 1 April 2008, legislative changes came into effect, changing the way charitable donations are taxed, removing the tax rebate cap for companies. Are you aware of this change?

- Yes
- No

Has this change influenced your donations or the level of your donations?

- Yes
- No

12. Thinking about the future, in the next five years, socially-related activities in my business will become *(please fill-in one circle):*

- No more important to my business
- Marginally more important to my business
- More important to my business
- Much more important to my business
- Unable to determine

13. My business is getting internal pressure to improve socially-related activities from *(please fill-in the circles for all that apply):*

- Parent company
- Shareholders
- Employees
- Personal values, beliefs and/or commitments of management
- Don't know
- No one
- Other (please specify):

14. My business is getting external pressure to improve socially-related activities from *(please fill-in the circles for all that apply):*

- Customers
- Competitors
- Government
- Pressure groups
- Don't know
- No one
- Other (please specify):

15. Which of the following do you view as barriers to adoption of environmental and/or socially-related activities by your business *(please fill-in the circles for all that apply):*

- Cost implications
- Knowledge and skills
- Not seen as important in the organisation
- Other priorities are more important
- Management time
- Lack of metrics to establish business case
- Culture of the organisation
- Other (please specify):

16. What factors have influenced you to implement environmental and/or socially-related activities *(please fill-in the circles for all that apply):*

- Cost management/reduction
- Improved shareholder value
- Investor pressure, including socially responsible investing
- Board influence
- Outside pressure groups
- Attractiveness to employees
- Reputation and brand
- Risk management
- Government regulations
- Other (please specify):

17. What information would your company most value to facilitate the development of company strategy related to environmental and social considerations?

Although no personal names or company names are published with the results, it helps the research team to know who in the company has filled in the survey. Please give your name and title below:

May we contact you again for any follow-up required? *(please fill in one circle)*

- Yes
- No

If yes, please provide your e-mail address: _____

Please attach business card here

Appendix 2 – Business Engagement In Environmental Activities By Firm Size

Business engages in the following activities related to the environment:	Small N=426	Medium N=188	Large N=136	ANOVA Test
Has a recycling programme	72%	84%	87%	F=11.077***
	ANOVA shows that large firms have significantly higher rates of this program than small and medium sized firms and medium sized firms have significantly more than small sized firms but significantly less than larger firms.			
Has a company environmental policy statement	27%	43%	67%	F=40.120***
	ANOVA shows that large firms have significantly higher rates of this program than small and medium sized firms and medium sized firms have significantly more than small sized firms but significantly less than larger firms.			
Produces a public environmental and/or sustainability report	4%	15%	40%	F=68.184***
	ANOVA shows that large firms have significantly higher rates of this program than small and medium sized firms and medium sized firms have significantly more than small sized firms but significantly less than larger firms.			
Considers the environmental impact of our products, processes and/or services	62%	61%	79%	F=7.376**
	ANOVA shows that large firms have significantly higher rates of this program than small and medium sized firms. However, there is no significant difference between small and medium sized firms towards this activity.			
Develops product and service innovations based on environmental benefits	32%	34%	36%	F=.352
	ANOVA shows no significant difference between firms of different size.			
Marketing or image based on environmental claims (e.g. clean, green N.Z)	28%	31%	32%	F=.676
	ANOVA shows no significant difference between firms of different size.			
Measurable targets for employee training programs related to our environmental goals	4%	14%	21%	F=19.600***
	ANOVA shows that large firms have significantly higher rates of this program than small and medium sized firms and medium sized firms have significantly more than small sized firms but significantly less than larger firms.			
Measurable targets for reducing waste	16%	37%	53%	F=45.832***
	ANOVA shows that large firms have significantly higher rates of this program than small and medium sized firms and medium sized firms have significantly more than small sized firms but significantly less than larger firms.			
Measurable targets for reducing energy	15%	32%	51%	F=40.769***
	ANOVA shows that large firms have significantly higher rates of this program than small and medium sized firms and medium sized firms have significantly more than small sized firms but significantly less than larger firms.			

Measurable targets for reducing water	10%	20%	30%	F=18.623***
	ANOVA shows that large firms have significantly higher rates of this program than small and medium sized firms and medium sized firms have significantly more than small sized firms but significantly less than larger firms.			
Measurable targets for reducing carbon	9%	16%	37%	F=32.652***
	ANOVA shows that large firms have significantly higher rates of this program than small and medium sized firms and medium sized firms have significantly more than small sized firms but significantly less than larger firms.			
Participates in a voluntary environmental program	28%	34%	42%	F=5.036**
	ANOVA shows that large firms have significantly higher rates of this program than small sized firms. Similarly, medium sized firms have significantly more than small sized firms. However, there is no significant difference between medium and large sized firms.			
Has an environment-focused supplier program	23%	23%	29%	F=1.333
	ANOVA shows no significant difference between firms of different size.			
Has environmental management systems	15%	26%	40%	F=20.502***
	ANOVA shows that large firms have significantly higher rates of this program than small and medium sized firms and medium sized firms have significantly more than small sized firms but significantly less than larger firms.			
None	11%	4%	3%	F=7.359**
	ANOVA shows that small firms are significantly more likely to have no programs compared to medium and large sized firms. Medium and large sized firms are not significantly different from each other.			

Note: ANOVA Bonferroni Post-Hoc Analysis. *p< .05, **p< .01, ***p< .001

Appendix 3 – Business Engagement in Environmental Activities by Affiliation

Business engages in the following activities related to the environment:	Affiliated N=350	Non-Affiliated N=402	T-Test
Has a recycling programme	87%	70%	5.436***
Has a company environmental policy statement	54%	24%	8.919***
Produces a public environmental and/or sustainability report	23%	6%	6.935***
Considers the environmental impact of our products, processes and/or services	84%	47%	11.341***
Develops product and service innovations based on environmental benefits	52%	17%	11.061***
Marketing or image based on environmental claims (e.g. clean, green N.Z)	47%	14%	10.602***
Measurable targets for employee training programs related to our environmental goals	15%	5%	4.358***
Measurable targets for reducing waste	39%	18%	6.310***
Measurable targets for reducing energy	35%	17%	5.662***
Measurable targets for reducing water	21%	12%	3.242**
Measurable targets for reducing carbon	27%	6%	7.826***
Participates in a voluntary environmental program	46%	19%	8.233***
Has an environment-focused supplier program	39%	11%	9.453***
Has environmental management systems	33%	13%	6.448***
None	1%	14%	-6.928***

*p < .05, **p < .01, ***p < .001. All test are single-tailed.

Appendix 4 – Business Engagement In Socially-Related Activities By Firm Size

Business engages in the following socially-related activities:	Small N=426	Medium N=188	Large N=136	ANOVA Test
Provides job training	37%	80%	81%	F=86.026***
	ANOVA shows that large firms have significantly higher rates of this program than small sized firms and medium sized firms have significantly more than small sized firms. However, there is no significant difference between medium and large sized firms.			
Provides assistance for employees to obtain tertiary education	11%	45%	75%	F=151.384***
	ANOVA shows that large firms have significantly higher rates of this program than small and medium sized firms and medium sized firms have significantly more than small sized firms but significantly less than larger firms.			
Gives time, money, products or services to local community projects	51%	63%	74%	F=12.847***
	ANOVA shows that large firms have significantly higher rates of this program than small sized firms and medium sized firms have significantly more than small sized firms. However, there is no significant difference between medium and large sized firms.			
Contributes time, money, products or services to charity	55%	69%	71%	F=8.884***
	ANOVA shows that large firms have significantly higher rates of this program than small sized firms and medium sized firms have significantly more than small sized firms. However, there is no significant difference between medium and large sized firms.			
Considers diversity in hiring decisions	20%	40%	61%	F=47.769***
	ANOVA shows that large firms have significantly higher rates of this program than small and medium sized firms and medium sized firms have significantly more than small sized firms but significantly less than larger firms.			
Has family-friendly policies	52%	71%	68%	F=12.801***
	ANOVA shows that large firms have significantly higher rates of this program than small sized firms and medium sized firms have significantly more than small sized firms. However, there is no significant difference between medium and large sized firms.			
Has stress management initiatives	20%	36%	68%	F=60.952***
	ANOVA shows that large firms have significantly higher rates of this program than small and medium sized firms and medium sized firms have significantly more than small sized firms but significantly less than larger firms.			
Has ethical purchasing policies	36%	36%	42%	F=.744
	ANOVA shows no significant difference between firms of different size.			

Measures outcomes/impacts of socially-related initiatives	11%	11%	27%	F=12.381***
	ANOVA shows that large firms have significantly higher rates of this program than small and medium sized firms, while small and medium sized firms have similar levels.			
Develops product and service innovations based on social benefits	21%	15%	27%	F=3.373*
	ANOVA shows that large firms have significantly higher rates of this program than medium sized firms, while small sized firms also have significantly higher rates of this program than medium sized firms. Small and large sized firms have similar levels.			
None	10%	2%	2%	F=10.100***
	ANOVA shows that small firms are significantly more likely to have no programs compared to medium and large sized firms. Medium and large sized firms are not significantly different from each other.			

Note: ANOVA Bonferroni Post-Hoc Analysis. *p< .05, **p< .01, ***p< .001

Appendix 5 – Business Engagement In Socially-Related Activities By Membership

Business engages in the following socially-related activities:	Affiliated N=350	Non-Affiliated N=402	T-Test
Provides job training	62%	50%	3.104**
Provides assistance for employees to obtain tertiary education	38%	25%	3.674***
Gives time, money, products or services to local community projects	74%	44%	8.608***
Contributes time, money, products or services to charity	69%	55%	4.177***
Considers diversity in hiring decisions	45%	21%	7.247***
Has family-friendly policies	69%	52%	4.841***
Has stress management initiatives	44%	23%	6.477***
Has ethical purchasing policies	51%	26%	7.380***
Measures outcomes/impacts of socially-related initiatives	22%	7%	6.069***
Develops product and service innovations based on social benefits	33%	10%	8.357***
None	1%	11%	-5.591***

*p< .05, **p< .01, ***p< .001. All test are single-tailed.

Appendix 6 – Institutional Pressures Towards Environmental Activities By Affiliation

My business is getting internal pressure to improve environmentally from...	Affiliated N=350	Non-Affiliated N=402	T-Test
Parent company	7%	4%	2.232*
Shareholders	12%	5%	3.336**
Employees	30%	10%	7.293***
Personal values, beliefs and/or commitments of management	61%	28%	9.651***
No one	20%	55%	-10.479***

My business is getting external pressure to improve environmentally from...			
Customers	32%	18%	4.443***
Competitors	14%	6%	3.627***
Central government	13%	9%	1.839*
Local government	13%	12%	.507
Pressure groups	7%	5%	1.096
No one	45%	58%	-3.464**

*p< .05, **p< .01, ***p< .001. All test are single-tailed.

Appendix 7 – Institutional Pressures Towards Environmental Activities By Firm Size

My business is getting internal pressure to improve environmentally from...	Small N=426	Medium N=188	Large N=136	ANOVA Test
Parent company	1%	9%	15%	F=23.286***
	ANOVA shows that large firms report significantly higher rates of this pressure than small and medium sized firms and medium sized firms have significantly more pressure than small sized firms but significantly less pressure than larger firms.			
Shareholders	5%	6%	22%	F=19.823***
	ANOVA shows that large firms report significantly higher rates of this pressure than small and medium sized firms. Small and medium sized firms are not significantly different from each other.			
Employees	8%	27%	43%	F=51.591***
	ANOVA shows that large firms report significantly higher rates of this pressure than small and medium sized firms and medium sized firms have significantly more pressure than small sized firms but significantly less pressure than larger firms.			
Personal values, beliefs and/or commitments of management	40%	48%	48%	F=2.088
	ANOVA shows no significant difference between firms of different size.			
No one	49%	32%	17%	F=26.686***
	ANOVA shows that small firms are significantly more likely to report feeling no pressures towards improving environmentally. Medium sized firms report significantly more pressure than small but significantly less pressures than large sized firms.			
My business is getting external pressure to improve environmentally from...				
Customers	18%	30%	40%	F=16.739***
	ANOVA shows that large firms report significantly higher rates of this pressure than small and medium sized firms and medium sized firms have significantly more pressure than small sized firms but significantly less pressure than large sized firms.			
Competitors	7%	11%	16%	F=5.161***
	ANOVA shows that large firms report significantly higher rates of this pressure than small sized firms, while medium and large sized firms report similar levels of pressure.			
Central government	6%	12%	26%	F=22.835***
	ANOVA shows that large firms report significantly higher rates of this pressure than small and medium sized firms and medium sized firms have significantly more pressure than small sized firms but significantly less pressure than large sized firms.			

Local government	8%	16%	24%	F=14.068***
	ANOVA shows that large firms report significantly higher rates of this pressure than small and medium sized firms and medium sized firms have significantly more pressure than small sized firms. There is no difference in pressure between medium and large sized firms.			
Pressure groups	4%	3%	15%	F=14.568***
	ANOVA shows that large firms report significantly higher rates of this pressure than small and medium sized firms and medium sized firms have significantly less pressure than larger firms. Small and medium sized firms report similar levels of this pressure.			
No one	65%	45%	21%	F=45.611***
	ANOVA shows that small firms are significantly more likely to report feeling no pressures towards improving environmentally. Medium sized firms report significantly more pressure than small but significantly less pressures than large sized firms.			

Note: ANOVA Bonferroni Post-Hoc Analysis. *p< .05, **p< .01, ***p< .001

Appendix 8 – Institutional Pressures Toward Socially-Related Activities By Affiliation

My business is getting internal pressure to improve socially-related activities from...	Affiliated N=350	Non-Affiliated N=402	T-Test
Parent company	3%	2%	1.471
Shareholders	7%	3%	2.596**
Employees	25%	9%	6.105***
Personal values, beliefs and/or commitments of management	41%	17%	7.636***
No one	41%	66%	-7.339***

My business is getting external pressure to improve socially-related activities from...			
Customers	16%	8%	3.570***
Competitors	7%	2%	2.889**
Government	4%	3%	.956
Pressure groups	4%	3%	.956
No one	7%	11%	-1.868*

*p< .05, **p< .01, ***p< .001. All test are single-tailed.

Appendix 9 – Institutional Pressures Toward Socially-Related Activities By Firm Size

My business is getting internal pressure to improve socially-related activities from...	Small N=426	Medium N=188	Large N=136	AVA Test
Parent company	1%	4%	7%	F=23.286***
	ANOVA shows that large firms report significantly higher rates of this pressure than small sized firms and medium sized firms have significantly more pressure than small sized firms. Medium and large sized firms report similar levels of pressure.			
Shareholders	4%	4%	9%	F=2.222
	ANOVA shows no significant difference between firms of different size.			
Employees	9%	20%	35%	F=29.224***
	ANOVA shows that large firms report significantly higher rates of this pressure than small and medium sized firms and medium sized firms have significantly more pressure than small sized firms but significantly less pressure than larger firms.			
Personal values, beliefs and/or commitments of management	26%	31%	33%	F=1.845
	ANOVA shows no significant difference between firms of different size.			
No one	64%	53%	26%	F=31.951***
	ANOVA shows that small firms are significantly more likely to report feeling no pressures towards providing socially-related activities. Medium sized firms report significantly more pressure than small but significantly less pressures than large sized firms.			

My business is getting external pressure to improve environmentally from...				
Customers	9%	11%	21%	F=6.778***
	ANOVA shows that large firms report significantly higher rates of this pressure than small and medium sized firms. Small and medium sized firms report similar levels of pressure.			
Competitors	4%	5%	7%	F=1.769
	ANOVA shows no significant difference between firms of different size.			
Government	2%	3%	10%	F=11.473***
	ANOVA shows that large firms report significantly higher rates of this pressure than small and medium sized firms. Small and medium sized firms report similar levels of pressure.			

Pressure groups	2%	3%	10%	F=11.473***
	ANOVA shows that large firms report significantly higher rates of this pressure than small and medium sized firms. Small and medium sized firms report similar levels of pressure.			
No one	6%	9%	22%	F=17.226***
	ANOVA shows that large firms report significantly higher rates of this pressure than small and medium sized firms. Small and medium sized firms report similar levels of pressure.			

Note: ANOVA Bonferroni Post-Hoc Analysis. *p< .05, **p< .01, ***p< .001

Appendix 10 – Barriers and Drivers towards Environmental and Socially-Related Activities by Affiliation

Barriers:	Affiliated N=350	Non-Affiliated N=402	T-Test
Cost implications	54%	54%	-.063
Knowledge and skills	29%	24%	1.641
Not seen as important in the organisation	9%	27%	-6.438***
Other priorities are more important	29%	30%	-.286
Management time	43%	31%	3.273**
Lack of metrics to establish business case	17%	11%	2.349*
Culture of the organisation	8%	7%	.682

Drivers:			
Cost management/reduction	34%	24%	3.079**
Improved shareholder value	18%	6%	5.194***
Investor pressure, including socially responsible investing	6%	3%	2.016*
Board influence	17%	7%	4.224***
Outside pressure groups	5%	4%	.585
Attractiveness to employees	43%	20%	7.026***
Reputation and brand	68%	43%	7.149***
Risk management	18%	10%	3.220**
Government regulations	9%	16%	-2.969**

*p< .05, **p< .01, ***p< .001. All test are single-tailed.

Appendix 11 – Barriers And Drivers Towards Environmental And Socially-Related Activities By Firm Size

Barriers:	Small N=426	Medium N=188	Large N=136	AVA Test
Cost implications	49%	57%	65%	F=5.413**
	ANOVA shows that large firms report significantly higher rates of this barrier than small sized firms. Small and medium sized firms report similar levels of this barrier, as do medium and large sized firms.			
Knowledge and skills	23%	32%	30%	F=3.037*
	ANOVA shows that medium sized firms report significantly higher rates of this barrier than small sized firms. Medium and large sized firms report similar levels of this barrier, as do small and large sized firms.			
Not seen as important in the organisation	17%	16%	24%	F=2.023
	ANOVA shows no significant difference between firms of different size.			
Other priorities are more important	23%	35%	46%	F=15.043***
	ANOVA shows that large firms report this barrier significantly higher than small and medium sized firms and medium sized firms report it significantly higher than small sized firms but significantly less than larger firms.			
Management time	33%	42%	36%	F=2.104
	ANOVA shows no significant difference between firms of different size.			
Lack of metrics to establish business case	10%	17%	24%	F=8.543***
	ANOVA shows that large firms report this barrier significantly higher than small and medium sized firms and medium sized firms report it significantly higher than small sized firms. Medium and large sized firms report similar levels.			
Culture of the organisation	5%	6%	18%	F=14.970***
	ANOVA shows that large firms report this barrier significantly higher than small and medium sized firms, while small and medium sized firms report similar levels.			

Drivers:	Small N=426	Medium N=188	Large N=136	AVA Test
Cost management/reduction	23%	31%	44%	F=12.113***
	ANOVA shows that large firms report this driver significantly higher than small and medium sized firms, while small and medium sized firms report similar levels.			
Improved shareholder value	8%	13%	21%	F=8.416***
	ANOVA shows that large firms report this driver significantly higher than small and medium sized firms, while small and medium sized firms report similar levels.			
Investor pressure, including socially responsible investing	3%	3%	11%	F=8.871***
	ANOVA shows that large firms report this driver significantly higher than small and medium sized firms, while small and medium sized firms report similar levels.			
Board influence	6%	18%	22%	F=16.773***
	ANOVA shows that medium and large sized firms report significantly higher rates of this driver than small sized firms. Medium and large sized firms report similar levels of this driver.			
Outside pressure groups	2%	5%	11%	F=10.010***
	ANOVA shows that large firms report this driver significantly higher than small and medium sized firms, while small and medium sized firms report similar levels.			
Attractiveness to employees	22%	43%	41%	F=19.020***
	ANOVA shows that large firms report this driver significantly higher than small sized firms, while medium sized firms also report higher than small sized firms. Medium and large sized firms report similar levels of this driver.			
Reputation and brand	47%	64%	65%	F=11.481***
	ANOVA shows that large firms report this driver significantly higher than small sized firms, while medium sized firms also report higher than small sized firms. Medium and large sized firms report similar levels of this driver.			
Risk management	7%	16%	32%	F=32.149***
	ANOVA shows that large firms report this driver significantly higher than small and medium sized firms and medium sized firms report it significantly higher than small sized firms but significantly less than larger firms.			
Government regulations	10%	12%	23%	F=7.558**
	ANOVA shows that large firms report this driver significantly higher than small and medium sized firms. Small and medium sized firms report similar levels of this driver.			

Note: ANOVA Bonferroni Post-Hoc Analysis. *p< .05, **p< .01, ***p< .001

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- Collins, E., Roper, J. & Lawrence, S. (In Press). Sustainability Practices: Trends in New Zealand Businesses *Business Strategy and the Environment*.
- Collins, E., Lawrence, S., & Pavlovich, K., and Ryan, C. (2007). Business Networks and the Uptake of Sustainability Practices in Small and Medium-Sized Enterprises: The Case of New Zealand. *Journal of Cleaner Production*, 15(8&9), 729-740.
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