



# Business Strategy and Corporate Social Responsibility

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## Abstract

This study examines the relation between a firm's business strategy and its corporate social responsibility (CSR) performance. Using a comprehensive measure of business strategy based on the Miles and Snow (Organizational strategy, structure, and process, McGraw-Hill, New York, 1978, Organizational strategy, structure, and process, Stanford University Press, Stanford 2003) theoretical framework, we find that firms following an innovation-oriented strategy (prospectors) are associated with better CSR performance than those following an efficiency-oriented strategy (defenders). Specifically, compared with defenders, prospectors engage in more socially responsible activities, fewer socially irresponsible activities, and perform better in both stakeholder- and third-party-related CSR areas. Taken together, our results suggest that business strategy is an important determinant of CSR performance. Prospectors take advantage of CSR, as their innovation-oriented strategy allows them not only to benefit more from CSR, but also to have more tolerance for the uncertainty, risk, and long time-horizon associated with CSR engagement.

**Keywords** Business strategy · Corporate social responsibility · Long-term investment · Innovation leadership · Cost minimization

## Introduction

Corporate social responsibility (CSR) is a multifaceted concept that reflects a firm's response to the expectations and demands of a wide range of stakeholders, including society, the environment, and individuals (e.g., Carroll 1979; Freeman 1984; McWilliams and Siegel 2001). In recent years,

CSR has become a mainstream activity in the business world. Along with other core areas of management, firms allocate significant portions of their budgets to CSR activities. In 2012, U.S. companies spent \$34.6 billion on CSR activities, and this figure is expected to grow to \$43.6 billion in 2017.<sup>1</sup> A recent survey suggests that company leaders increasingly see sustainability as a top priority.<sup>2</sup>

Given the growing importance of CSR to firm operations and performance and its impact on society, CSR has become an important research topic in both the management and accounting literatures (e.g., Barnea and Rubin 2010; El Ghoul et al. 2011; Garriga and Melé 2004; Kim et al. 2012; Mackey et al. 2007). Extant studies on the antecedents of firms' CSR practices examine a number of institutional, organizational, and individual factors (Aguinis and Glavas 2012). This literature finds that stakeholder pressure (e.g., Chen et al. 2018; David et al. 2007; Marquis et al. 2007), corporate governance (e.g., Jo and Harjoto 2011; Neubaum

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<sup>1</sup> See the Verdantix survey on U.S. Sustainable Business Spending 2012–2017. [http://research.verdantix.com/index.cfm/papers/Products\\_Details/product\\_id/544/us-sustainable-business-spending-2012-2017](http://research.verdantix.com/index.cfm/papers/Products_Details/product_id/544/us-sustainable-business-spending-2012-2017).

<sup>2</sup> See McKinsey's global survey on sustainability's strategic worth. <http://www.mckinsey.com/business-functions/sustainability-and-resource-productivity/our-insights/sustainabilitys-strategic-worth-mckinsey-global-survey-results>.

and Zahra 2006; Oh et al. 2011), and characteristics of top managers (e.g., Chin et al. 2013; Manner 2010; Petrenko et al. 2016; Tang et al. 2015; Wong et al. 2011) affect firm CSR engagement. Using theoretical analyses, survey methodology or case studies, several recent studies have examined the determinants of firm CSR performance from the perspective of firm strategic orientation. For example, prior studies find that firms with a stronger customer orientation, market orientation and/or entrepreneurial orientation tend to have better CSR performance (e.g., Jansson et al. 2017; Kiessling et al. 2016). Using the Porter (1980) strategy typology, Hoejmosé et al. (2013) find that compared with low-cost producers, firms with differentiation strategies have better socially responsible supply chain management.

In this study, we examine how a firm's business strategy orientation affects its CSR performance. Differing from the firm attributes and strategies examined in the aforementioned studies, a firm's business strategy varies little over time such that the way the firm responds to the environment and market is significantly influenced by its business strategy (Hambrick 1983). Organizational theorists suggest that business strategy represents a unique and fundamental element of a firm's identity, and concerns how firms compete in a given business; this is chosen very early in a firm's history (Hambrick 1983; Snow and Hambrick 1980). As a consequence, a firm's characteristics or strategies, such as managerial power patterns, values, and use of resources, are all geared toward a firm's business strategy (Miles and Snow 1978, 2003). In other words, a firm's business strategy dictates many other firm characteristics or strategies such as customer orientation or market orientation. Consistent with the view that business strategy is a distinct form of firm-level strategy, recent studies suggest that a firm's business strategy affects the firm's practices in financial reporting (Bentley et al. 2013), tax planning (Higgins et al. 2015), as well as third-party assessment of the firm's operating risks (Chen et al. 2016).

We employ the theoretical business strategy framework of Miles and Snow (1978, 2003), which classifies business strategies into three categories: prospectors, analyzers, and defenders. Prospectors and defenders sit at the endpoints of the Miles and Snow (1978, 2003) business strategy continuum, differing drastically in terms of their product and market change speed, risk and uncertainty tolerance level, and investment horizon preferences, whereas analyzers are an intermediate type that shares the attributes of both prospectors and defenders (Miles and Snow 1978, 2003). Based on this business strategy theory and the resource-based theory, we argue that the characteristics of prospectors and defenders could influence a firm's engagement in CSR, and compared with defenders, prospectors are more willing to conduct CSR activities since, as a strategic resource, CSR could benefit prospectors more. This is because, first, resource-based theory suggests that firms compete

with other firms in terms of their tangible and intangible resources (e.g., Barney 1991; Peteraf and Barney 2003). CSR activities contribute to the development of a firm's intangible resources by improving the firm's reputation, promoting innovation, and fostering customer trust (e.g., Bansal 2005; Flammer and Kacperczyk 2015; McWilliams et al. 2006; Mishra 2017). Compared with defenders, the above functions of CSR activities are likely to be more crucial for prospectors, since prospectors have greater need to enhance firm reputation and brand among consumers and consistently maintain innovation capacity (Miles and Snow 1978, 2003). In contrast, defenders' main focus is on defending existing product mix through production or cost management to improve efficiency rather than exploring new markets and/or products as prospectors do; thus, defenders are less likely to recoup benefits from CSR engagement. Second, as defenders emphasize reducing costs, minimizing risk and uncertainty, and pursuing short-term profits rather than long-term profits from projects entailing uncertainty and risk, as prospectors do, defenders are less likely than prospectors to devote their resources to CSR activities, since the payoff from such engagement is uncertain and takes time to realize. Taken together, we predict that, compared with defenders, prospectors are more likely to engage in CSR, and thus have better CSR performance.

To test our prediction, we use a business strategy measure developed by Bentley et al. (2013) to investigate the relation between business strategy and firm CSR performance. The Bentley et al. (2013) measure of business strategy has been widely used in prior literature, including Bentley et al. (2015, 2016), Chen et al. (2016), Higgins et al. (2015), and Ittner et al. (1997). Using a sample of U.S. public firms over the period 2004–2012, we find that prospectors are associated with better CSR performance than defenders. To probe more deeply how firms enhance their CSR performance, we further examine the impact of business strategy on firms' socially responsible activities and socially irresponsible activities, and on stakeholder CSR and third-party CSR (Servaes and Tamayo 2013), respectively. We find that, compared with defenders, prospectors are associated with more socially responsible activities and fewer socially irresponsible activities, and perform better in areas concerning both stakeholder CSR and third-party CSR. Overall, our results suggest that business strategy is an important determinant of firm CSR performance. Compared with defenders' efficiency-oriented strategies, prospectors' innovation-oriented strategies allow prospector firms to take advantage of CSR and to be more tolerant of the uncertainty, risk, and long time-horizon associated with such engagement.

After establishing a positive relation between business strategy and CSR performance, we further investigate whether this relationship varies with the degree of CSR emphasis exerted by a firm's external social capital

environment. Prior literature suggests that a high level of social capital of a U.S. county in which a firm is headquartered could encourage firm engagement in CSR, leading to better CSR performance (Hoi et al. 2016; Jha and Cox 2015). Thus, the effect of business strategy on CSR performance is likely to be attenuated for firms whose headquarters are located in areas of high social capital. Partitioning our sample based on the level of social capital of the county where a firm's headquarters is located, we find that the relation between business strategy and CSR performance is significant and positive only in the low social capital subsample.

In additional analyses, we provide evidence that our findings are not likely to be driven by omitted variables or our CSR measure. Prior studies suggest that a firm's business strategy is often chosen at its inception and is likely to be adjusted rather than changed greatly over time (e.g., Hambrick 1983; Snow and Hambrick 1980). Consistent with this view, we find that firms' business strategies remain relatively stable over time, which suggests that business strategy is likely to be an underlying firm-specific determinant of CSR performance and that our findings are less likely to be driven by any time-variant variables. Moreover, we perform a business strategy component analysis to test whether the constructed measure of business strategy used in our study is greater than the sum of its parts. The factor analysis shows that our business strategy measure captures a construct that cannot be assessed by considering its individual characteristics, indicating that our results are not likely to be caused by any individual component of business strategy. Finally, to enhance the robustness of our results, we re-estimate all our tests using an adjusted CSR score based on Deng et al. (2013) and obtain robust results.

This study relates to the literature that focuses on the strategic aspect of a firm's CSR performance. Prior studies find that as an important contributor to a firm's competitiveness and value (e.g., Dentchev 2004; Mishra 2017), a firm's CSR performance can be determined by various internal (e.g., managerial characteristic) or external factors (e.g., stakeholder pressure) (Aguinis and Glavas 2012). Some recent studies have begun to link various firm strategic orientations to CSR, including customer, market, and entrepreneurial orientations (e.g., Jansson et al. 2017; Kiessling et al. 2016). We add to this literature by focusing on an aspect of a firm attribute that is often chosen at an early stage of a firm's life, and has the potential to affect every aspect of the firm's characteristics and subsequent decisions, including CSR, innovativeness, and choice of management (Miles and Snow 1978). As pointed out by Miles and Snow (1978, 2003), a firm's business strategy represents a fundamental element of a firm's identity chosen at the early stage of the firm's history, and it begins to influence how the firm conducts its business; consequently, certain internal consistencies are formed, and a firm's characteristics or strategies are all geared toward that business strategy (Miles and Snow 1978, 2003). Our study

suggests that, before CSR is affected by various temporal internal or external factors (e.g., stakeholder pressure) as documented in prior studies, a firm's CSR performance, to some extent, is already shaped (encouraged or constrained) by the firm's business strategy chosen in its early history.

Our study contributes to the research on the consequences of firm business strategy. Prior literature shows that a firm's business strategy could significantly affect the firm's financial reporting and tax planning practices, as well as auditors' assessment of the firm's operating risks (e.g., Bentley et al. 2013; Chen et al. 2016; Higgins et al. 2015). Our study complements prior research by demonstrating the importance of a firm's business strategy in affecting its CSR activities, which represent a firm's non-financial behavior. Our results suggest that firms pursuing innovation-oriented strategies are more likely to take advantage of CSR and to be more tolerant of uncertainty and the risk associated with such engagement. Our study helps broaden our understanding of the consequences of business strategy.

Our study relates to but differs from Galbreath (2010), who examines the relationship between a firm's strategic orientation and its CSR. Galbreath (2010) focuses on analyzers versus prospectors or defenders and finds that analyzers have a lower level of CSR than defenders or prospectors. The present study focuses on prospectors and defenders, the two strategic types that sit at the endpoints of Miles and Snow's business strategy continuum. Our study suggests that the innovation-oriented strategy of prospectors allows prospectors to take advantage of CSR. Also, Galbreath (2010) focuses on two industries and uses a 1-year survey sample of 280 Australian firms. We examine a broader concept of CSR based on KLD data, a comprehensive third-party source, which is widely used in recent accounting, finance, and management literature. Further, we examine the association based on a large sample of 27,475 firms across industries over a period of 9 years. Our study is less likely to suffer from self-reporting and self-selection bias and provides more generalizable findings (Bloomfield et al. 2016). In addition, our study identifies the moderating effect of social capital on the business strategy and CSR relationship. These allow us to consider the dynamics between a firm's business strategy and its institutional environment, which develops into a deeper understanding of the role that a firm's business strategy plays in affecting its CSR performance.

The remainder of this paper proceeds as follows. “[Related Literature and Hypothesis Development](#)” section reviews the related literature and develops our hypothesis. “[Research Method](#)” section describes variable definitions, our empirical model, sample selection, and descriptive statistics. “[Results](#)” section presents our empirical results. Additional tests and robustness checks are reported in “[Additional Analyses](#)” section. “[Conclusion](#)” section describes the main contributions, implications, and limitations of our analyses.

## Related Literature and Hypothesis Development

### Business Strategy

In the organizational literature, business strategy is regarded as a firm strategy that focuses on how to compete in a given industry or product-market segment, and it is a source of intra-industry variation in firm strategies (e.g., Beard and Dess 1981; Ginsberg and Venkatraman 1985; Hambrick 1983; Hofer and Schendel 1978). Business strategy reflects the actions and choices taken by a firm to understand and adapt to the environment and to position itself in the market to realize a high level of performance (Porter 1980).

There are several typologies of business strategy in the literature; these describe how firms compete in their respective businesses. For example, Miles and Snow (1978, 2003) identify three viable business strategies: prospectors, analyzers, and defenders, based on a firm's rate of change with respect to its products and markets. Based on whether a firm chooses to be a lowest-cost producer or a unique products provider, Porter (1980) classifies a firm's business strategy as either cost-leadership or product differentiation. Focusing on organizational learning, March (1991) characterizes business strategies as exploration or exploitation. Based on the different kinds of value that customers demand, Treacy and Wiersema (1995) describe business strategies in terms of operational leadership, product leadership, and customer intimacy.

While there are overlaps among various typologies (Dent 1990; Langfield-Smith 1997)<sup>3</sup>, the Miles and Snow (1978, 2003) typology is widely recognized as one of the most employed, enduring, and robust typologies (e.g., Bentley et al. 2013; Hambrick 1983; Higgins et al. 2015; James and Hatten 1995; Segev 1987; Zahra and Pearce 1990) and it offers at least two advantages over other typologies. First, Miles and Snow's typology can be operationalized using archival data (Ittner et al. 1997), which allows development of a replicable measure of business strategy to a broad cross section of firms and industries. In contrast, other typologies are restricted to surveys or interviews, which make the classifications hard to replicate and use widely. Second, the validity of Miles and Snow's typology has been confirmed by numerous studies in a variety of settings, such as Bentley

et al. (2013), Chen et al. (2016), Higgins et al. (2015), Ittner et al. (1997), and Segev (1987).

According to the Miles and Snow (1978, 2003) typology, prospectors and defenders sit at the endpoints of the business strategy continuum; they are systematically different along multiple dimensions, whereas analyzers occupy the middle of the strategy continuum and exhibit characteristics of both prospectors and defenders (Miles and Snow 1978, 2003). Specifically, prospectors persistently seek to exploit and identify new products and market opportunities through processes of innovation, and their competitiveness depends on firms' ability to pioneer products and/or market development. Defenders, on the other hand, focus on a narrow and limited product-market domain and their core competence depends on their ability to enhance production and administration efficiency. Analyzers take prospective or defensive actions depending on their environmental settings and efficiency-innovation balance. They usually attempt to minimize the risk of low profitability and overextension of resources faced by prospectors, and to maximize opportunities for growth, which is ignored by defenders.

Using the business strategy typology of Miles and Snow (1978, 2003), a number of studies have investigated the association between a firm's business strategy and its economic consequences. For example, existing literature suggests that a firm's business strategy affects the firm's financial performance (Zahra and Pearce 1990), innovation practices (Blumentritt and Danis 2006), foreign market entry mode (Liang et al. 2009), practices in financial reporting (Bentley et al. 2013), tax planning (Higgins et al. 2015), as well as third-party assessment of the firm's operating risks (Chen et al. 2016). Meanwhile, some studies also focus on the relationship between the business strategy typology of Miles and Snow (1978, 2003) and CSR. Based on a survey of 280 CEOs in Australia, Galbreath (2010) finds that prospectors and defenders demonstrate higher level of CSR than analyzers, and reactors demonstrate the lowest level of CSR.

While there are a series of studies that analyze theoretically the impact of business strategy on firm CSR performance or examine the association between business strategy and CSR using survey data, there is a paucity of empirical research addressing how a firm's business strategy affects its CSR performance using archival data. Therefore, the present study uses archival data to measure the business strategy typology suggested by Miles and Snow (1978, 2003) and provides more evidence on the impact of a firm's strategic orientation on its CSR performance. Following prior literature (e.g., Bentley et al. 2013; Higgins et al. 2015; Ittner et al. 1997; Simons 1987), we focus only on the prospector and defender strategies, as these two strategies sit at the end of the Miles and Snow (1978, 2003) business strategy continuum, and they differ drastically in terms of their product

<sup>3</sup> Miles and Snow's prospectors and defenders strategy typologies are similar to the business strategies suggested by Porter, March, Treacy, and Wiersema (Dent 1990; Langfield-Smith 1997). Specifically, Miles and Snow's prospectors could be akin to Porter's product differentiators, March's explorers, and Treacy and Wiersema's product leaders. Likewise, Miles and Snow's defenders could align with Porter's cost leadership, March's exploitation, and Treacy and Wiersema's operational excellence.



and market change speed, risk and uncertainty tolerance level, and investment horizon preference.

### The Link Between Business Strategy and CSR

Developed by Wernerfelt (1984) and Barney (1991), resource-based theory suggests that firms compete with other firms on the basis of their resources and capabilities. If a firm has valuable, rare resources or capabilities that are not easily imitated by others and not easily substituted, the firm could enjoy sustainable competitive advantages and have superior performance (Peteraf 1993; Peteraf and Barney 2003). CSR has long been recognized as an effective way to help firms develop such resources or capabilities that lead to competitive advantages (Bansal 2005; Dentchev 2004; Hart 1995; McWilliams and Siegel 2001; Russo and Fouts 1997). CSR activities could improve a firm's reputation and foster customer trust, contributing to development of the firm's important intangible resources (Branco and Rodrigues 2006; McWilliams et al. 2006; Orlitzky et al. 2003).

Based on the resource-based theory and the theoretical business strategy framework of Miles and Snow (1978, 2003), we argue that differences in CSR may be linked to business strategy. Compared with defenders, prospectors are more willing to conduct CSR activities since, as a strategic resource, CSR could benefit them more.

### Prospectors

Prospectors compete on generating new products and finding new markets, and always seek to be innovators in product and market development (Miles and Snow 1978, 2003). To achieve their competency, prospectors need to continually change their product-market portfolio by stimulating and meeting new market opportunities. This requires prospectors to closely monitor product and market trends and probe market opportunities efficiently (Chen and Jermias 2014; Hambrick 1983; Miles and Snow 1978, 2003). Prior literature suggests that CSR activities could make firms more sensitive to stakeholder demands and help firms find new social needs. Bhattacharyya (2010) states that, through interacting with various stakeholders, firms can better comprehend the needs of social realities and thus have more opportunities to find new markets and develop new products.

Moreover, since prospectors' competitiveness depends on their ability to pioneer in products and/or market development, enhancing firm reputation and brand among consumers and consistently maintaining innovation capacity are crucial (Hambrick 1983; Miles and Snow 1978, 2003). The existing literature suggests that consumers take firm CSR performance into consideration when making purchase decisions (Servaes and Tamayo 2013). Consumers have a favorable attitude toward firms that engage in CSR, and thus, when

a new product enters a market, CSR has a positive influence on consumers' firm evaluations and product purchase intentions (e.g., Bhattacharya and Sen 2003; Lii and Lee 2012; Sen and Bhattacharya 2001; Williams and Barrett 2000). CSR could also help firms increase consumer recognition of products and improve consumer loyalty, which is very important for firms developing new markets and acquiring new consumers (Bhattacharya and Sen 2004; Luo and Bhattacharya 2006). Furthermore, prior studies suggest that a commitment to CSR activities could help firms attract and retain high-quality employees (Greening and Turban 2000; Rodrigo and Arenas 2008). More importantly, by attending to the needs of stakeholders, firms could relieve employees from short-termism and make them more willing to invest effort in risky and innovative projects (Flammer and Kacperczyk 2015). This is essential for acquiring and maintaining firm innovation capabilities. Since CSR can help firms find new markets and create new products, prospectors are likely to be incentivized to undertake more CSR, leading to better CSR performance.

In addition, prospectors' focus on innovation induces them to take a long-term perspective on firm investment and executive compensation (Rajagopalan 1997; Singh and Agarwal 2002). Innovation involves a long process filled with uncertainty, and the outcomes of innovation typically need a long time to come to fruition (Govindarajan and Fisher 1990; Rajagopalan 1997). Consequently, prospectors tend to emphasize long-term incentive plans to motivate managers to focus on long-term firm development and success (Chen and Jermias 2014; Singh and Agarwal 2002). A firm's CSR activities can similarly be treated as a long-term investment that benefits a firm's future sustainable development (Flammer 2015; Friedman 1970; Mahoney and Thorne 2005; Van Marrewijk 2003). CSR focuses on long-term horizons and requires a period of time to realize financial benefits (Deckop et al. 2006). Prospectors, with their long-term orientation, motivate managers to invest in long-term activities, and thus enable CSR activities to realize their potential value. Therefore, from this perspective, prospectors are also more likely to engage in CSR activities and have better CSR performance.

### Defenders

Defenders follow a cost-leadership strategy by focusing on a narrow market and a stable mix of products and services and by striving to improve cost efficiency in the production and distribution of goods and services (Miles and Snow 1978, 2003). They minimize expenditures in other fields (e.g., R&D and marketing expenses) and concentrate on investing in single-core technologies (e.g., property, plant, and equipment) to produce cost-efficient goods, and they use the resulting low prices to compete in the market (e.g.,

Hambrick 1983; Higgins et al. 2015; Miles and Snow 1978, 2003). However, CSR is costly for firms (e.g., Friedman 1970; Wang and Bansal 2012). Conducting CSR activities comes at a cost to profits (Hong et al. 2012), and it requires the sacrifice of significant amounts of firm resources (Porter and Kramer 2006). Meanwhile, using resources to conduct CSR activities rather than putting them into core business activities brings defenders high opportunity costs (Bhattacharyya 2010). Instead of devoting resources to CSR that involve high profit uncertainty and high current costs, defenders are more likely to invest their resources in producing an efficient product line or enhancing the level of mechanization. Therefore, defenders have fewer incentives to engage in conduct CSR.

Additionally, defenders' focus on product cost induces them to emphasize short-term performance targets (Rajagopalan 1997; Singh and Agarwal 2002). Rather than develop new products, defenders tend to penetrate existing product markets, thus yielding results within a much shorter time period (Galbraith and Merrill 1991; Rajagopalan 1997). As a result, defenders have a short-term decision horizon and tend to determine objectives in the short term (Galbraith and Merrill 1991). Moreover, since defenders strive to maintain organizational and operational stability, they do not like to be exposed to risk and uncertainty. CSR is a long-term investment with high risk, and it may not generate profit in the short term (Falck and Heblich 2007). Therefore, conducting CSR activities may not help defenders meet short-term targets and avoid risk, and thus they are less likely to engage in CSR activities.

In sum, compared with defenders, prospectors are more likely to take advantage of CSR, as their innovation-oriented strategy allows them not only to benefit more from CSR, but also to be more tolerant of uncertainty, risk, and the long time-horizon associated with such activities. We thus expect that prospectors are more likely to engage in CSR activities and have better CSR performance than defenders.

Besides, in contrast to other strategies, which could vary greatly over time, a firm's business strategy represents a fundamental element of a firm's identity (Hambrick 1983; Snow and Hambrick 1980). Business strategies are often decided at an early stage of a firm's history; over time, firms following these business strategies develop certain internal consistencies. For example, according to Miles and Snow (1978, 2003), a firm's characteristics or strategies, such as managerial power patterns, values, and use of resources, are all geared toward the firm's business strategy. Therefore, we argue that firms determine their business strategies at the first step; then, following their business strategies, they will further organize their resources, make corresponding decisions, and carry out related financial activities and non-financial activities, including CSR activities. We thus expect that a firm's business strategy has a significant effect

on its CSR performance, not the other way around. Thus, our hypothesis is as follows:

**Hypothesis** Prospectors are associated with better CSR performance than defenders.

## Research Method

### Measures

#### Business Strategy

Following the prior literature (e.g., Bentley et al. 2013; Chen et al. 2016; Higgins et al. 2015), we use an archival measure of the Miles and Snow (1978, 2003) business strategy typology developed by Bentley et al. (2013), which is a discrete *STRATEGY* composite measure to proxy for a firm's business strategy. This composite measure *STRATEGY* is constructed from the following six firm attributes: (1) ratio of R&D expenses to sales, (2) ratio of employees to sales, (3) one-year percentage change in total sales, (4) ratio of SG&A expenses to sales, (5) standard deviation of total number of employees, and (6) net property, plant, and equipment scaled by total assets.

The ratio of R&D expenses to sales is a proxy for a firm's propensity to search for new products, and the ratio of SG&A expenses to sales serves as a measure of a firm's focus on marketing and sales. The ratio of employees to sales reflects a firm's capability to produce and distribute products and services efficiently. Net PPE scaled by total assets captures a firm's emphasis on production assets. One-year percentage change in total sales measures a firm's historical growth or investment opportunities. The standard deviation of total number of employees reflects a firm's organizational stability.

Consistent with previous research (Bentley et al. 2013; Ittner et al. 1997), we first compute all six variables using a rolling average of the respective yearly ratios over the prior 5 years. Then, we rank each of the six variables into quintiles within each industry (two-digit SIC code) and year. For the first five variables (except for net PPE scaled by total assets), we assign a score of 5 to observations in the highest quintile, a score of 4 to the second quintile, and so on. Since prospectors exhibit lower capital intensity, the ratio of net PPE to total assets is reverse-scored and the observations in the highest (lowest) quintile are given a score of 1(5). Finally, for each firm-year, we sum the scores of the six variables to generate our *STRATEGY* measure. This composite measure receives a maximum score of 30 and a minimum score of 6. Higher *STRATEGY* score represents a firm pursuing a prospector strategy, and lower *STRATEGY* score represents a firm following a defender strategy. In addition, following the

prior literature (Bentley et al. 2013; Higgins et al. 2015), we consider strict definitions of *STRATEGY\_TYPE*: defenders (6–12), analyzers (13–23), and prospectors (24–30).

### CSR Score

To construct a firm's social responsibility score, we use the ratings from the MSCI STATS database (which is the successor to the Kinder, Lydenberg, and Domini database). Consistent with the literature (e.g., Hong et al. 2012; Servaes and Tamayo 2013), we measure a firm's CSR performance based on five dimensions: community, diversity, employee relations, environment, and human rights.<sup>4</sup> We first subtract the scores of concerns from the scores of strengths to get the raw CSR score for each dimension. We sum the raw scores of the five dimensions to construct a firm's total CSR score. In addition, following the literature (e.g., Godfrey et al. 2009; Kotchen and Moon 2012; Strike et al. 2006; Tang et al. 2015), we construct a *CSR\_STRS* variable, calculated as the sum of strength scores across the five dimensions, to reflect a firm's performance in socially responsible activities. The sum of concern scores, *CSR\_CONS*, is used to measure a firm's involvement in socially irresponsible activities.

### Control Variables

We also include various control variables that are related to firm CSR performance. A firm's CSR score in the prior year is controlled because prior studies suggest that CSR performance is serially correlated (Barnett 2007; Tang et al. 2015). *SIZE* is controlled due to its potential effects on CSR (Abigail and Siegel 2000; Udayasankar 2008). Return on assets (*ROA*) and market-to-book ratio (*MB*), as proxies of firm performance, are both included in the regression. Prior studies show that firms with better financial performance have better CSR performance (Adams and Hardwick 1998; Waddock and Graves 1997). Firm leverage (*LEV*) is controlled, since firms with lower risk are more likely to conduct CSR activities (Adams and Hardwick 1998; Orlitzky and Benjamin 2001). We also include cash flow from operations (*CFO*) and cash dividends (*DI*) in the regression, since firms with more cash and dividend payout engage in more CSR (Di Giuli and Kostovetsky 2014; Lys et al. 2015). Prior studies find that U.S. firms located in Democratic Party-leaning

states tend to engage in more CSR activities (Deng et al. 2013; Di Giuli and Kostovetsky 2014). We control *BLUE*, which is equal to 1 if a firm is located in a Democratic-leaning state, and 0 otherwise. See Appendix for more detailed variable definitions.

### Research Model

To test our hypothesis, we follow prior studies to estimate the following model:

$$\begin{aligned} CSR_{i,t} = & \alpha_0 + \beta_1 STRATEGY_{i,t} + \beta_2 SIZE_{i,t} + \beta_3 LEV_{i,t} \\ & + \beta_4 ROA_{i,t} + \beta_5 MB_{i,t} + \beta_6 CFO_{i,t} + \beta_7 DI_{i,t} \\ & + \beta_8 BLUE_{i,t} + \beta_9 CSR_{i,t-1} + \text{Year Fixed Effects} \\ & + \text{Industry Fixed Effects} + \varepsilon_{i,t}, \end{aligned} \quad (1)$$

where *i* is firm and *t* is year. *CSR* is a firm's total CSR score, and *STRATEGY* is a discrete score with values ranging from 6 to 30, where high (low) values indicate prospector (defender) firms. In the following analyses, we use *STRATEGY\_TYPE*, which divides business strategies into three categories, with values 1 for defenders, 2 for analyzers, and 3 for prospectors, as an alternative measure of business strategy. The definitions of the other control variables are provided in Appendix. We also include industry (two-digit SIC code) and year indicators, and cluster standard errors by firm (Petersen 2009).

### Sample Selection

Our sample is composed of U.S. publicly listed companies from 2004 to 2012.<sup>5</sup> We obtain CSR data from the MSCI STATS database, and financial statement data from COMPUSTAT. We first identify the sample used to calculate business *STRATEGY* components. Consistent with prior literature (e.g., Bentley et al. 2013; Higgins et al. 2015), our sample selection starts with all COMPUSTAT firms for the fiscal years between 1999 and 2012 with positive assets, positive sales, and non-missing historical SIC code observations. We then delete firms in the utilities and financial industries (SIC 4900–4999 and 6000–6999). Our *STRATEGY* component variable requires a 5-year rolling average, and thus we require firms to have at least 6 years of consecutive data in COMPUSTAT and at least 3 years

<sup>4</sup> We exclude the corporate governance dimension and product dimension. The corporate governance dimension is viewed as a construct distinct from the other dimensions (e.g., Hong et al. 2012; Kim et al. 2012; Servaes and Tamayo 2013). The product dimension focuses on issues such as innovation and product quality. Since prospectors are expected to engage in a great amount of innovation activities, the product dimension has clear strategic implications (Servaes and Tamayo 2013).

<sup>5</sup> In 2003, MSCI STATS expanded its coverage of the Russell 3000 firms. Thus, we choose 2003 as the starting point to calculate CSR performance, to cover more firms. Due to the lagged CSR performance included in our model (1), our sample of business strategy and CSR performance is identified between 2004 and 2012. Since calculation of business strategy component variables requires prior 5-year data, the sample period of business strategy calculation is from 1999 to 2012.

**Table 1** Sample selection

Description	Firm-years
<i>Panel A</i> Business strategy composite score construction	
COMPUSTAT data for years between 1999 and 2012 (excluding firms with zero negative assets, zero negative sales, and missing historical SIC codes)	93,876
Less firms in Utilities and Financial Industries (SIC 4900-99 and 6000-999)	(21,647)
Less firms not meeting the requirement of using 5-year rolling average data for <i>STRATEGY</i> measure and firms with missing values for all six <i>STRATEGY</i> component variables	(44,754)
Total observations for <i>STRATEGY</i> composite score (2004–2012)	27,475
<i>Panel B</i> Regression sample	
<i>STRATEGY</i> composite score dataset in Panel A	27,475
Less missing CSR data and control variables	(13,476)
Total observations for <i>STRATEGY</i> CSR dataset (2004–2012)	13,999

of non-missing observations for each of our measures. We delete firms that do not meet the above requirements and firms with missing values for all six *STRATEGY* component variables. Our sample for *STRATEGY* finally consists of 27,475 observations from 2004 to 2012. We next merge these *STRATEGY* data with CSR data and financial statement data. This results in a final sample of 13,999 firm-year observations (Table 1).

## Descriptive Statistics

Descriptive statistics are provided in Table 2. The distribution of our strategy measure is consistent with prior studies (Bentley et al. 2013, 2016; Higgins et al. 2015). Panel A shows the number of strategic types in each industry. Following Bentley et al. (2013), we classify firms as defenders when *STRATEGY* scores range from 6 to 12, as prospectors when *STRATEGY* scores range from 24 to 30, and as analyzers when *STRATEGY* scores range from 13 to 23. Panel B reports descriptive statistics for the *STRATEGY* composite measure and the raw components of *STRATEGY*. All the means of the six component variables are significantly different at the 5% level between prospectors and defenders, suggesting that the composite of the six *STRATEGY* components captures the different business strategies. Panel C presents descriptive statistics for all variables used in model (1). We winsorize all continuous variables at the 1st and 99th percentiles to reduce the influence of outliers. Prospectors have higher CSR scores, consistent with our hypothesis. Panel D reports Pearson correlation coefficients for selected variables. *STRATEGY* is positively correlated with CSR score at the 1% level. Also, *STRATEGY* is significantly and negatively correlated ( $p \leq 0.01$ ) with *CSR\_CONS*. The correlation between *STRATEGY* and *CSR\_STRS* is positive but not significant. None of the correlations among the independent variables are high enough to cause multicollinearity concerns.

## Results

### Business Strategy and CSR Performance

Our hypothesis predicts that prospectors have better CSR performance than defenders, which indicates that a positive correlation between business strategy and CSR performance is expected. Table 3 presents the regression results for Model (1). In column (1) of Table 3, we use *STRATEGY* to measure a firm's business strategy, while in column (2) *STRATEGY\_TYPE* is used as an alternative measure of business strategy. For both columns, we control for year and industry fixed effects to avoid any common trend in CSR score over time or between industries. We further cluster standard errors by firm to address potential serial dependence in the data.

Consistent with our hypothesis, the coefficient of *STRATEGY* in column (1) is significantly positive ( $\beta_1 = 0.009$ ,  $p \leq 0.01$ ). Specifically, when business strategy changes from a defender to a prospector, CSR performance increases accordingly by 1.47 times compared to the mean CSR score.<sup>6</sup> The majority of control variables are consistent with expectations from prior literature. The coefficient of CSR score in year  $t-1$  is 0.816 and significant at the 1% level, suggesting that a firm's current CSR performance is significantly affected by its prior CSR performance.

The coefficient of *STRATEGY\_TYPE* in column (2) is also positive and significant at the 1% level, suggesting that no matter whether we use a discrete business strategy score or a categorical value of business strategy, prospectors conduct more CSR activities and have better CSR performance.

<sup>6</sup> Calculated as  $\{[(24-12) \times 0.009] / 0.073\}$ , where 24 and 12 represent the cutoff values for prospectors and defenders, respectively. 0.009 is the coefficient of *STRATEGY*, and 0.073 is the absolute value of the mean CSR score.



**Table 2** Descriptive statistics

Panel A Industry affiliations (firm-year)							
SIC	Industry affiliation	Full sample (N = 27,475)		Prospectors (N = 2185)		Defenders (N = 1712)	
		N	%	N	%	N	%
01–09	Agriculture, forestry and fishing	115	0.4	9	0.4	2	0.1
10–14	Mining	1379	5.0	123	5.6	79	4.6
15–17	Construction	361	1.3	19	0.9	13	0.8
20–39	Manufacturing	14,303	52.1	1280	58.6	968	56.5
40–48	Transportation and communications	1530	5.6	117	5.4	90	5.3
50–51	Wholesale trade	1225	4.5	88	4.0	64	3.7
52–59	Retail trade	2371	8.6	103	4.7	95	5.5
70–89	Services	6069	22.1	441	20.2	398	23.2
99	Other	122	0.4	5	0.2	3	0.2
Total		27,475	100.0	2185	100.0	1712	100.0
Panel B STRATEGY component							
		Full sample (N = 27,475)		Prospectors (N = 2185)		Defenders (N = 1712)	
		Mean	SD	Mean		Mean	
STRATEGY		18.029	3.705	25.160		11.027	
STRATEGY component variables							
RDS5		0.440	11.470	2.545		0.007	
EMPS5		0.014	0.178	0.036		0.004	
REV5		137.341	3769.233	604.983		3.412	
SGA5		1.725	27.238	7.540		0.187	
σEMP5		1.195	5.191	1.202		0.359	
CAP5		0.246	0.216	0.142		0.384	
Panel C Regression variables							
		Full sample (N = 13,999)		Prospectors (N = 1026)		Defenders (N = 659)	
		Mean	SD	Mean		Mean	
CSR		−0.073	2.377	−0.267		−0.778	
CSR_CONS		1.389	1.407	1.237		1.560	
CSR_STRS		1.316	2.339	0.970		0.781	
STRATEGY		18.200	3.500	25.076		11.099	
SIZE		7.123	1.510	6.717		6.917	
LEV		0.209	0.201	0.208		0.275	

**Table 2** (continued)

Panel C Regression variables											
Full sample (N= 13,999)						Prospectors (N= 1026)			Defenders (N= 659)		
	Mean	SD				Mean				Mean	
ROA	0.033	0.117				-0.026				0.030	
MB	2.787	3.361				3.579				2.277	
CFO	0.099	0.088				0.055				0.105	
DI	0.012	0.024				0.007				0.016	
BLUE	0.576	0.494				0.686				0.460	
Panel D Correlation matrix											
	CSR	CSR_CONS	CSR_STRS	STRATEGY	SIZE	LEV	ROA	MB	CFO	DI	BLUE
CSR	1										
CSR_CONS	-0.323	1									
CSR_STRS	0.822	0.274	1								
STRATEGY	0.055	-0.072	0.013	1							
SIZE	0.355	0.357	0.576	-0.033	1						
LEV	-0.013	0.074	0.031	-0.079	0.287	1					
ROA	0.096	0.006	0.101	-0.117	0.175	-0.192	1				
MB	0.095	-0.036	0.075	0.085	-0.017	-0.090	0.159	1			
CFO	0.107	-0.020	0.097	-0.123	0.129	-0.128	0.613	0.168	1		
DI	0.123	0.044	0.152	-0.100	0.075	-0.028	0.217	0.135	0.238	1	
BLUE	0.163	-0.086	0.114	0.119	-0.055	-0.162	-0.037	0.036	-0.086	-0.022	1

Panel A reports the number of strategic types in each industry. Panel B presents the descriptive statistics of *STRATEGY* composite measure and the raw components of *STRATEGY*. Panel C reports the descriptive statistics for all variables included in the main tests. For Panel B and Panel C, means that are significantly different at or below the 5% level are in bold. Panel D presents the Pearson correlations for the main variables. Bold text indicates statistical significance at the 1% level or lower. See [Appendix](#) for variable definitions. All continuous variables are winsorized at 1 and 99%

**Table 3** Business strategy and CSR performance

	Dep. = CSR	
	(1)	(2)
<i>STRATEGY</i>	0.009*** (3.50)	
<i>STRATEGY_TYPE</i>		0.076*** (2.91)
<i>SIZE</i>	0.192*** (20.21)	0.192*** (20.24)
<i>LEV</i>	-0.223*** (-4.39)	-0.233*** (-4.60)
<i>ROA</i>	-0.191** (-2.03)	-0.203** (-2.16)
<i>MB</i>	0.009*** (2.92)	0.010*** (3.05)
<i>CFO</i>	0.509*** (3.82)	0.506*** (3.80)
<i>DI</i>	1.180** (2.56)	1.099** (2.40)
<i>BLUE</i>	0.076*** (3.71)	0.080*** (3.87)
<i>Lag. DV</i>	0.816*** (106.33)	0.816*** (106.83)
Constant	-1.762*** (-20.45)	-1.749*** (-19.67)
Year fixed effects	YES	YES
Industry fixed effects	YES	YES
Adjusted $R^2$	0.736	0.736
<i>N</i>	13,999	13,999

This table reports the results of estimating Model (1) on our main sample, which includes prospectors, analyzers, and defenders. Column (1) uses a discrete score *STRATEGY* to measure a firm's business strategy, and column (2) uses a categorical variable *STRATEGY\_TYPE* to proxy for business strategy. See Appendix for variable definitions. *t*-statistics are reported in parentheses and are based on standard errors clustered at the firm level

\*, \*\*, \*\*\* Indicate significance at the 10, 5, and 1% levels of confidence, respectively

The analysis above, which is consistent with the Miles and Snow (1978, 2003) theoretical framework, relies on a full sample that includes prospectors, analyzers, and defenders. To observe the difference in CSR performance between prospectors and defenders more clearly, we follow Higgins et al. (2015) and restrict our analysis to a smaller sample that consists of only prospectors and defenders. As shown in Table 4, there are only 1685 firm-year observations in the new test. Consistent with Higgins et al. (2015), we construct a dummy variable, *PROSPECTOR*, which equals 1 if a firm is classified as prospectors and zero if it is classified as defenders, to proxy for business strategy. The regression results show that the coefficient of *PROSPECTOR* is positive ( $\beta_1 = 0.218$ ) and significant at the 1% level, suggesting that there exists a significant difference in CSR performance between prospectors and defenders, and prospectors have better CSR performance than defenders.

Taken together, the results shown in Tables 3 and 4 support our hypothesis that compared with defenders, prospectors engage in more CSR activities.

**Table 4** Business strategy and CSR performance: prospectors versus defenders

	Dep. = CSR
<i>PROSPECTOR</i>	0.218*** (3.54)
<i>SIZE</i>	0.160*** (4.68)
<i>LEV</i>	-0.098 (-0.69)
<i>ROA</i>	-0.278 (-1.43)
<i>MB</i>	0.004 (0.77)
<i>CFO</i>	0.522** (2.04)
<i>DI</i>	0.398 (0.26)
<i>BLUE</i>	-0.033 (-0.56)
<i>Lag. DV</i>	0.796*** (29.76)
Constant	-1.435*** (-6.59)
Year fixed effects	YES
Industry fixed effects	YES
Adjusted $R^2$	0.657
<i>N</i>	1,685

This table reports the results of estimating Model (1) on a sample that consists of only prospectors and defenders. We use dummy variable *PROSPECTOR* to measure business strategy. See Appendix for variable definitions. *t*-statistics are reported in parentheses and are based on standard errors clustered at the firm level

\*, \*\*, \*\*\* Indicate significance at the 10, 5, and 1% levels of confidence, respectively

### Business Strategy and Socially Responsible/Irresponsible Activities

A firm's CSR activities can be decomposed into two components, socially responsible activities and socially irresponsible activities (e.g., Godfrey et al. 2009; Kotchen and Moon 2012; Mattingly and Berman 2006; Tang et al. 2015). Socially responsible activities are treated as firm activities taken to benefit a large range of stakeholders, with the ultimate goal of benefiting society at large (e.g., Freeman 1984; Mackey et al. 2007), while socially irresponsible activities are considered as cost-saving actions to achieve short-term financial performance but that destroy stakeholder value (e.g., Kotchen and Moon 2012; Tang et al. 2015). Prior literature shows that firms could simultaneously conduct socially responsible activities and socially irresponsible activities (e.g., Muller and Kräussl 2011; Strike et al. 2006). Some firms engage in more responsible activities to offset their engagement in socially irresponsible activities (Kotchen and Moon 2012).

We therefore examine the role of business strategy in a firm's socially responsible activities and socially irresponsible activities, respectively. We construct CSR strengths (*CSR\_STRS*) and CSR concerns (*CSR\_CONS*) to proxy for

**Table 5** Further analyses of business strategy and CSR performance*Panel A* CSR strengths and concerns

	Dep = CSR_STRS		Dep. = CSR_CONS	
	(1)	(2)	(3)	(4)
<i>STRATEGY</i>	0.005*** (2.61)		−0.005*** (−2.92)	
<i>STRATEGY_TYPE</i>		0.041** (2.01)		−0.039** (−2.31)
Control variables	YES	YES	YES	YES
Year fixed effects	YES	YES	YES	YES
Industry fixed effects	YES	YES	YES	YES
Adjusted $R^2$	0.827	0.827	0.729	0.728
<i>N</i>	13,999	13,999	13,999	13,999

*Panel B* Third-party CSR and stakeholder CSR

	Dep. = Third-party CSR		Dep. = Stakeholder CSR	
	(1)	(2)	(3)	(4)
<i>STRATEGY</i>	0.005*** (4.09)		0.005** (2.40)	
<i>STRATEGY_TYPE</i>		0.039*** (3.12)		0.044** (2.03)
Control variables	YES	YES	YES	YES
Year fixed effects	YES	YES	YES	YES
Industry fixed effects	YES	YES	YES	YES
Adjusted $R^2$	0.671	0.671	0.724	0.724
<i>N</i>	13,999	13,999	13,999	13,999

Panel A reports results for regressions of CSR strengths and CSR concerns on business strategy. Column (1) and column (3) use *STRATEGY* as the measure of business strategy, and column (2) and column (4) use *STRATEGY\_TYPE* as a proxy for business strategy. Panel B presents the results for the regressions of third-party CSR and stakeholder CSR on business strategy. Column (1) and column (3) use *STRATEGY* as the measure of business strategy, and column (2) and column (4) use *STRATEGY\_TYPE* as a proxy for business strategy. See [Appendix](#) for variable definitions. *t*-statistics are reported in parentheses and are based on standard errors clustered at the firm level

\*, \*\*, \*\*\* Indicate significance at the 10, 5, and 1% levels of confidence, respectively

a firm's socially responsible activity and socially irresponsible activity, respectively, and use these two variables as the dependent variables to re-estimate Model (1).

The results are shown in Panel A of Table 5. The coefficients of *STRATEGY* and *STRATEGY\_TYPE* are positive and significant in column (1) and column (2), indicating that prospectors invest more in socially responsible activities than defenders. The coefficients of *STRATEGY* and *STRATEGY\_TYPE* are significantly negative in column (3) and column (4), suggesting that prospectors engage in fewer socially irresponsible activities.

### Business Strategy and Third-Party (Stakeholder) CSR

CSR is a multidimensional concept that includes a variety of areas, such as the community, employees, the environment, and human rights. Some of these areas relate to stakeholder interests, such as employees and consumers, while other areas focus on benefits to the whole of society, such as the environment and human rights. Servaes and Tamayo (2013) subdivide the five CSR dimensions into two components: third-party CSR and stakeholder CSR. Specifically,

third-party CSR covers CSR activities in the environment, human rights, and community, which are related to third parties' benefits and represent normative expectations on firms. Stakeholder CSR consists of CSR activities that focus on stakeholders' interests, including employee relations and diversity, which are more central to shareholder value. We follow Servaes and Tamayo (2013) and calculate the CSR score for third-party CSR and stakeholder CSR, respectively.

Panel B of Table 5 reports the results. The coefficients of *STRATEGY* and *STRATEGY\_TYPE* are positive and significant in all columns, suggesting that prospectors engage in more CSR in both third-party-related and stakeholder areas.

### Additional Analyses

#### Social Capital and the Association Between Business Strategy and CSR Performance

Recent studies show that the social capital of a firm's location could have a significant impact on its economic decisions (e.g., Hasan et al. 2017; Jha and Chen 2015; Jha and



Cox 2015). Firms headquartered in U.S. counties with high social capital pay lower audit fees (Jha and Chen 2015), conduct fewer tax avoidance activities (Hasan et al. 2017), and engage in more socially responsible activities (Hoi et al. 2016; Jha and Cox 2015).

Social capital is often defined as mutual trust in society, which is captured by strength of civic norms and density of social networks (Jha and Chen 2015). A county with higher social capital means that individuals in this county share more civic norms and have denser networks (Coleman 1988; Fukuyama 1997; Woolcock 2001). These civic norms and denser networks make individuals in such a county more likely to forgo self-interest and act in the interests of the collectivity rather than their own interests (Coleman 1988; Knack and Keefer 1997). In the U.S., firms with good social responsibility ratings tend to be located in counties with high social capital, as high social capital facilitates civic-minded, socially cooperative actions and constrains behaviors that are inconsistent with the prescribed values associated with civic norms (Hoi et al. 2016). Therefore, firms headquartered in counties with high social capital are more likely to be incentivized to engage in CSR activities. We expect the sensitivity of business strategy to CSR performance to be lower if a firm's headquarters is located in a county with higher social capital.

To test this prediction, we partition our sample into two subsamples based on the level of social capital of the county where a firm's headquarters is located. Following the prior literature (e.g., Hoi et al. 2016; Jha and Cox 2015), our measure of social capital (*SOCIAL\_CAPITAL*) is directly based on the social capital index from the Northeast Regional Center for Rural Development (NRCRD) at Pennsylvania State University. NRCRD provides the social capital index for all U.S. counties in the four individual years of 1990, 1997, 2005, and 2009, which are named *sk90*, *sk97*, *sk05*, and *sk09*, respectively. We use the social capital index *sk97*, *sk05*, and *sk09* as indexes of social capital (*SOCIAL\_CAPITAL*) for 1997, 2005, and 2009. To create a complete longitudinal sequence of social capital between the sample periods, we fill in the data for the missing years using the social capital index in the preceding year for which data are available.

We classify a firm observation into the *High Social Capital* group if a firm's headquarters is located in counties in which the level of social capital (*SOCIAL\_CAPITAL*) is above the sample median. We use *STRATEGY*, *STRATEGY\_TYPE*, and *PROSPECTOR* as the independent variables, respectively, and estimate Model (1) for the two samples.

Table 6 shows that the positive relations between business strategy and CSR performance are observed only in the low social capital sample. These findings suggest that the effect of business strategy on CSR performance is weaker when

the CSR emphasis exerted by a firm's external social capital environment is high.

## Company Strategy Consistency

One concern with our results is that there could be omitted variables that are correlated with both business strategy and CSR performance, thus causing an endogeneity problem.

We argue that the endogeneity problem is less likely in our study due to the consistency in firm business strategy (Chen et al. 2016). Prior literature suggests that a firm's business strategy is determined at its early stage and remains relatively stable over time (e.g., Hambrick 1983; Snow and Hambrick 1980). Hambrick (1983) states that firms with different strategies tend to develop certain internal consistencies and maintain their strategies over time. When a firm faces a change in external environment, it typically tends to adjust its business strategy rather than change it entirely (Snow and Hambrick 1980).

In our sample, the variance of *STRATEGY* within firms is 1.43, and 5.90% of firms never change their *STRATEGY* score, consistent with Bentley et al. (2013) and Higgins et al. (2015). Moreover, 30% of firms do not change their *STRATEGY* score from year to year, while 39% of firms change their score by 1 and only 5% of firms change their score by more than 3. Further, no firm switches business strategy from a defender to a prospector (or vice-versa) over our sample period. These results are similar to Bentley et al. (2013) and Chen et al. (2016). In addition, the correlation between *STRATEGY* and its 1-year lag value is 0.88.

The evidence suggests that a firm's business strategy is consistent over time, and thus a firm's business strategy could be treated as an underlying factor of CSR performance.

## Business Strategy Component Analysis

To assess whether *STRATEGY* represents a construct that is greater than its six individual components, we follow the previous literature (e.g., Bentley et al. 2013, 2016; Higgins et al. 2015) to perform several additional tests. First, we re-estimate Model (1) using six raw components of *STRATEGY*. If the *STRATEGY* does not provide incremental information beyond the six components, we should find a positive and significant relationship between each individual component and CSR.<sup>7</sup> Consistent with Bentley et al. (2013, 2016) and Higgins et al. (2015), we find that five of the six individual components are insignificant or have the opposite sign against the composite *STRATEGY*.

<sup>7</sup> Except for *CAP5*, the relationship between *CAP5* and *CSR* should be significant and negative.

**Table 6** Business strategy and CSR performance with partitioned samples: high versus low social capital

	Dep. = CSR	
	High social capital	Low social capital
<i>Panel A STRATEGY as independent variable</i>		
<i>STRATEGY</i>	0.005 (1.14)	0.013*** (3.03)
Control variables	YES	YES
Year fixed effects	YES	YES
Industry fixed effects	YES	YES
Adjusted $R^2$	0.725	0.761
<i>N</i>	6584	6629
<i>Panel B STRATEGY_TYPE as independent variable</i>		
<i>STRATEGY_TYPE</i>	0.033 (0.69)	0.131*** (3.05)
Control variables	YES	YES
Year fixed effects	YES	YES
Industry fixed effects	YES	YES
Adjusted $R^2$	0.725	0.761
<i>N</i>	6,584	6,629
<i>Panel C PROSPECTOR as independent variable</i>		
<i>PROSPECTOR</i>	0.131 (1.11)	0.318*** (3.70)
Control variables	YES	YES
Year fixed effects	YES	YES
Industry fixed effects	YES	YES
Adjusted $R^2$	0.655	0.697
<i>N</i>	719	833

This table reports the results of the impact of social capital on the relationship between business strategy and CSR performance. Panel A uses *STRATEGY* as the measure of business strategy, and Panel B uses *STRATEGY\_TYPE* as a proxy for business strategy. In Panel C, we employ a sample that consists of only prospectors and defenders and use dummy variable *PROSPECTOR* to measure business strategy. We label the observations whose headquarters are located in counties in which the level of social capital (*SOCIAL\_CAPITAL*) is above the sample median by each year as the *high social capital sample* and otherwise as the *low social capital sample*. See [Appendix](#) for variable definitions. *t*-statistics are reported in parentheses and are based on standard errors clustered at the firm level

\*, \*\*, \*\*\* Indicate significance at the 10, 5, and 1% levels of confidence, respectively

Next, following Bentley et al. (2013) and Higgins et al. (2015), we conduct a factor analysis on the components of *STRATEGY*. The untabulated results show that all six components load on one factor. In addition, we construct a factor score of the six components and re-estimate Model (1). Our untabulated results are robust to the factor score of CSR.

### Alternative Measure of CSR Performance

Since the number of strength and concern items in the MSCI STATS database changes every year, direct comparison of the raw scores across years in the prior literature may not be appropriate (Deng et al. 2013). We follow Deng et al. (2013) to construct an alternative CSR measure (*Adjust CSR*) by

dividing the original CSR score by the number of strength and concern items every year. Our results are robust to the alternative measure.

### Conclusion

Relying on the Miles and Snow (1978, 2003) strategy typology and Bentley et al. (2013) measure of business strategy, we examine whether CSR performance varies between firms following different business strategies. We find evidence that prospectors are more likely to invest in CSR activities than defenders. We further find that the increases in prospectors' CSR performance are driven by improvements in socially responsible activities, reductions in socially irresponsible

activities, and by more engagements in both stakeholder CSR and third-party CSR. Moreover, the positive impact of business strategy on CSR performance is weakened when the CSR emphasis exerted by a firm's external social capital environment is high.

Overall, our results suggest that a firm's business strategy has a significantly positive effect on its CSR performance. Since business strategy is chosen to influence a firm's manner from an early stage of its history (Miles and Snow 1978, 2003), our findings suggest that, before affected by various temporal internal (e.g., corporate governance structures) or external factors (e.g., stakeholder pressure) as documented in prior studies, a firm's CSR performance, to some extent, is already shaped (encouraged or constrained) by the firm's business strategy chosen in the early history of its life. In other words, business strategy is an underlying determinant of CSR performance. In addition, our findings suggest that CSR is not merely a philanthropic activity of "doing good." It has a strong strategic aspect. Firms have a propensity to be socially responsible and are more willing to conduct CSR if they may gain benefits from CSR engagement.

Our study contributes to the literature in several ways. First, we add to prior studies that focus on the strategic aspect of a firm's CSR performance. Our study focuses on a firm's business strategy, which is a firm attribute that is often chosen at an early stage of a firm's life and varies little over time. Our study suggests that differences in firm business strategy could result in differences in firm CSR performance.

Second, this study contributes to the literature that focuses on the importance of business strategy. Our study suggests that, besides the significant effects on a firm's financial activities (e.g., tax planning, financial reporting), business strategy can enhance a firm's non-financial performance, such as CSR performance.

This study has important practical and societal implications. It suggests that when shareholders and managers determine a firm's business strategy at an early stage, they need to be aware that the choice of business strategy can affect not only a firm's financial performance directly, but it can also influence the firm's performance in CSR-related areas, which could also subsequently affect a firm's financial performance (Kurucz et al. 2008). Specifically,

compared with defenders, prospectors are more aware of the stakeholders who can influence their businesses, and they thus more actively respond to the demands of these stakeholders when creating and implementing their CSR activities. Consequently, these firms are more likely and more able to utilize CSR as part of their value creation process. Therefore, our study suggests that a firm's choice of business strategy could be a starting point for identifying opportunities to create relevant, strategic CSR that aligns with a firm's competitive circumstances. Moreover, our study provides an additional perspective for investors in examining a firm's current CSR performance and its future CSR performance. For example, if a firm is a defender, it is almost impossible that its future CSR performance will be as good as that of a prospector, due to its consistency of business strategy. This could thus provide an additional reference for investors' long-term investment decisions.

This study offers direction for future research. Since we focus only on U.S.-listed firms in this study, our findings provide evidence only for the U.S.; the relationship between business strategy and CSR performance may not apply to other countries. Therefore, research based on a non-U.S. setting is suggested.

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## Compliance with Ethical Standards

**Conflict of interest** Yuan Yuan declares that she has no conflict of interest. Louise Yi Lu declares that she has no conflict of interest. Gaoliang Tian declares that he has no conflict of interest. Yangxin Yu declares that he has no conflict of interest.

## Appendix

See Table 7.

**Table 7** Variable definitions

<i>STRATEGY</i> components	
<i>RDS5</i>	Research and development expenses ( <i>XRD</i> ) divided by total sales ( <i>SALE</i> ), computed over a rolling 5-year average (year $t-5$ through year $t-1$ )
<i>EMPS5</i>	Total number of employees ( <i>EMP</i> ) divided by total sales ( <i>SALE</i> ), computed over a rolling 5-year average (year $t-5$ through year $t-1$ )
<i>REV5</i>	1-year percentage change in total sales ( <i>SALE</i> ), computed over a rolling 5-year average (year $t-5$ through year $t-1$ )
<i>SGA5</i>	Selling, general and administrative expenses ( <i>XSGA</i> ) divided by total sales ( <i>SALE</i> ), computed over a rolling 5-year average (year $t-5$ through year $t-1$ )
$\sigma(EMP5)$	Standard deviation of total number of employees ( <i>EMP</i> ), computed over a rolling 5-year average (year $t-5$ through year $t-1$ )
<i>CAP5</i>	Net property, plant, and equipment ( <i>PPENT</i> ) divided by total assets ( <i>AT</i> ), computed over a rolling 5-year average (year $t-5$ through year $t-1$ )
Regression variables	
Dependent variables	
<i>CSR</i>	A firm's total CSR score, measured as the total strength score minus the total concern score across the five MSCI categories: community, diversity, employee relations, environment, and human rights
<i>CSR_STRS</i>	A firm's total CSR strength score, measured as the sum of strength scores across the five MSCI categories: community, diversity, employee relations, environment, and human rights
<i>CSR_CONS</i>	A firm's total CSR concern score, measured as the sum of concern scores across the five MSCI categories: community, diversity, employee relations, environment, and human rights
<i>Third-party CSR</i>	A firm's total third-party CSR score, measured as the sum of CSR scores across the three MSCI categories: community, environment, and human rights
<i>Stakeholder CSR</i>	A firm's total stakeholder CSR score, measured as the sum of CSR scores across the two MSCI categories: employee relations and diversity
<i>Adjusted CSR</i>	A firm's adjusted CSR score, developed by Deng et al. (2013), measured as a firm's total CSR score divided by the number of strength and concern items in the same year
Independent variables	
<i>STRATEGY</i>	Discrete score with values ranging from 6 to 30, where high (middle) [low] values indicate prospector (analyzer) [defender] firms, respectively. Refer to Bentley et al. (2013) for score construction
<i>STRATEGY_TYPE</i>	Categorical variable, equal to 1 if <i>STRATEGY</i> score is between 6 and 12, equal to 2 if <i>STRATEGY</i> score is between 13 and 23, and equal to 3 if <i>STRATEGY</i> score is between 24 and 30
<i>PROSPECTOR</i>	Dummy variable, equal to 1 if <i>STRATEGY</i> score is between 24 and 30, and zero otherwise
Control variables	
<i>Lag. DV</i>	Lag issue of the dependent variable
<i>SIZE</i>	Natural logarithm of total assets ( <i>AT</i> )
<i>LEV</i>	Sum of long-term debt and debt in current liabilities ( <i>DLTT</i> + <i>DLC</i> ) divided by total assets ( <i>AT</i> )
<i>ROA</i>	Income before extraordinary items ( <i>IB</i> ) divided by total assets ( <i>AT</i> )
<i>MB</i>	Market value of equity ( <i>PRCC_F</i> × <i>CSHO</i> ) divided by book value of equity ( <i>CEQ</i> )
<i>CFO</i>	Cash flow from operations ( <i>OANCF</i> ) divided by total assets ( <i>AT</i> )
<i>DI</i>	Cash dividends ( <i>DVC</i> + <i>DVP</i> ) divided by total assets ( <i>AT</i> )
<i>BLUE</i>	Dummy variable, equal to 1 if a firm's headquarters is located in a Democratic state and zero otherwise. Democratic states are defined as states that support the Democratic candidate in any presidential election from 2000 to 2012
<i>SOCIAL_CAPITAL</i>	Back-filled based on <i>sk97</i> , <i>sk05</i> , and <i>sk09</i> . For instance, missing data for 2006 to 2008 were back-filled using <i>sk05</i>
<i>sk97</i> , <i>sk05</i> , <i>sk09</i>	Social capital index in 1997, 2005, and 2009, respectively



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