

Drivers of Corporate Social Responsibility Attitudes: The Demography of Socially Responsible Investors

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Demographic characteristics of socially responsible investors (SRIs) are likely to play a significant role in shaping their perceptions and behaviour concerning corporate social responsibility (CSR). This paper identifies demographic characteristics of SRIs and explores the relationship of these characteristics with their CSR attitudes. We analyse, using generalized ordered logistic regression, the questionnaire responses of 2464 SRIs from 20 countries. The results demonstrate that younger and female SRIs are more likely to believe that a company's social and environmental performance is as important as its financial performance. Female SRIs and those with high incomes are the most likely to believe that companies should be as responsible to their shareholders as to the broader society. In addition, younger SRIs, those with high incomes and those who have attained higher education levels regard socially responsible companies as at least as profitable as other companies. The benefits which companies can derive from understanding the demographic profile of SRIs are examined, including a potentially lower cost of capital, improved CSR rankings and business policy formulation and communication consistent with CSR views held by specific groups of SRIs.

Introduction

Since its introduction in the early 1990s, socially responsible (SR) investment has gained prominence (Robson and Wakefield, 2007) as both a rival and a complement to conventional investment (Sparkes, 1991). Broadly defined, SR investment is the philosophy and practice of

making strategic investment decisions by integrating financial and non-financial considerations, including personal values, societal demands, environmental concerns and corporate governance issues (Lozano, Albareda and Balaguer, 2006; Michelson *et al.*, 2004; Scholtens, 2006). These non-financial factors are commonly linked with corporate social responsibility (CSR), defined as the philosophy and practice of voluntarily integrating social and environmental concerns into companies' operations (Jamali, Safieddine and Rabbath, 2008) and mobilizing companies' resources to benefit society beyond basic economic and legal concerns (Carroll, 1991). Conflicting views on CSR still exist but contemporary proponents argue that companies'

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objectives should include the pursuit of financial well-being *and* the satisfaction of stakeholders' non-financial aspirations, beyond mere compliance with legal requirements (Baron, 2001; Cheah, Chan and Chieng, 2007; Donaldson and Preston, 1995; Freeman, 1984; Garriga and Mele, 2004; Hart, 1995; McWilliams and Siegel, 2001).

Socially responsible investors¹ (SRIs) are likely to invest in companies with CSR agendas (Sparkes and Cowton, 2004). The relationship between CSR and SR investment is captured by Sparkes (2002, p. 42): 'CSR and SR investing are in essence mirror images of each other. Each concept basically asserts that business should generate wealth for society but within certain social and environmental frameworks. CSR looks at this from the viewpoint of companies, SR investment from the viewpoint of investors in those companies.' Therefore, a growth in SR investment is likely to lead to greater sensitization to responsible business practice and societal welfare. In other words, the link between CSR and SR investment suggests that the latter is one of the key drivers of CSR and can play a crucial role in influencing organizations to adopt more SR business practices (Lozano, Albareda and Balaguer, 2006; Waring and Edwards, 2008).

The growth in SR investment in the USA has been linked to particular groups defined by demographic characteristics such as gender and education (Michelson *et al.*, 2004). In addition, a number of studies have identified demographic characteristics as a potentially useful means of profiling SRIs (Hayes, 2001; Michelson *et al.*, 2004; Rosen, Sandler and Shani, 1991; Schueth, 2003; Tippet, 2001; Tippet and Leung, 2001). However, erroneous conclusions may have been drawn from these studies, as most employed small samples. In addition, it could be argued that several of the studies used inappropriate methods to investigate the relationship between demographic characteristics of SRIs and their CSR attitudes. For example, Williams (2007) employed the binary logistic regression model

which, as a result of the process of dichotomizing the responses, could have led to a loss of statistical power, as information contained in the ordering of the responses was diluted (Long and Freese, 2001). In addition, it could be argued that, in some studies, statistical models to distinguish the investment decision-making styles of SR and conventional investors were inappropriate (e.g. McLachlan and Gardner, 2004).

The aim of this study is to fill the gap in our understanding of the demographic characteristics of SRIs, which can be used to distinguish their views on CSR-related issues. In particular, the study makes the following important contributions. First, we use existing literature to identify some demographic characteristics that may be useful for segmenting the population of SRIs. We then use responses from a large, global questionnaire survey to identify 2464 SRIs from 20 countries and investigate the manner in which their demographic characteristics are related to their CSR-related attitudes. This is achieved by employing a generalized ordered logistic (gologit) regression model, which enables us to capture the full richness of information contained in the SRIs' ordered questionnaire responses.

A closer examination of the demographic characteristics of SRIs is worthwhile, in itself, as this can help to identify the distinctive attributes of SRIs which may influence their investment decision-making styles. An understanding of SRIs' demographic characteristics also enables CSR focused companies² to prioritize their CSR agendas in order to attract specific groups of SRIs (cliente effect). In addition, an awareness of the demographic characteristics of SRIs enables SR investment fund managers to target their sales strategies towards specific groups of SRIs, while attending to internal issues relating to the selection and retention of employees who share the same affinities and orientations (McLachlan and Gardner, 2004; Williams, 2007). Furthermore, understanding the demographic characteristics of SRIs (and the issues they consider important when making investment decisions) is critical for organizations, particularly because of the increasing importance of

¹There is no universal definition for SRIs, nor a universal agreement on the characteristics of an SRI. For the purpose of this study, we define SRIs as those who aim to achieve an acceptable rate of return within the boundaries of ethical corporate activities and those who seek to influence corporate behaviour by pursuing greater social accountability and responsibility for companies (Hudson, 2005).

²We define CSR focused companies as those with explicit objectives in executing CSR-related agendas. These companies may or may not be owned exclusively by SRIs.

SRI and their demands to become further engaged with the executives of publicly listed companies (specifically to influence corporate decision-making).

The paper proceeds as follows. In the next section, we first examine the role of SR investment with respect to specific salient themes in the CSR debate (namely, financial performance, company profitability, responsibility to broader society and trust in financial statements). The objective of this discussion is to establish issues related to these four themes on which different groups of SRIs may disagree. Second, we use the results of existing studies to identify some demographic characteristics that may be useful for segmenting the population of SRIs. Third, we develop a series of hypotheses based on the view that the demographic characteristics of SRIs are correlated with their CSR-related views. In the following section the methodology and data employed to test these hypotheses are explored. The empirical results and related analyses are presented in the penultimate section, together with a discussion of their important implications. Finally, we draw conclusions, identify limitations of the study and suggest future avenues for research.

Literature review and hypotheses development

Four themes in the CSR literature

A number of studies have investigated the role of socio-demographic characteristics in explaining the demand for SR investment products (for a review see Nilsson, 2009). In addition, clear links between SR investment and CSR have been established in previous studies (Anderson, 1986; Sparkes, 2002). However, no previous literature links the socio-demographic characteristics of SRIs to their CSR views (Nilsson, 2009).³ Roberts (1996) suggests that this is an important gap in our knowledge. Our aim, therefore, is to fill this gap. To achieve this, we begin this section

³A sample of more recent SR investment literature which features demographic characteristics as explanatory variables is provided in the Appendix. A more complete literature review is summarized in Nilsson (2009) and the literature exploring the role of socio-demographics in profiling green consumers is explored in Diamantopoulos *et al.* (2003).

by examining the role of SR investment with respect to key themes in the CSR debate, and specifically, to establish issues on which particular SRIs may disagree. Later in the paper, we explore to what extent particular groups of SRIs, defined by their demographic characteristics, differ in their views regarding these issues.

CSR and financial performance

Previous studies have shown that CSR and financial performance are linked (Cochran and Wood, 1984). According to the efficient market hypothesis, if CSR leads to improved financial performance, information regarding a change in a company's CSR ratings will instantaneously alter share prices once equity market participants become aware of the information. Consequently, for example, efforts to increase workforce diversity with respect to demographic characteristics (e.g. age and educational attainment diversity, increasing female representation on corporate boards), which are likely to improve CSR ratings, can potentially have a positive impact on shareholders' wealth (Erhardt, Werbel and Shrader, 2003; Nielsen and Huse, 2010). Similarly, the cost of ineffective CSR measures may have a detrimental effect on shareholders' wealth.

Companies who are interested in improving their financial performance may therefore attempt to appeal to investors with views in line with their own CSR policies, because, provided these investors 'ethical' objectives are satisfied by the company's policies, they are likely to accept a lower rate of equity return. This, in turn, leads to a higher value of the company. This is akin to the clientele effect in corporate finance, where companies appeal to investors with specific cash flow needs that match their dividend payout policy (again lowering the cost of capital).⁴ Consequently, in order to improve the value of their companies, boards of directors may decide to tailor their CSR policies to the attitudes of

⁴For details on how wealth maximization (as a shareholder's objective), company value and the present value of tax shield are related, please refer to the seminal paper by Modigliani and Miller (1958) and to Brounen, Jong and Koedijk (2006), Hovakimian, Hovakimian and Tehranian (2004), Miller (1988) and Rajan and Zingales (1995). Essentially, in the presence of tax, a lower cost of capital leads to a higher value of the company, implying an increase in shareholder wealth.

particular groups of SRIs, perhaps defined by their demographics. For example, companies who wish to attract female shareholders can implement CSR decisions in line with the attitudes of this specific group of investors. Furthermore, in searching for potential funds, CSR companies may wish to appeal to the more affluent groups within the SRIs. This can again help to lower their cost of capital because the more affluent SRIs may be willing to compromise their wealth maximization objective in order to support financially sustainable CSR-related agendas.

In seeking to align their CSR policies with the attitudes of particular groups of SRIs, companies must be aware that different groups of SRIs give higher or lower priority to maximizing shareholder wealth than to the goals of promoting social and environmental concerns. Therefore, some SRIs may be more tolerant of accepting some financial penalty, commonly known as the 'ethical penalty' (McLachlan and Gardner, 2004; Williams, 2007). These SRIs would clearly disagree with the view (which we term CSR View 1) that 'a company's social and environmental performance is not as important as its financial performance'.

CSR and company profitability

Triple bottom line is a systematic approach to managing the complete set of a company's responsibilities and for reconciling economic, social and environmental objectives to produce a more balanced view of corporate performance (Jamali, 2006). However, the more traditional and prevalent view in the CSR literature is that economic responsibility, measured by a company's profitability, is indeed the foundation upon which all other responsibilities rest (Carroll, 1979, 1991, 1999) and that business organizations need to focus primarily on profitability and the economic bottom line to ensure their viability.

Given the agency relationship between company directors and their owners and the growing importance of SR investment, directors of publicly listed companies are increasingly required to take account of the views and perceptions of SRIs. Agency theory suggests that the contractual agency relationship between directors (agents) and shareholders (principals) ensures that directors are legally bound to act in the best interests of shareholders. They are therefore

required to undertake business strategies aimed at satisfying shareholders' wealth maximization objectives (Jensen and Meckling, 1976). Researchers have explored whether engagement in CSR compromises this objective (Lindgreen and Swaen, 2010; Margolis and Walsh, 2001; Orlitzky, Schmidt and Rynes, 2003) and hence the level of profitability of SR investment funds (Bauer, Koedijk and Otten, 2005; Hamilton, Jo and Statman, 1993; Statman, 2000). Evidence in this respect is mixed (Baron, 2001; Cochran and Wood, 1984; McWilliams and Siegel, 2001; Waddock and Graves, 1997). However, Carroll and Shabana (2010) argue that companies that engage in CSR activities will see direct and clear links between CSR initiatives and superior financial profitability. Consequently, they argue that it is important for companies to pursue CSR initiatives, as this will also fulfil the obligations of managers to maximize shareholders' wealth in general and profitability in particular. We summarize this side of the argument as CSR View 2: 'companies that are socially responsible are more profitable than socially irresponsible companies'.

There are also arguments against implementing CSR initiatives, since many of these initiatives could have negative effects on profitability, as suggested by the mixed research evidence indicated above. In addition, effective CSR initiatives are often unique to particular circumstances and may not yield the same level of financial profitability if they are replicated in other situations. Consequently, it is plausible that certain groups of SRIs, particularly those who give greater weight to profit, may not agree with CSR View 2.

CSR and responsibility to broader society

Friedman (1970) suggested that companies should only be accountable to their shareholders, maintaining that publicly listed companies should focus on the shareholder wealth maximization objective. Similarly, it has been argued that companies should pay little attention to ethical obligations, provided they operate profitably and within legal stipulations (Hill *et al.*, 2003). More recent views on CSR fall into two camps: the classical view, with a narrow competitiveness focus and little tolerance for a social role for business, and the modern view, which envisages businesses' responsibility extending beyond profit-making to include a wider spec-

trum of stakeholders' and society's interests (Jamali, Sidani and El Asmar, 2009; Quazi and O'Brien, 2000). In addition, the modern view argues that directors need to constantly realign the company to the perceptions and expectations of stakeholders, to ensure sustained legitimacy (Post, 1978). Nasi, Nasi and Zyglidopoulos (1997) and Panwar, Han and Hansen (2010) underscore the importance of companies investigating the gap between societal expectations and societal perceptions regarding their current performance. A higher/lower expectation for companies to undertake CSR activities may result from an unfavourable/favourable perception by society concerning their efforts in promoting CSR activities. Consequently, according to agency theory, directors will need to pay close attention to perceptions held by stakeholders, defined in the broadest sense.

We summarize the classical view of CSR as 'companies should be more responsible to their shareholders than to the broader society' (CSR View 3), and we suspect that some groups of SRIs are more likely to adhere to this view than the alternative, modern view.

CSR and trust in financial statements

There are mixed views in the CSR literature concerning the extent to which the recent ascendancy of CSR can mitigate widely prevailing distrust in companies and in the accuracy of their financial statements. Some argue that, following a string of corporate scandals, there is a global crisis of ethics (Ghillyer, 2008) and a fundamental distrust of companies and their reporting practices. For example, several prominent organizations (all formerly Wall Street stars, e.g. Enron and WorldCom) have been found to have hidden the true state of their precarious finances. On the other hand, there is an increased awareness of the importance of ethics, with CSR advancing steadily and moving into the mainstream (Ghillyer, 2008). However, with massive bankruptcies, accounting scandals, fraud and evidence of obstruction to justice by major corporations, the erosion of trust in companies and in their financial reports remains a major concern (Sagar and Singla, 2003). As a result, numerous companies have implemented programmes to incorporate ethics into their organizations. These programmes range from formulated codes of ethics to educating their employees towards ethical behaviour (Schlegelmilch, 1997).

In summary, the growth of CSR may have gone some way to increasing faith in the veracity of companies' financial statements, but it is likely that some groups of more sceptical SRIs may still adhere to CSR View 4, namely: 'the accuracy of financial statements of many companies cannot be trusted'.

SRI and socio-demographic characteristics: hypotheses development

CSR is a multi-faceted concept that potentially affects the entire spectrum of business decision-making. Nilsson (2009) argues that SR investment decisions, which integrate financial, social, environmental and ethical considerations, share similar dimensions with pro-social variables associated with CSR. At one end of the spectrum, SRIs who predominantly focus on the wealth maximization objective (keeping SR objectives to a minimum) can behave primarily like non-SRIs. However, some SRIs, who focus on SR agendas, may behave very differently. Consequently, while SRIs are often treated as a homogeneous group, they are likely to be heterogeneous in their investment preferences.

In order to be considered as a suitable investment vehicle by SR mutual funds, many companies take steps to adhere to certain standards of CSR, giving greater weight to ethical decision-making (Nilsson, 2008; Schlegelmilch, 1997). Many companies take such steps realizing that there is heterogeneity in investment preferences among SRIs. However, they often have little knowledge of the CSR attitudes of different groups of SRIs. The decisions of companies wishing to attract SR investment are therefore likely to be improved if they are able to target their actions in line with the criteria considered most important by particular segments of the SRI community. In seeking to explore how different groups of SRIs vary in terms of their attitudes to CSR issues we explore the possibility of employing SRIs' demographic characteristics as a means of achieving this (Roberts, 1996).

Rest (1986) was one of the first to develop a theory of ethical decision-making⁵ which used demographic characteristics to explain (and

⁵For a comprehensive list of previous studies reviewing the literature on ethical decision-making, see O'Fallon and Butterfield (2005), Loe, Ferrell and Mansfield (2000) and Ford and Richardson (1994).

predict) how individuals think about, and react to, ethically charged situations. The theory argues that an individual's perception of moral intensity is moderated by individual and organizational characteristics and varies across different situations. In particular, McLachlan and Gardner (2004) found a statistically significant difference in the perception of moral intensity among SRIs and conventional investors. Harrison (1995) has also argued that demographic information is useful when segmenting markets on the basis of attitudes.

Three recent studies have directly associated demographic factors (a) with differences in the amount of SR investment (Nilsson, 2008), (b) with which investors are likely to report themselves as having made an SR investment (Junkus and Berry, 2010) and (c) with differences in SRIs' attitudes (Nilsson, 2009). The data, methodology and major findings of these studies are summarized in Appendix A. Each of these studies has important limitations (see Appendix A) but they all suggest that segmenting SRIs by demographic characteristics may be possible. We therefore explore whether the views of SRIs segmented according to the demographic factors explored in these studies (gender, age, education and income) differ with respect to the controversial themes emerging from the CSR literature, discussed above: (i) the relative importance of companies' social and environmental versus financial performance; (ii) whether companies which pursue CSR policies are more profitable; (iii) whether company responsibilities should be broad (e.g. to society at large) or narrow (e.g. to shareholders); and (iv) the degree to which the financial statements of companies can be trusted.

To achieve this objective we develop hypotheses related to the four demographic factors education, age, income and gender.

Education levels. Lewellen, Lease and Schlarbaum (1977) found that the level of education affects an investor's capital gains, dividend yield and overall return. In addition, SR consumers have been shown to be better educated (Chan, 1999; Murphy, Kangun and Locander, 1978; Schueth, 2003; Wall, 1995). These findings are supported by the work of Nilsson (2009) and Tippet and Leung (2001) which has shown that the education level of SRIs explains their demand for SR investment funds. Consequently, we

believe that SRIs who are better educated are likely to be more aware of, and concerned about, the impact of companies' activities on society and the environment. Hence, we would expect that their perceptions regarding the conduct of companies are more likely to influence their investment behaviour. Further, we expect SRIs who are better educated to be more sceptical of annual company reports, as ethics-related subjects increasingly feature in institutions of higher learning, especially in business schools (Warren and Tweedale, 2003). Consequently, we expect SRIs' level of education to affect their views concerning the four important issues related to CSR identified above. To explore this view we test the following null hypothesis.

H1: The level of education amongst SRIs does not affect the degree to which they hold CSR Views 1–4.

Age. A number of studies have shown that SRIs tend to be younger (e.g. Diamantopoulos *et al.*, 2003; Hayes, 2001; Laroche, Bergeron and Barbaro-Forleo, 2001; Lewellen, Lease and Schlarbaum, 1977; Rosen, Sandler and Shani, 1991; Schueth, 2003). This clearly suggests a link between age and attitudes to SR investment. In particular, we suspect that younger SRIs may represent a generation of investors who are more sensitive to the manner in which companies conduct their business and the impact they have on society and the environment. We therefore suspect that a link may also exist between the age of SRIs and their CSR attitudes. To explore this view we test the following null hypothesis.

H2: The age of SRIs does not affect the degree to which they hold CSR Views 1–4.

Income levels. SRIs have been found to have lower incomes than their mutual fund counterparts (Rosen, Sandler and Shani, 1991) but SRIs are generally wealthier (Tippet, 2001; Vinning and Ebreo, 1990). Even though the objective of maximizing expected return on investment remains an essential requirement for many investors (Matterson, 2000), SRIs are willing to trade off this objective with the goals of promoting the well-being of the planet. In other words, SRIs, particularly wealthier SRIs, may be more willing to tolerate an 'ethical penalty' (McLachlan and

Gardner, 2004; Williams, 2007). We therefore suspect that the level of income of SRIs may influence their CSR attitudes. To explore this view we test the following null hypothesis.

H3: The level of SRIs' income does not affect the degree to which they hold CSR Views 1–4.

Gender. An important implication of the trend for women to be appointed as senior executives and directors is that this gives them access to power and the ability to invest. This is important since it has been shown that women make a larger proportion of SRIs from the overall investor population (Beal, Goyen and Phillips, 2005). This is supported by Tippet and Leung (2001) and Tippet (2001), who have shown that SRIs tend to be predominantly female (Lewellen, Lease and Schlarbaum, 1977; Schueth, 2003). Similarly Diamantopoulos *et al.* (2003) and Laroche, Bergeron and Barbaro-Forleo (2001) have shown that SR consumers tend to be women. Previous studies have also shown that cognitive abilities, problem-solving, motivation, risk attitudes, confidence and decision styles differ between males and females, and these factors clearly help to shape their perceptions of moral intensity (Johnson and Bruce, 1993; Johnson and Powell, 1994). We therefore expect that SRIs' gender may influence their CSR attitudes. To explore this view we test the following null hypothesis.

H4: SRIs' gender does not affect the degree to which they hold CSR Views 1–4.

Data and methods

Data sample, measures and variables

We employed the Environics data set supplied by GlobeScan Ltd. The survey on which the data set was based involved a fully stratified representative sample. It contains responses concerning a wide range of individual attitudes toward CSR from 1000 individuals (investors and non-investors) from each of 20 countries (20,000 in total). Non-SRIs' responses were filtered out, leaving 2464 for analysis.

There is no universal agreement on how to identify SRIs. The study by McLachlan and Gardner (2004) accessed clients of several

Australian service companies (including some companies that advertised only 'ethical' investment products). They identified SRIs as those participants who (a) were current customers of a designated ethical service provider or (b) reported themselves as holding an investment portfolio including designated ethical shares or designated ethical funds. However, being current customers of a designated ethical service provider and/or holding shares in ethical investment products does not necessarily imply that investors are SRIs. To overcome this problem we first identify active investors as those respondents who indicated that they own shares (i) directly, (ii) indirectly through a mutual fund, pension plan or other retirement fund, or (iii) both directly and indirectly (see Appendix B, question 1). SRIs are then identified as a subset of these active investors if they report that they have either bought or sold their shares at least once because of a company's demonstrated social responsibility (see Appendix B, question 2). This, we believe, provides a better means of identifying SRIs than that adopted by McLachlan and Gardner (2004), since the investors specifically indicated that their decisions were influenced by social considerations.

The survey was designed to reduce cultural bias in the use of response scales. For example, it is known that Latin cultures tend to use the extreme ends of scales, whereas other cultures (e.g. Japanese) tend to float to the centre so as not to stand out from the crowd. In an attempt to minimize this effect the questions were designed such that their content displayed as little cultural bias as possible. In particular, the survey was designed such that the questions had relevance in virtually every country. In addition, the questionnaires were pre-tested, in English, to ensure that questions were understandable. A total of six to ten participants were selected in one developed country (usually Canada) and a similar number in a developing country (often Kenya). Whilst questions were not rotated in a pre-test to control for position of a question, the question sequencing was always taken into account and whenever possible the relative question sequence was held constant over multiple tracking waves. Finally, the fieldwork was conducted using the ESOMAR (www.esomar.org) guidelines for either telephone or face-to-face interview.

Montiel (2008) indicates that there is no universally accepted conceptualization or

Table 1. CSR views explored and metrics used to assess SRIs' attitudes

CSR views	Metrics
As an investor, a company's social and environmental performance is not as important to me as its financial performance	1 – Strongly agree 2 – Somewhat agree 3 – Somewhat disagree 4 – Strongly disagree
Companies that are socially responsible are more profitable than socially irresponsible companies	1 – Strongly agree 2 – Somewhat agree 3 – Somewhat disagree 4 – Strongly disagree
Companies should be more responsible to their shareholders than to the broader society	1 – Strongly agree 2 – Somewhat agree 3 – Somewhat disagree 4 – Strongly disagree
I do not trust the accuracy of the financial statements of many companies	1 – Strongly agree 2 – Somewhat agree 3 – Somewhat disagree 4 – Strongly disagree

measurement of CSR attitudes. The scales employed in our study for measuring the strength of CSR attitudes involve the use of a four-point Likert scale, where 1 is strongly agree and 4 is strongly disagree. These CSR attitudes are employed as the dependent variables. The four statements of CSR attitudes to which respondents were asked their degree of agreement and the respective metrics employed to capture their responses are shown in Table 1.

Demographic details of the SRI respondents, including 'education' (metric: low, medium and high), 'income' (metric: low, medium low, medium, medium high and high), 'age' (metric: age) and 'gender' (metric: male and female), were assigned as independent variables.

The descriptive statistics of the dependent and independent variables are presented in Table 2. Using the median as the measure of central tendency, the demographic description of a typical SRI in our study would be a 45-year-old male with a medium level of income and education. Our results suggest that SRIs are generally older (median age 45) than the age range reported by Hayes (2001), i.e. between 18 and 24. In addition, our sample of SRIs contained a greater proportion (58%) of males, in contrast to the sample used by Tippet and Leung (2001).

Generalized ordered logistic regression model

The ordered logistic (ologit) regression model is usually used when the responses to the dependent

variables are ordinal, regardless of whether the independent variables are categorical or continuous. In our study, each of the dependent variables is regressed against all the demographic characteristics. As a result, each of the CSR attitude statements generates separate regression results.⁶

An assumption that underpins the ologit regression is the parallel line assumption. This requires that the effect of a change in the independent variables is the same for each level of the dependent variables. For example, if age is the independent variable, then the impact on the dependent variable of a 10-year increase from, say, 30 years or 40 years should be identical. If this assumption is violated, the coefficients produced by the ologit model will be invalid. In practice, this assumption is overly restrictive and is often violated (Long and Freese, 2001). To overcome this limitation, we employ a model which corrects for problems arising from violation of the assumption: the generalized ordered logistic (gologit) regression model (Clogg and Shihadeh, 1994; Fahrmeir and Tutz, 1994; Fu, 1998; McCullagh and Nelder, 1989). Consequently, employing the gologit model ensures that the results we produce are unbiased (Long and Freese, 2001). Long and Freese (2001) and Williams (2006) provide an accessible treatment of the technical details of the gologit model.

After performing the gologit regressions, we interpret the results. This is not straightforward since there is no single approach that can fully describe the relationship between an independent variable and the outcome probabilities of the dependent variables of the gologit regression model. This arises because the outcome probability of the dependent variables is non-linear, and substantively meaningful interpretations are based on predicted probabilities and functions of those probabilities (Long and Freese, 2001). To interpret the relationship between the independent variables and the outcome probability of the dependent variables, we compute the predicted probabilities of the dependent variables by

⁶A simple linear regression model is not suitable because the ordered responses employed in this study would violate the model's assumptions (McKelvey and Zavoina, 1975; Winship and Mare, 1984). The linear regression model requires that the dependent variables are continuous. However, in our study, the dependent variables consist of several categorical variables.

including a set of central tendency measures (such as mean and median) for the independent variables. We investigate the predicted probabilities in the dependent variables which have statistically significant independent variables in the respective gologit regression models.

Empirical results

Descriptive statistics summarizing the degree of support shown by the 2464 SRI respondents for

the four CSR-related views discussed above are presented in Table 3. Using the median response as a reflection of the SRIs' attitudes suggests that the 'typical' SRI agrees with all four CSR-related views. The results of the gologit regressions are shown in Table 4.

The log likelihood ratios for all four models (related, respectively, to CSR Views 1–4), estimated on the basis of the responses of the 2464 SRI respondents, suggest that the independent variables are jointly statistically significant. A positive (negative) coefficient associated with the

Table 2. Descriptive statistics regarding the demographic characteristics of SRIs

	Frequency	Mean	Median	Max	Min	Standard deviation
Education						
Low (0)	252	1.34	1	2	0	0.65
Medium (1)	1114					
High (2)	1098					
Age	2464	45.47	45	92	17	14.32
Income						
Low (0)	207	2.42	3	4	0	1.27
Medium low (1)	439					
Medium (2)	556					
Medium high (3)	647					
High (4)	615					
Gender						
Male (0)	1424	0.42	0	1	0	0.49
Female (1)	1040					

Table 3. Descriptive statistics summarizing the degree of support shown by the 2464 SRI respondents

	Frequency	Mean	Median	Max	Min	Standard deviation
(a) Responses to the view that 'as an investor, a company's social and environmental performance is not as important to me as its financial performance'						
Strongly agree	407	2.47	2	4	1	0.94
Somewhat agree	889					
Somewhat disagree	783					
Strongly disagree	385					
(b) Responses to the view that 'companies that are socially responsible are more profitable than socially irresponsible companies'						
Strongly agree	515	2.32	2	4	1	1.01
Somewhat agree	930					
Somewhat disagree	758					
Strongly disagree	261					
(c) Responses to the view that 'companies should be more responsible to their shareholders than to the broader society'						
Strongly agree	642	2.32	2	4	1	1.01
Somewhat agree	731					
Somewhat disagree	742					
Strongly disagree	349					
(d) Responses to the view that 'I do not trust the accuracy of the financial statements of many companies'						
Strongly agree	815	2.02	2	4	1	0.90
Somewhat agree	950					
Somewhat disagree	530					
Strongly disagree	161					

Table 4. Results of the generalized ordered logistic regression (gamma parameterization)

Independent variable	Coefficient (p value)
(a) Responses to the view that 'as an investor, a company's social and environmental performance is not as important to me as its financial performance'	
Education	0.014 (0.811)
Age	-0.014*** (0.000)
Income	-0.043 (0.154)
Gender	0.275*** (0.000)
Gamma 1 (Age)	0.012*** (0.001)
Gamma 2 (Age)	0.017*** (0.000)
Constant 1	2.251*** (0.000)
Constant 2	-0.032 (0.857)
Constant 3	-1.873*** (0.000)
Number of observations	2464
LR χ^2 (p value)	33.48*** (0.000)
Pseudo-R ²	0.005
Log-likelihood	-3234.753
(b) Responses to the view that: 'companies that are socially responsible are more profitable than socially irresponsible companies'	
Education	0.206*** (0.000)
Age	-0.006** (0.029)
Income	0.068** (0.025)
Gender	0.001 (0.990)
Constant 1	1.162*** (0.000)
Constant 2	-0.534*** (0.002)
Constant 3	-2.331*** (0.000)
Number of observations	2464
LR χ^2 (p value)	31.20*** (0.000)
Pseudo-R ²	0.005
Log likelihood	-3176.243
(c) Responses to the view that 'companies should be more responsible to their shareholders than to the broader society'	
Education	0.051 (0.378)
Age	-0.009*** (0.000)
Income	0.080*** (0.008)
Gender	0.175** (0.018)
Constant 1	1.140*** (0.000)
Constant 2	-1.146 (0.390)
Constant 3	-1.728*** (0.000)
Number of observations	2464
LR χ^2 (p value)	30.42*** (0.000)
Pseudo-R ²	0.005
Log likelihood	-3309.16
(d) Responses to the view that 'I do not trust the accuracy of the financial statements of many companies'	
Education	-0.014 (0.815)
Age	-0.003 (0.351)
Income	0.028 (0.362)
Gender	-0.010 (0.892)
Gamma 1 (Age)	0.008** (0.029)
Gamma 2 (Age)	0.024*** (0.000)
Constant 1	0.790*** (0.000)
Constant 2	-1.182*** (0.000)
Constant 3	-3.726*** (0.000)
Number of observations	2464
LR χ^2 (p value)	19.32*** (0.004)
Pseudo-R ²	0.003
Log likelihood	-3050.694

**Significant at the 0.05 level.

***Significant at the 0.01 level.

education, age or income variables implies that SRIs tend to disagree (agree) with the CSR statements. In addition, a male respondent would tend to be less (more) supportive of the CSR statement if the coefficient associated with gender is positive (negative).

The results of the gologit regression analysis (shown in Table 4, part (a)) suggest that SRIs' age ($p < 0.01$) and gender ($p < 0.01$) are significantly correlated with their support for the view that 'as an investor, a company's social and environmental performance is not as important to me as its financial performance'. In addition, SRIs' education ($p < 0.01$), age ($p < 0.05$) and income ($p < 0.05$) are significantly correlated with their support for the view that 'companies that are socially responsible are more profitable than socially irresponsible companies' (see Table 4, part (b)). Equally, SRIs' age ($p < 0.01$), income ($p < 0.01$) and gender ($p < 0.05$) are significantly correlated with their support for the view that 'companies should be more responsible to their shareholders than to the broader society' (see Table 4, part (c)). However, none of the SRIs' demographic characteristics that we examined is significantly correlated with their support for the view that 'I do not trust the accuracy of the financial statements of many companies' (see Table 4, part (d)).

The gamma parameterization of the gologit model, which is used to assist in testing the parallel lines assumption, shows that the age variable violates the parallel line assumption for all dependent variables. Consequently, extra caution must be used when interpreting the results with respect to age, as the coefficient associated with age may be biased. In all cases where age is statistically significant, it is negatively related to the respective dependent variables, and education and gender are positively related to the dependent variables.

To facilitate the interpretation of these results, post-estimation analyses were conducted for those gologit models where significant independent variables were found (see Tables 5–8). We report the predicted probabilities of the dependent variables (strength of support for the four CSR views) given a set of values of independent variables (demographic characteristics of SRIs). In particular, we employ the mean and median values of the respective independent variables. With the exception of the view that 'companies

Table 5. Results for post-estimation analyses: predicted probability using mean and median

Dependent variable	Responses	Predicted probability using	
		mean	median
As an investor, a company's social and environmental performance is not as important to me as its financial performance	Strongly agree	0.1630	0.1886
	Somewhat agree	0.3636	0.3740
	Somewhat disagree	0.3178	0.2938
	Strongly disagree	0.1556	0.1437
Companies that are socially responsible are more profitable than socially irresponsible companies	Strongly agree	0.2075	0.2169
	Somewhat agree	0.3801	0.3746
	Somewhat disagree	0.3084	0.3056
	Strongly disagree	0.1041	0.1029
Companies should be more responsible to their shareholders than to the broader society	Strongly agree	0.2581	0.2738
	Somewhat agree	0.2998	0.2907
	Somewhat disagree	0.3012	0.2945
	Strongly disagree	0.1409	0.1410
I do not trust the accuracy of the financial statements of many companies	Strongly agree	0.3307	0.3343
	Somewhat agree	0.3893	0.3732
	Somewhat disagree	0.2179	0.2203
	Strongly disagree	0.0622	0.0722

Table 6. Results for post-estimation analyses: gender-based predicted probabilities for responses to the view that 'as an investor, a company's social and environmental performance is not as important to me as its financial performance'

Dependent variable	Responses	Gender	Predicted probability	Difference
As an investor, a company's social and environmental performance is not as important to me as its financial performance	Strongly agree	Male	0.1886	0.0560
		Female	0.1326	
	Somewhat agree	Male	0.3672	0.0133
		Female	0.3539	
	Somewhat disagree	Male	0.2944	-0.0554
		Female	0.3498	
	Strongly disagree	Male	0.1498	-0.0140
		Female	0.1638	

should be more responsible to their shareholders than to the broader society', the predicted probability of the outcome shows that SRIs tend to 'somewhat agree' with the CSR views we examine (Table 5). Specifically, we found that male (female) SRIs 'strongly agree' ('somewhat disagree') and older (younger) SRIs tend to be more (less) supportive of the view that 'as an investor, a company's social and environmental performance is not as important to me as its financial performance' (Table 6). SRIs who have high (low) levels of education and income tend to either 'somewhat disagree' ('agree') or 'strongly disagree' with the view that 'companies that are socially responsible are more profitable than socially irresponsible companies' (Table 7). Male SRIs 'strongly agree' with the view that 'companies should be more responsible to their shareholders than to the broader society' and SRIs

with high incomes tend to either 'somewhat disagree' or 'strongly disagree' with the view that 'companies should be more responsible to their shareholders than to the broader society'. Younger (older) SRIs tend to be less (more) supportive of the view that 'companies should be more responsible to their shareholders than to the broader society' (Table 8). Since none of the demographic characteristics was statistically significant in explaining the view that 'I do not trust the accuracy of the financial statements of many companies', no post-estimation analysis was conducted regarding this statement.

Discussion and implications

Our findings demonstrate a link between the demographic characteristics of SRIs and the degree

Table 7. Results for post-estimation analyses: education- and income-based predicted probabilities for responses to the view that 'companies that are socially responsible are more profitable than socially irresponsible companies'

Dependent variable	Responses	Metric	Predicted probability
Companies that are socially responsible are more profitable than socially irresponsible companies	<i>Education</i> Strongly agree	Low	0.2445
		Medium	0.2165
		High	0.1909
		Low	0.4142
		Medium	0.3897
		High	0.3603
		Low	0.2651
		Medium	0.2976
		High	0.3281
		Low	0.0762
		Medium	0.0962
		High	0.1207
	<i>Income</i> Strongly agree	Low	0.2334
		Medium low	0.2224
		Medium	0.2118
		Medium high	0.2015
		High	0.1917
		Low	0.3946
		Medium low	0.3891
		Medium	0.3829
		Medium high	0.3761
		High	0.3687
		Low	0.2825
		Medium low	0.2933
		Medium	0.3040
		Medium high	0.3145
		High	0.3249
	Somewhat agree	Low	0.0895
		Medium low	0.0953
		Medium	0.1014
		Medium high	0.1079
	Somewhat disagree	Low	0.0895
		Medium low	0.0953
		Medium	0.1014
		Medium high	0.1079

to which they agree with statements reflecting CSR-related views. Clearly, the findings should not be interpreted as suggesting that demographic characteristics of SRIs are necessarily the reason for their degree of support for particular CSR initiatives undertaken by companies. However, agency theory suggests that, in the light of our results, managers (agents) should carefully understand the demographic characteristics of their SRIs (principals) and consider taking action to ensure that their CSR agendas are aligned with their SRIs' perceived expectations. This is particularly important given that increasingly assertive and influential SRIs are engaging executives of publicly listed companies

Table 8. Results for post-estimation analyses: income- and gender-based predicted probabilities for responses to the view that 'companies should be more responsible to their shareholders than to the broader society'

Dependent variable	Responses	Metric	Predicted probability	Difference
Companies should be more responsible to their shareholders than to the broader society	<i>Income</i> Strongly agree	Low	0.2911	
		Medium	0.2772	
		low		
		Medium	0.2636	
		Medium	0.2505	
		high		
		High	0.2379	
		Low	0.3186	
		Medium	0.3113	
		low		
		Medium	0.3033	
		Medium	0.2946	
	<i>Gender</i> Strongly agree	high		
		High	0.2852	
		Low	0.2708	
		Medium	0.2835	
		low		
		Medium	0.2961	
		Medium	0.3084	
		high		
		High	0.3203	
		Low	0.1195	
		Medium	0.1280	
		low		
		Medium	0.1370	
		Medium	0.1465	
		high		
		High	0.1566	
	Somewhat disagree	Male	0.2780	0.0455
		Female	0.2325	
		Male	0.2970	-0.0047
		Female	0.3017	
	Strongly disagree	Male	0.2881	-0.0311
		Female	0.3192	
		Male	0.1368	-0.0098
		Female	0.1466	

in the process of corporate decision-making (Galbreath, 2009).

Our results show that younger SRIs and female SRIs tend to 'somewhat disagree' or 'strongly disagree' (but male SRIs tend to 'strongly agree') with the view that 'as an investor, a company's social and environmental performance is not as important to me as its financial performance'. In particular, younger and female SRIs' views appear at variance with the arguments of Friedman and Miles (2001) and Friedman (1970) that companies should focus on profit maximization

and not pursue interests beyond those which comply with the law and which avoid deception and fraudulent practices. This interesting finding is consistent with the literature, in the sense that it confirms the permeation of more progressive CSR views among the younger generation of SRIs. Our finding that female SRIs place at least as much weight, when investing, on a company's social and environmental performance as on its financial performance is entirely novel. However, this finding accords with Schueth's (2003) conclusion that SRIs tend to be predominantly female (Schueth, 2003). Consequently, our results appear to suggest that younger and female SRIs share an appreciation of the intersection between business and society, where social consciousness and social action are seen as important determinants of a company's success (Hill *et al.*, 2003).

We find that younger, better educated and higher income SRIs are more likely to either 'somewhat disagree' or 'strongly disagree' with the view that 'companies that are socially responsible are more profitable than socially irresponsible companies'. One possible explanation is that younger SRIs with better education and income are not particularly concerned about a company's wealth maximization, as they belong to a more affluent segment of society. Consequently, they prefer to see companies pursuing CSR-related agendas, irrespective of the immediate implications for the bottom line. This finding is important because it not only provides support for the prevailing view that SRIs tend to be younger, better educated and wealthier (e.g. Hayes, 2001; Tippet, 2001) but it also suggests that those SRIs who are younger, better educated and wealthier are those most likely to support SR companies while cognizant of the likely negative implications for profits (i.e. they are prepared to accept the ethical penalty).

We find that younger SRIs, and those with higher incomes, tend to 'somewhat disagree' or 'strongly disagree' with the view that 'companies should be more responsible to their shareholders than to the broader society'. Consequently, younger and more affluent SRIs appear to hold a broader conception of CSR, entailing a sense of responsibility to a wider set of stakeholders and to society at large. However, male SRIs tend to 'strongly agree' with this statement. This is consistent with their greater support (than females) for the view that 'as an investor, a company's

social and environmental performance is not as important to me as its financial performance'. Taken together, these results suggest a narrower classical CSR orientation among male SRIs. Consequently, these findings, coupled with the lack of support among male SRIs for the view that 'as an investor, a company's social and environmental performance is not as important to me as its financial performance', confirm that younger SRIs and those who are female hold broader views of CSR and are inclined to invest in companies meeting a wider spectrum of expectations, balancing financial objectives and social and environmental concerns (Ethical Funds, 2002; Kennedy, 2001; Matterson, 2000; World Bank, 2002).

Implications of the study

There are several important implications of our findings. First, we find that gender is a salient variable in accounting for different CSR attitudes among SRIs. These findings help explain the increased predominance of females amongst those engaged in SR investment and the support of female SRIs for CSR, irrespective of the ethical penalty (reduced profit) they may incur. Consequently, our results support Schueth's (2003) findings concerning the part played by females in the SR investment growth in the USA. Our results suggest that attracting female SRIs (who hold positive views on CSR) to invest in a company can help push the CSR agenda, both internally and externally, leading to, perhaps, increased female representation at different levels in the company, good management of diversity and more awareness and sensitivity to issues relating to discrimination. Our results also suggest that companies intending to attract female SRIs should focus their efforts on improving social and environmental performance as well as taking proactive steps to positively impact broader society.

The second important implication of our findings is that well educated and affluent SRIs are increasingly aware of the triple bottom line integration imperative and the need to balance multiple impacts and bottom lines. In other words, they are aware of a need for a systematic approach to managing the complete set of a company's responsibilities and for reconciling economic, social and environmental objectives to produce a more balanced view of corporate performance (Jamali, 2006). This implies that

companies pursuing CSR agendas are able to secure equity financing from SRIs who are prepared to accept a relatively low expected return from such companies (this will lower the overall cost of capital for these companies). The current view in the literature is that SRIs tend to be (cf. non-SRIs) younger, better educated and more affluent individuals (e.g. Hayes, 2001; Tippet, 2001) and our results show that it is the younger, better educated and more affluent SRIs who are most likely to support SR policies. The willingness of some SRIs to accept an ethical penalty is well documented (McLachlan and Gardner, 2004; Williams, 2007) and our results show that this group is most likely to consist of the younger, better educated and more affluent SRIs. According to agency theory, top management (agents) is duty-bound to allocate resources to CSR-related agendas consistent with views held by SRIs (principals). Therefore, this underscores the importance for executives to align their resources targeted at CSR efforts to meet expectations of younger, better educated and more affluent SRIs.

The third important implication of our findings is that they provide the knowledge needed for developing appropriate sales and financial consulting strategies for investment fund companies when targeting particular groups of SRIs (Williams, 2007). In particular we demonstrate that these policies should be targeted at customers with particular demographic profiles. For example, our findings suggest that they should tailor their sales and financial consulting to younger, better educated and wealthier investors and, particularly, female investors. These are the investors that are likely to be most amenable to companies taking a rounded view of responsibility and hence the most likely to embrace the tenets of SR investment.

Conclusion

The societal impacts of corporate behaviour are at the heart of CSR (Lindgreen and Swaen, 2010). The increasing pressure on executives to make socially acceptable decisions reflects the growing importance of SR investment. Despite numerous research projects exploring CSR and related areas, there has been relatively little research which links the SR investment literature to the CSR literature. Consequently, we have

attempted to fill this gap by demonstrating that specific demographic characteristics of SRIs are correlated with certain CSR views. For example, younger female SRIs tend to hold a broader conception of CSR and disagree with the view that a company's social and environmental performance is not as important as its financial performance. In addition, younger SRIs, those who are better educated and those who are more affluent seem to support a broad range of objectives, of which profit is only one, and not necessarily the primary one. However, we find that none of the demographic characteristics examined here is correlated with SRIs' distrust of the accuracy of many companies' financial statements.

Our findings that demographic characteristics can be used to predict SRIs' views concerning a number of CSR-related issues lead to a number of important insights. First, more affluent SRIs are willing to accept a lower rate of return in order to facilitate the pursuit of CSR-related agendas. This can lead to a lower cost of capital and, in turn, will increase the company's value, which is consistent with the shareholders' wealth maximization objective. Second, investment fund companies can use these findings to develop more relevant financial consultation and targeted sales strategies by targeting these on groups of SRIs defined by their demographic characteristics. Third, attracting female SRIs is likely to help promote the CSR agenda, given that we find they are particularly interested in companies focusing their efforts on improving social and environmental performance, as well as taking proactive steps to positively impact broader society. In order to attract female SRIs companies will need to align themselves with the views held by this group. This in turn is likely to lead to increased female representation at different levels in the company, good management of diversity and more awareness and sensitivity to issues relating to discrimination. Finally, as SR investment is growing, agency theory predicts that senior management (agents) will be placed under increasing pressure and scrutiny to undertake CSR-related initiatives demanded by SRIs (principal). Consequently, our results indicate that it is important for senior management to be aware of the CSR views held by groups of SRIs defined by their demographic characteristics when formulating their strategic plans.

Whilst this study has advanced our knowledge regarding the correlation between demographic characteristics of SRIs and their CSR attitudes, some limitations of the study should be noted, which could be addressed in future research. First, the addition of a number of control variables would have ensured that the results were more robust. For example, cultural differences among the respondents could play an important role in mediating or moderating the correlation between the demographic characteristics of SRIs and their CSR-related views. Consequently, future research should examine the degree to which culture moderates this relationship. Second, risk, which is an important factor affecting investment decisions, was not accounted for in this study. Future research should therefore endeavour to capture the risk profile of SRIs (Nilsson, 2008, 2009) and to explore if this affects the correlation between SRIs' demographic characteristics and their CSR attitudes. Third, legal provisions, especially relating to corporate governance issues, may

influence CSR attitudes held by SRIs. One example is the protection afforded by legal institutions and the government with respect to an investor's legal rights. An investor's legal rights are dependent upon differences in legal traditions, which, in turn, can have a significant impact on the provision of effective private and societal property rights. Consequently, future research is needed to examine the impact of legal traditions on the relationship between SRIs' demographic profile and their CSR attitudes.

In summary, despite this study's limitations, the results demonstrate an important connection between SRIs' demographic characteristics and their views related to CSR. These findings are likely to be of value to companies wishing to attract SR investment, to investment fund companies when developing financial consulting strategies targeted at particular groups of SRIs, and to governments and other regulatory authorities who may wish to encourage a greater move towards CSR.

Appendix A: Key literature linking demographic characteristics and SR investment

Author(s) and publication year	Data and methodology	Major findings
Junkus and Berry (2010)	5391 members of the American Association of Individual Investors (at the end of November 2008) were surveyed. SRIs were distinguished by their response to the question 'Have you ever made an SR investment?' Analysis of variance test of equality of population distribution and t test were used to compare the demographic characteristics of the respondents	Female investors were more likely to be SRIs and SRIs tend to be younger and better educated. It is argued that future research should examine if those predisposed to SR investments conform to a particular profile and if this profile is significantly different from that of other investors The limitation of this study is that it failed to take into account whether the higher risk aversion of women SRIs and their greater concern for the environment (as reported in previous studies) is responsible for their results. The paper did not examine any statistical relationships between demographic characteristics of the SRIs (or non-SRIs) and their investment behaviour or attitudes
Nilsson (2009)	563 respondents were classified (using a cluster analytic approach) into different segments based on their perception of the importance of financial return and social responsibility. Discriminant analysis and chi-squared tests were used to further profile the respective segments	Three segments of SRIs were identified: those who value financial return over social responsibility (primarily concerned about profit), those who value social responsibility over financial return (primarily concerned about social responsibility) and those who value both return and social responsibility (socially responsible and return driven) SRIs who value social responsibility over financial return were found to be predominantly female and have a university degree. Those SRIs who value financial return over social responsibility were found to be predominantly

Nilsson (2008)	528 Swedish investor respondents to a questionnaire survey. 439 respondents had at least one SR investment product in their portfolio; the remaining 89 respondents had no SR investment product in their portfolio An ordinal logistic regression was conducted to ascertain whether certain independent variables (pro-social attitudes, perceived consumer effectiveness, trust, perception of financial return and perception of financial risk) have an impact on investment behaviour (measured by a six-point Likert scale; developed from respondents indicating the percentage of their portfolio held in SR investment)	male and have less formal education. The gender and level of education were useful in explaining those SRIs who value both return and social responsibility Important limitations of this paper are that it only used respondents from one SR investment provider and the sample concentrated on older respondents Gender and education are statistically significant in determining the proportion of their portfolio held in SR investments. Men and those who were not educated up to a university degree were found to have a tendency to invest a smaller proportion of their portfolio in SR investments. Income and age variables were not statistically significant Perceived consumer effectiveness is the belief that consumers are more likely to act on a social issue if their behaviour can help resolve the issue in question. Therefore, individuals will not invest in SR investments if they do not believe that these investments can help solve social, ethical and environmental problems. Perceived consumer effectiveness and pro-social attitudes were significant in explaining investment behaviour of investors. There was no statistically significant relationship between trust and SR investment behaviour Perception of financial return is statistically significant while perception of financial risk is not statistically significant in explaining investment behaviour Two important limitations of the study: the authors indicated that the study included a higher proportion of older respondents and the results with respect to age should be interpreted with caution; as our current paper points out, applying an ologit model without testing for the parallel line assumption can lead to invalid estimates
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Appendix B: Questions employed to determine whether a participant is an SRI

Question 1

Do you currently own shares in a company listed on a stock exchange, either directly or indirectly through a mutual fund, pension plan or other retirement fund?

1. I own shares directly
2. I own shares indirectly through a mutual fund, pension plan or other retirement fund
3. I do not own any shares
4. I own shares both directly and indirectly

Question 2

Has a company's demonstrated social responsibility ever had an influence on your investment decisions? Have you either bought or sold its shares as a result?

1. It had an influence at least once
2. I considered it, but didn't buy or sell shares as a result
3. It had no effect on my share purchases or sales

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