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#### RESEARCH ARTICLE



# The impact of creating shared value strategy on corporate sustainable development: From resources perspective

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#### Abstract

Porter and Kramer abandoned the traditional view of trade-offs and proposed the concept of "creating shared value", which integrates social and environmental needs into a company's core business to improve both society and the environment while enhancing its competitiveness. Whether creating shared value strategy can achieve corporate sustainable development should be urgently investigated. With the resource-dependence theory and resource-based theory, the positive impacts of creating shared value strategy on corporate social, environmental, and financial performances are theoretically analyzed and empirically tested from the perspectives of resource provision and acquisition. In further analysis, the mechanism test based on "sharing value" suggests that creating shared value strategy can strengthen its competitiveness by fulfilling social and environmental responsibilities. The consequences test demonstrates that creating shared value strategy promotes the provision of technological resources and information resources, which is conducive to the acquisition of market resources, human resources, and capital resources.

#### KEYWORDS

creating shared value, corporate sustainable development, social performance, environmental performance, financial performance

#### INTRODUCTION 1

Corporate sustainable development is a hot issue in both commercial and social fields. In the early 1970s, according to shareholder primacy theory, enterprises aimed to create economic value (Friedman, 2007). Social responsibility activities consume enterprise resources and lower enterprise value (Aupperle et al., 1985; Li, 2006). With the stakeholder theory proposed, enterprises should fulfill their social responsibilities to meet stakeholders' needs, creating economic and social value (Flammer, 2015; Jones, 1995). In the early 20th century, the triple bottom line theory became one of the fundamental theories in the sustainable development field, including economic, social, and environmental bottom lines (Elkington, 1998). Porter and Kramer (2006) pointed out that people focus too much on the boundary between enterprises and society without fully understanding mutual interdependence. They believe corporate decision-making and policymaking should follow the "Creating Shared Value (CSV)" principle. "Shared

Value" is defined as "policies and operating practices that not only enhance the competitiveness of a company but also advance the economic and social conditions in the communities in which it operates" (Porter & Kramer, 2011). As a business strategy, CSV differs from related concepts due to an additional dimension that focuses on integrating business strategy in responding to societal and environmental problems (Menghwar & Daood, 2021; Nam & Hwang, 2019; Porter & Kramer, 2014). By coordinating business activities and social concerns, CSV strategy brings an excellent opportunity to transform the business model for sustainable development (Corazza et al., 2017; Yang & Yan, 2020).

This paper aims to explore the relationship between CSV strategy and corporate sustainable development through theoretical analysis and empirical tests. Additional analyses around the research topic delve into how CSV strategy achieves sustainable development. Existing studies have focused on the impact of strategic choice, corporate governance and stakeholder management on sustainable

development (Harms et al., 2013; Huang, 2013; Lozano, 2013; Muñoz et al., 2019). However, the relationship between CSV strategy and corporate sustainable development regarding resource perspective remains to be further studied. This paper follows Porter and Kramer's definition to examine the impact of CSV strategy on corporate sustainable development from the perspective of resource provision and resource acquisition. Based on the triple bottom line theory of sustainable development (Gu et al., 2020), the logic chain that enterprises with CSV strategy are conducive to improving corporate social, environmental and economic performance is constructed. The empirical results suggest that CSV strategy positively impacts corporate social, environmental, and financial performance. Those results confirm that CSV strategy can improve the sustainable development of enterprises. In order to further reflect the realization form of CSV strategy on corporate sustainable development, the mechanism test based on the concept of "sharing value" validates that social and environmental performances play mediating roles in CSV strategy and corporate financial performance. This result implies that CSV strategy strengthens enterprise competitiveness by fulfilling social and environmental responsibilities, consistent with the core idea of shared value. Resource provision and acquisition are critical processes to create value (Zeng et al., 2021). Considering that this paper takes resources as the perspective, the impact of CSV strategy on different resources is further analyzed through consequences test. The results demonstrate that enterprises with CSV strategy prefer to release technology and information resources, which obtains market, human, and capital resources. These results suggest that CSV strategies can provide resources that benefit stakeholders and capture resources that contribute to a firm's competitive advantage.

The remainder of this paper is as follows. Section 2 reviews the CSV strategy literature and elaborates on research hypothesis. Section 3 describes research design. Section 4 reports the results of empirical analysis. Section 5 employs additional analyses. Section 6 and 7 present suggestions and conclusions of this study.

## 2 | LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

#### 2.1 | Literature review

Since Porter and Kramer's proposal, the CSV concept has gained much attention from practitioners. More and more enterprises integrate social and environmental issues into corporate strategy, which contributes to a sustainable competitive advantage (Bertini & Gourville, 2012; Pfitzer et al., 2013). After that, researchers not only provide an in-depth exploration of theoretical concepts for CSV (Beschorner & Hajduk, 2017; Chen et al., 2021; Dembek et al., 2016; Giuliani et al., 2020) but also performed case studies of corporate practice (Elamrani & Lemtaoui, 2016; Ollivier de Leth & Ros-Tonen, 2021; Senevirathna, 2018).

After Porter and Kramer proposed the concept of CSV, they further clarified that shared value could be created by reconstructing products and markets, redefining the productivity of the value chain, and promoting the development of local clusters (Porter & Kramer, 2011). Many researchers have also supplemented how to create shared value (Saenz, 2019), emphasizing the importance of resource endowment and organizational processes. With new resources combined with local resource endowment, corporates with complementary heterogeneous resources create much more shared value than others (Xing et al., 2015). Campos-Climent and Sanchis-Palacio (2017) believed that knowledge absorption capacity is the assimilation and utilization of external knowledge, which positively impacts economic and social value through the acquisition and optimization of resource allocation. Through the ByteDance poverty alleviation case, Xing et al. (2021) discovered that corporates build social value into the platform business ecosystem and create shared value through the mixed allocation, transformation, utilization of social and commercial relations, and resources. Good governance is also essential in CSV and realizing corporate sustainable development (Rubio et al., 2020). De los Reyes et al. (2017) suggest that ethical frameworks should be established to realize the legitimacy of CSV through institutional constraints because managers cannot reasonably perform strategic management.

Meanwhile, researchers also pay attention to the outcomes of CSV strategy. Most research stresses this impact on company itself or other "beneficiaries." On the one hand, increasing the level of shared values in organizations will enhance reputation and profitability (Amah & Ahiauzu, 2014; Fernández et al., 2020). With 26 sustainability performance indicators as proxy variables for CSV, Jones et al. (2018) discovered a significant positive relationship between CSV and a range of financial performance indicators according to a 5-year sample of ASX 300 companies. On the other hand, some researchers have further studied the impact of CSV on different stakeholders. Consumers' selfbrand connection will be improved when the concept of CSV is embedded in brand strategy planning to enhance their sense of identity with the enterprise brand (Jin, 2018). Good supplier management is also one of the realization forms of CSV. Maintaining a long-term and stable cooperative relationship with suppliers is conducive to improving economic and social value (Lee et al., 2014). Establishing an informationsharing mechanism with suppliers can reduce backorder costs and create overall shared value in the supply chain (Liao et al., 2017).

CSV concept has maintained a strong interest in academia and business but has not been without its critics. Crane et al. (2014) believe that CSV is a restatement of the basic principles of stakeholder theory and is very similar to the blended value and the bottom of the pyramid theory. Some scholars also proposed that CSV is not a new concept (Aakhus & Bzdak, 2012), and it is even considered as "knowledge piracy" (Hart, 2013). Beschorner (2013) believes that CSV belongs to the "One-Trick Pony" approach, which cannot truly solve social problems.

#### 2.2 | Hypothesis development

The core of sustainable development emphasizes that enterprises should pursue economic interests and pay attention to social and

FIGURE 1 Creating shared value strategy and corporate social & environmental performance

environmental responsibilities. Based on the triple bottom line theory, the existing literature divides corporate sustainable development into three dimensions: corporate social performance (CSP), corporate environmental performance (CEP) and corporate financial performance (CFP) (Ahi & Searcy, 2015; Svensson et al., 2016; Wen & Xue, 2005). According to the existing literature, this paper discusses the influence of CSV strategy on corporate sustainable development from social, environmental and economic aspects.

According to the resource-dependence theory, it is difficult for enterprises to obtain all the resources needed for production and operation (Pfeffer & Salancik, 1978). To survive and grow, they should take the initiative to communicate and interact with other organizations that master the resources to acquire the necessary support (Ireland & Webb, 2009). Under the dependence relationship with other organizations, corporates will exchange resources with stakeholders, such as suppliers, customers, competitors, and regulators. Corporates with CSV strategy will obtain external resources and release part of their resources to satisfy the requirements of the market, stakeholders, and local clusters. Starting from the three paths of CSV strategy. Figure 1 illustrates the specific process of CSV strategy to improve CSP and CEP from the perspective of resource provision. The purpose of reconstructing products and markets is to obtain sufficient market resources, for which enterprises choose to meet the corresponding needs of market resource providers. This process is the release of some resources applied to make products and services to form a stable dependence with market resource owners. It requires enterprises to prioritize contributions to society and the environment (Chikweche & Fletcher, 2010; Tang & Yang, 2018; Xing et al., 2015). The strategic cooperation of each link in the enterprise value chain is the key to maintaining the daily operation (Porter, 1985; Wu, Inoue, et al., 2022). Redefining productivity in the value chain is a new paradigm of adding value to activities within enterprises and a better choice to fulfill social responsibility. To ensure the excellent connection and orderly flow of all links in the internal value chain, a dependency relationship with stakeholders can be established, for example, by motivating and training employees, shortening the distance with suppliers, and providing public services. Enterprises fulfill social responsibilities by releasing resources related to protecting stakeholders' rights and enhancing stakeholders' well-being. To reduce the use of natural resources and avoid the supply shortage caused by resource scarcity and depletion, enterprises increase the R&D investment in green innovation technology and reduce the demand for resources through self-developed technology and equipment (Wang

et al., 2021). Those enterprises fulfill their environmental responsibilities by saving resources and protecting the ecological environment. Enabling local cluster development aims to serve regional institutions. Also, it is one of the methods for enterprises to release their resources. The clusters will feed back the enterprises within clusters (Alcaraz et al., 2019; Wu, 2004). The infrastructure defects within the cluster may lead to structural imbalance, making it unable to achieve resource sharing and symbiotic development. To realize the mutual integration of technology and information resources, enterprises actively participate in constructing and upgrading the local cluster infrastructure, supporting the operation of the local cluster institutions, and ensuring coordination and stability within the cluster. CSV strategy contains a series of activities that satisfy the needs of stakeholders at the cost of releasing enterprise resources. These activities generally cover both social and environmental aspects, encouraging enterprises to fulfill social and environmental responsibilities actively. Therefore, from the perspective of resource provision, the following hypotheses are proposed in this paper based on the resourcedependence theory.

**Hypothesis 1.** Enterprises with CSV strategy are conducive to improving corporate social performance.

**Hypothesis 2.** Enterprises with CSV strategy are conducive to improving corporate environmental performance.

The resource-based theory holds that heterogeneous resources are crucial for making profits (Grant, 1991). Enterprises with CSV strategy have opportunities to get resources from society and the environment, which can bring competitive advantages and improve their financial performance. Starting from the three paths of CSV strategy, Figure 2 exhibits the specific process of CSV strategy to improve financial performance from the perspective of resource acquisition. To reconstruct products and markets, enterprises should dig deep to meet the market needs of social and environmental development, find a considerable number of business opportunities hidden at the bottom of society, and obtain market resources. Products and services that meet the requirements of society can attract consumers and quickly occupy the market (Mohr & Webb, 2005) while creating a higher market share (Caves, 1971). It will bring a cost advantage and thus improve corporate financial performance. Redefining productivity in the value chain is to obtain stable capital resources, supplier and

FIGURE 2 Creating shared value strategy and corporate financial performance

customer resources, and human resources, maintaining close cooperation with the upstream and downstream of the supply chain and improving employee welfare benefits. Social responsibility activities help enterprises to reduce financing costs and acquire sufficient financial support (Attig et al., 2013; Ge & Liu, 2015). Employee recognition can be obtained through human resource management, such as fair pay, a safer work environment, and professional development opportunities (El Akremi et al., 2018; Wright et al., 2003). Stakeholders reciprocate by endorsing the enterprise, resulting in a culture of mutual trust and cooperation relationship (Bosse & Coughlan, 2016; Vishwanathan et al., 2020). Due to the stakeholder reciprocation mechanism, enterprises can make full use of the resources obtained from stakeholder to increase production and operation efficiency, and then maximize profits. Enabling the development of local clusters indicates that enterprises are committed to supporting the coordinated development of cluster institutions, establishing good cooperative relations with surrounding institutions, and creating new advantages for cooperation and competition. Each enterprise's production and operation activities are affected by other organizations in the cluster (Porter & Kramer, 2011). Enterprises with good partnerships have more opportunities to obtain new resources from the cluster. Learning advanced technology and equipment from universities, research institutions, and community clusters is essential for enterprises to obtain technology and information resources. Sharing those resources with cooperative enterprises contributes to resource integration, cost reduction and efficiency increase. CSV strategy can increase market share, improve production efficiency, and maintain stable cooperative relations. It generates competitive advantages by obtaining heterogeneous resources such as market, capital, human resources, technology and information. Therefore, from the perspective of resource acquisition, the following hypothesis is presented based on the resourcebased theory.

**Hypothesis 3.** Enterprises with CSV strategy are conducive to improving corporate financial performance.

#### 3 | METHODOLOGY

#### 3.1 | Model

The corporate sustainable development is divided into three dimensions: social, environmental and financial. By exploring the relationship

between CSV strategy and the improvement of social, environmental and economic performance, the empirical analysis is made on whether CSV strategy is conducive to the corporate sustainable development (Jarboui et al., 2020; Shou et al., 2019).

Two-way fixed effects Equations (1), (2), and (3) are constructed at the time and individual level to examine Hypothesis 1, Hypothesis 2, and Hypothesis 3, expressed as:

$$CSP_{i,t} = \alpha_0 + \alpha_1 CSV_{i,t} + \alpha_2 Control_{i,t} + \varepsilon_{i,t}$$
 (1)

$$CEP_{i,t} = \alpha_0 + \alpha_1 CSV_{i,t} + \alpha_2 Control_{i,t} + \varepsilon_{i,t}$$
 (2)

$$CFP_{i,t} = \alpha_0 + \alpha_1 CSV_{i,t} + \alpha_2 Control_{i,t} + \varepsilon_{i,t}$$
(3)

where  $CSV_{i,t}$  indicates the CSV activities number;  $CSP_{i,t}$  denotes the corporate social performance;  $CEP_{i,t}$  represents the corporate environmental performance;  $CFP_{i,t}$  refers to the corporate financial performance;  $Control_{i,t}$  signifies the control variable;  $\varepsilon_{i,t}$  stands for the random error item of the enterprise in the year, the same below.

In addition, other models are constructed to test the robustness of the results. Specifically, we employed IV test, PSM test, Placebo test, Variable Substitution test.

#### 3.2 | Measurement

The total number of CSV activities disclosed is used as a proxy variable for CSV strategy in this paper (Sadick et al., 2019; Shi et al., 2019). These activities are constructed based on Porter's definition of CSV concept. An index system containing 15 CSV activities is set up from the three paths of CSV strategy (Table A1). We judged whether the events disclosed by the enterprise meet each CSV activity. The total number of CSV activities that meet the criteria for each enterprise is calculated. The higher the value, the more obvious the enterprise CSV strategy.

CSP emphasizes fulfilling responsibilities to stakeholders, such as shareholders, employees, customers, and suppliers. HEXUN performs the evaluation and scoring depending on the description of shareholder responsibility, employee responsibility, supplier, clients, and consumer rights in the CSR report of listed companies to construct the total score of CSR. The social performance index is from the total score of HEXUN (Yang et al., 2019; Zhong et al., 2019). The higher the index value, the better the social performance.

CEP mainly examines the effect of enterprises in fulfilling their environmental protection responsibilities. The sewage discharge fee is for enterprises that discharge pollutants in accordance with the quantity and concentration of pollutants exceeding the prescribed standards. The sewage discharge fee can be regarded as the punishment of enterprises in environmental protection. Therefore, the ratio of pollutant discharge cost to operating revenue in the current year is calculated and enlarged by 1000 times, and the negative number is taken as the proxy variable of environmental performance (Zhang et al., 2022; Zhu et al., 2022). The higher the ratio, the better the environmental performance. The sewage discharge fee of the enterprise in that year is from the management cost details of the listed company's annual report.

There are two types of corporate financial performance (CFP) measurements: (1) ROA, which emphasizes the financial condition (Fang et al., 2022; Lin & Wang, 2021); (2) Tobin's Q, which stresses the enterprise market value (Cheng et al., 2018). This paper highlights the enterprise profitability reflected by accounting indicators, so ROA is chosen to measure financial performance. The higher the rate, the better the financial performance.

Based on related factors affecting CSV, environmental performance, social performance, financial performance, as well as corporate sustainable development (Li & Xiao, 2020; Yin et al., 2014), control variables are selected as follows: enterprise size (SIZE), financial leverage (LEV), redundancy resources (CR), fixed asset ratio (FAR), administration expense ratio (ADM), operating cash flow (CFO), growth capacity (TAGR), independent director ratio (INDR), major shareholder funds (TUNNEL), and annual virtual variable (YEAR). The definition of control variables is shown in Table A2.

#### 3.3 | Sample

The social performance data in this paper is from Hexun.com, which evaluates and scores the social responsibility of listed companies. The financial data, such as sewage fee, ROA, and control variables, are from CSMAR (Xia et al., 2023). CSMAR is an economic and financial database developed based on the needs of academic research and China's national conditions. The CSV strategy data are manually collected by reviewing the annual reports, social responsibility reports, environmental reports, and sustainable development reports. This paper used EXCEL to sort out CSV data and STATA software for regression analysis. The sorting process is detailed as follows.

First, the A-share listed manufacturing enterprises were screened according to *The Guidelines on industry classification of listed companies* issued by the China Securities Regulatory Commission in 2012 (Ouyang et al., 2023). In this paper, manufacturing enterprises are selected as samples since the production and operation are more appropriate to the three paths of CSV strategy and more closely connected with stakeholders.

Second, the sample time range was determined to be 2012–2020. In the existing literature, the concept of CSV was proposed in July 2011. After that, researchers began conducting related research. Regarding China's actual situation, the 18th National Congress of the Communist Party of China (CPC) in 2012 laid out the Five-in-one overall plan, which paid more attention to social development and ecological progress, and set new requirements for enterprises to create innovative ways of value. Since 2012, Chinese enterprises have been increasingly stressing social and environmental needs. Thus, the sample period of this paper is selected to be 2012–2020.

Finally, the enterprises with incomplete data and ST class are removed, and the outliers are processed. According to the variable definition, enterprises disclosing sewage discharge fees are screened, listed companies in the ST category are excluded, and observations with missing or invalid data are excluded. Winsorize process was conducted on all variables at the upper and lower 1% levels.

On the whole, 286 enterprises and 1425 sample observations were obtained. The sample is typical because most of the sample enterprises are heavy polluters. Heavy polluters disclose more information in fulfilling their social and environmental responsibilities. In addition, the sample is also universal because the sample involves manufacturing enterprises in various subsectors. Specifically, it includes 31 categories, such as food manufacturing, textile industry, pharmaceutical manufacturing, and automobile manufacturing.

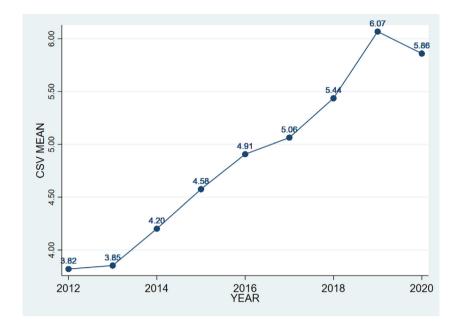
#### 4 | RESULTS AND DISCUSSIONS

#### 4.1 Descriptive statistics

Details of the CSV variable are shown in Figure 3, and descriptive statistics of the main continuous variables are reported in Table 1.

Figure 3 depicts the CSV average value of sample enterprises each year. From 2012 to 2020, the CSV of sample enterprises exhibited an increasing trend year by year, rising from the lowest average value of 3.82 in 2012 to the highest average value of 6.07 in 2019. It suggests that increasing enterprises have taken CSV as their core strategy recently. The average CSV in 2020 was 5.86, which may be slightly lower than the peak in 2019 due to the impact of the COVID-19 pandemic.

Table 1 lists the number of observed values, mean, standard deviation, minimum, median, and maximum values of the main variables and the VIF test results. The mean values of CSP, CEP, and CFP were 22.370, -1.667, and 0.030, and the standard deviations were 16.520, 2.739, and 0.059, respectively. The range calculated by subdividing the maximum and minimum values were 94.250, 18.094, and 0.384, respectively. Comprehensive analysis reveals that the difference in financial performance between sample enterprises is slight, while the difference in social and environmental performance is significant. The median value of CSV is 5, higher than the mean value of 4.762, reflecting that CSV of most sample companies is higher than the average level. The standard deviation of CSV is 2.054, which is relatively high, implying that the individual differences of sample enterprises are significant. The maximum value of the CSV index is 10. In other



**TABLE 1** Descriptive statistics

Variable	N	Mean	SD	Min	P50	Max	Vif
CSP	1425	22.370	16.520	-11.770	19.550	82.480	-
CEP	1425	-1.667	2.739	-18.100	-0.761	-0.006	-
CFP	1425	0.030	0.059	-0.170	0.025	0.214	-
CSV	1425	4.762	2.054	1.000	5.000	10.000	1.13
SIZE	1425	22.530	1.211	20.140	22.410	25.950	1.53
LEV	1425	0.482	0.202	0.071	0.488	0.960	1.50
CR	1425	0.484	0.172	0.150	0.478	0.892	2.57
FAR	1425	0.329	0.156	0.039	0.311	0.699	3.05
ADM	1425	0.076	0.049	0.008	0.066	0.289	1.22
CFO	1425	0.054	0.070	-0.173	0.052	0.248	1.13
TAGR	1425	0.096	0.188	-0.295	0.062	0.882	1.11
INDR	1425	0.372	0.071	0.231	0.364	0.600	1.01
TUNNEL	1425	0.046	0.081	0	0.017	0.518	1.24

words, the number of CSV activities in all sample enterprises is at most 10, and no enterprise meets all the measurement standards of CSV. Thus, the enthusiasm of enterprises to create shared value needs to be improved, which is one of the reasons why this paper chooses to study the outcomes of CSV strategy. After the VIF test of explanatory variables and control variables, the study results revealed that the variance inflation factor of each variable was less than 10, demonstrating no severe multicollinearity issue.

## 4.2 | Empirical results

The regression results of CSP, environmental performance, and financial performance on CSV are listed in Table 2. Column (1) provides the

impact of CSV on CSP. The CSV regression coefficient is 0.793, which is significantly positive at the 5% level. This result confirms Hypothesis 1. Column (2) presents the impact of CSV on CEP. The CSV regression coefficient is 0.076, which is significantly positive at the 10% level. This result confirms Hypothesis 2. Column (3) details the impact of CSV on enterprise financial performance. The regression coefficient of CSV is 0.002, which is significantly positive at 5%, indicating that Hypothesis 3 establish. On the whole, enterprises with CSV strategy are conducive to improving triple performances and realizing corporate sustainable development. This conclusion is consistent with the positive effects of CSV found by most scholars (Jin, 2018; Yang & Yan, 2020). On this basis, the results supplement the previous studies through large-sample empirical research (Xing et al., 2015; Xing et al., 2021).

TABLE 2 Regression results

(1) (2) (3)  Variable CSP CEP CFP  CSV 0.793** 0.076* 0.002** (2.28) (1.89) (2.00)  SIZE 3.638*** 0.374 0.003 (2.73) (1.59) (0.49)  LEV -24.062*** 0.925 -0.123* (-4.66) (1.24) (-6.08)	
(2.28) (1.89) (2.00)  SIZE 3.638*** 0.374 0.003 (2.73) (1.59) (0.49)  LEV -24.062*** 0.925 -0.123* (-4.66) (1.24) (-6.08)	
(2.73) (1.59) (0.49)  LEV -24.062*** 0.925 -0.123* (-4.66) (1.24) (-6.08)	
(-4.66) (1.24) (-6.08)	
CD 5.007 4.000 0.047**	:**
CR -5.907 1.003 0.067** (-0.83) (0.96) (2.50)	
FAR -11.175 0.544 -0.000 (-1.53) (0.76) (-0.01)	
ADM -60.345*** -15.375** -0.483* (-3.17) (-1.99) (-5.72)	**
CFO 10.612 1.021 0.167*** (1.61) (0.83) (5.91)	k
TAGR 6.149** 0.345 0.068*** (2.43) (1.10) (7.41)	*
INDR 3.484 0.074 0.009 (0.50) (0.11) (0.60)	
TUNNEL 7.936 1.537* 0.032 (1.08) (1.72) (0.92)	
CONS -34.327 -10.558* -0.001 (-1.12) (-1.81) (-0.01)	
Year FE Yes Yes Yes	
N 1425 1425 1425	
F 7.546 2.536 17.391	
AdjR <sup>2</sup> 0.199 0.105 0.401	

#### 4.3 | Robustness tests

## 4.3.1 | IV test

This paper may have reverse causal issues between independent and dependent variables. In other words, enterprises with high social, environmental and financial performance are more vulnerable to supervision and constraints by stakeholders such as the government and investors. They may force enterprises to integrate CSV into strategic management activities. Thus, the IV test is performed for endogeneity treatment. In this paper, the following three instrumental variables (IV) were selected to alleviate the potential endogeneity problem: CSV with one lag period (LCSV), mean value of CSV deducted from the company's industry (MEAN\_CSV), and mean value of Lerner index deducted from the company's industry (MEAN\_LN). Lerner index data are from CSMAR. The selection of the IV meets the relevance requirement. Firstly, enterprises' CSV strategy in the current year may be adjusted according to the previous year. Secondly, CSV strategy will be adjusted by the activities of competitors (Menghwar & Daood, 2021). Hence, the MEAN\_CSV representing the average industry situation was selected as the IV. Thirdly, the external

market environment affects the enterprise's strategic choice, and the degree of market competition is one of the influencing factors of the management decision (Menghwar & Daood, 2021). Moreover, the Lerner index is one of the indicators for measuring the degree of market competition (Miller, 1988). Hence, the MEAN\_LN, representing the average industry situation, is selected as the IV. The selection of IV also meets the exogenous requirement. First, enterprise performance in the current year does not affected by CSV in the next year. Second, the industry average does not directly influence the activities and performance of the specific enterprise.

The regression results of using the IV test to alleviate the endogeneity problem are presented in Table A3. Among them, (1) provides the regression result of the first stage. Based on the existing control, IV is added, and CSV is adopted as the explained variable in the regression. The F-statistic of the first stage regression result is 12.81 (>10), suggesting no weak instruments issue. (2), (3), and (4) are listed as the second-stage regression results, and the CSV coefficients are all positive and significant, consistent with the previous conclusion. Besides, the *p*-values of the Anderson LM test are all 0.000, demonstrating no insufficient identification issue. The *p*-values of Sargan test results were 0.174, 0.058, and 0.716, respectively, all greater than 0.05, indicating no over-identification issue. Hence, the conclusion is consistent with the previous one after controlling for endogeneity caused by reverse causality.

#### 4.3.2 | PSM test

Given the multiple influences of CSV strategy, missing variables may still occur, though many influencing factors have been controlled. The PSM method was used to solve the endogeneity problem caused by missing variables, and regression was performed on the matched samples. With the CSV median as the benchmark, the whole sample is divided into treatment group and control group. Given the propensity score of the control variable estimate, the proximity matching method is adopted according to the matching principle of 1:3 matching. Table A4 lists PSM matching results. The standardized deviation of all covariates after final matching is less than 10%. No significant difference in the mean values of covariates between the treatment group and the control group after matching indicates an excellent matching effect. The model is empirically tested again with the PSM paired samples, and the regression results (Table A5) are consistent with the above hypothesis.

## 4.3.3 | Placebo test

Since CSV is randomly transformed among the observed values (Cornaggia et al., 2015), the re-matched samples are used for regression. If the re-matched samples are still significant, the positive impact of CSV on CSP, CEP, and CFP is caused by the unobserved omitted variables. CSV\_N replaces the randomly transformed CSV variable. Table A6 provides the test results of the re-regression, and the

coefficients of CSV\_N are no longer significant. Thus, the improvement of CSP, CEP, and CFR is driven by CSV. Considering the large randomness of only one random sampling, the above random process is repeated 1000 times. Figures A1–A3 illustrate the distribution of T-values corresponding to the regression coefficients of CSP, CEP, and CFP on CSV\_N after 1000 times of random processing. It is revealed that T-values are concentrated around 0 and close to following the normal distribution. The test results are not likely to be driven by unobservable variables. It further supports the research conclusion of this paper.

#### 4.3.4 | Interactive fixed effects test

In this paper, a traditional panel fixed effects model is constructed, in which individual and time effects are added to the model to control individual differences and time differences that do not change over time in the sample. However, time and individual shocks may be multi-dimensional. As a result, traditional fixed effects models cannot address the endogeneity problem caused by unobservable variables that vary over time and over individuals. To further capture the time-varying characteristics, this study refers to the interactive fixed effect model of Bai. (2009), introduces the interaction effect of individual enterprise and time, and re-tests the hypothesis. Table A7 lists the regression results of the one-dimensional interactive fixed effects model at the time and individual levels. The CSV coefficients are significantly positively correlated. The model setting has no significant influence on the regression results of this paper.

## 4.3.5 | Variable substitution test

The measurement method of core variables is replaced in this paper to verify the robustness of the hypothesis conclusion. First, the measure of CSV variables is replaced. Enterprise size is one of the influencing factors of strategic choice. The number of CSV activities may vary with different enterprise sizes. Therefore, standardized CSV constructed the CSVSIZE index (CSV/SIZE) and performed regression with CSP, CEP, and CFP. As exhibited in Table A8, the coefficients of CSVSIZE in columns (1), (2), and (3) are all significant, and the signs are consistent with the main hypothesis.

Second, the measure of the explained variable is replaced. For social performance, the total CSR score, which includes the evaluation of the responsibility of the environment, was constructed directly using the HEXUN website and may be repetitive. Therefore, the score of environmental responsibility is removed in the robustness test of replacement variables. The four scoring results of shareholder responsibility, employee responsibility, supplier, customer and consumer equity responsibility, and social responsibility are used as secondary indicators. The surrogate index of social performance (CSP\_R) is constructed through the entropy right method. For environmental performance, the master hypothesis is measured in monetary terms. For conflict prevention, the number of environmental performance

projects in the enterprise is taken as the replacement variable (CEP\_R) of environmental performance, and the environmental performance projects are from CSMAR. Accounting indicators measure the financial performance of this paper. Considering that the market index Tobin's Q is a commonly used indicator to measure financial performance, Tobin's Q is selected as the replacement variable of financial performance (CFP\_R). The regression results are listed in columns (4), (5), and (6). The coefficients of CSV are significantly and positively correlated with the replaced explained variables, consistent with the main hypothesis. In conclusion, the test results are consistent with the main hypothesis and have certain robustness after replacing the core variables measurement.

#### 5 | ADDITIONAL ANALYSES

# 5.1 | Mechanism test based on "sharing value" concept

CSV emphasizes that one way of enhancing enterprises' competitiveness is to meet social and environmental needs. The "sharing value" mechanism in the CSV concept is further explored based on verifying that CSV is conducive to improving corporate sustainable development. Although there is only a one-word difference between "creating value" and "creating shared value," they contain the evolution and sublimation of values. The latter emphasizes that the scope of value creation extends from financial value to considering social and environmental values, which aligns more with the core of sustainable development.

The modern enterprise is a marketable connection organization composed of contracts (Coase, 1937). Some contracts exist between the enterprise and its stakeholders (Jensen & Meckling, 1976), such as human capital owners, physical capital owners, and creditors. From the perspective of the three paths of CSV, enterprises have contractual relations with other entities, for example, customers in the market, stakeholders in the value chain, and internal institutions of clusters. The contractual relationship between enterprises and market entities, such as customers, is reflected in providing products and services following customers' requirements. Concurrently, customers will also give feedback to enterprises accordingly, obtaining a larger market share (Anderson et al., 1994). Enterprises also have a contractual relationship with stakeholders who improve productivity in the value chain. Enterprises try their best to meet the needs of stakeholders, including saving resources, providing employees with good benefits, and maintaining an equal working environment. Simultaneously, stakeholders repay the enterprise in a way that improves productivity (Ben Lahouel et al., 2022). A cooperative contractual relationship exists between the enterprise and the institutions within the cluster. The enterprise is committed to the infrastructure construction of the cluster, supports the development of the internal institutions of the cluster, and promotes the cluster to feed them back. Every activity of an enterprise revolves around these contractual relationships. To obtain key resources, enterprises frequently actively fulfill their social and environmental responsibilities, send signals to the outside world to

meet the needs of markets, stakeholders, and clusters, and establish excellent contractual relations with organizations with external resources, to obtain related resources. CSV is to unify the development of enterprises with the solution of social and environmental problems. Enterprises try to meet the needs of society and the environment first, turn social needs and solve environmental problems into profitable business opportunities, and then obtain resources from society and the environment to improve corporate financial performance. Therefore, the "sharing value" mechanism of CSV reflects that enterprises can achieve a winwin situation of improving economic benefits by improving social and environmental performance.

Given the chain relationship of "CSV-social and environmental performances—financial performance", the "sharing value" mechanism in the CSV concept is verified by referring to the test method of intermediary mechanism. According to the three-step method of mediation test (Wen et al., 2004), Equations (4) and (5) are further constructed based on Equations (1), (2), and (3) to test the third step of the threestep method.

 $CFP_{i,t} = \alpha_0 + \alpha_1 CSP_{i,t} + \alpha_2 CSV_{i,t} + \alpha_3 Control_{i,t} + \varepsilon_{i,t}$ (4)

$$\mathsf{CFP}_{i,t} = \alpha_0 + \alpha_1 \, \mathsf{CEP}_{i,t} + \alpha_2 \, \mathsf{CSV}_{i,t} + \alpha_3 \, \mathsf{Control}_{i,t} + \varepsilon_{i,t} \tag{5}$$

Equations (1), (3), and (4) were adopted to validate the mediation effects of social performance for the first, second, and third steps of examining the mediation effects, respectively. In Table 3, column (1) exhibits the regression results in step 3, with coefficients of 0.004 and 0.001 for CSP and CSV, and significance levels of 1% and 10%, respectively. Therefore, social performance plays a partial intermediary role in the impact of CSV on CFP. Equations (2), (3), and (5) were employed to examine the first, second, and third steps of the environmental performance mediation effects, respectively. Column (2) in Table 3 shows the regression results in step 3, with CEP and CSV coefficients of 0.003 and 0.002, respectively. A significant positive correlation at the 5% and 10% levels was observed, validating the partial mediation of environmental performance. Besides, all enterprises were divided into two groups with high social performance (H-CSP)

TABLE 3 Mechanism test

Variable	(1)	(2)	(3)	(4)	(5)	(6)
	Step3	Step3	H-CSP	L-CSP	H-CEP	L-CEP
	CFP	CFP	CFP	CFP	CFP	CFP
CSP	0.004*** (8.92)					
CEP		0.003** (2.24)				
CSV	0.001*	0.002*	0.003**	0.002	0.002*	0.001
	(1.74)	(1.82)	(2.34)	(1.30)	(1.73)	(1.17)
SIZE	-0.001	0.002	-0.001	-0.002	0.009	-0.000
	(-0.22)	(0.33)	(-0.08)	(-0.31)	(0.93)	(-0.02)
LEV	-0.094***	-0.126***	-0.068**	-0.119***	-0.118***	-0.164***
	(-4.85)	(-6.35)	(-2.52)	(-3.87)	(-5.30)	(-4.48)
CR	0.066**	0.065**	0.063**	0.050	0.066	0.037
	(2.45)	(2.44)	(2.20)	(1.04)	(1.64)	(0.90)
FAR	0.011	-0.002	−0.057*	0.037	0.009	-0.022
	(0.40)	(-0.06)	(−1.66)	(0.84)	(0.28)	(-0.41)
ADM	-0.456***	-0.440***	-0.426***	-0.388***	-0.493***	-0.403***
	(-5.92)	(-4.73)	(-3.58)	(-4.51)	(-5.74)	(-3.69)
CFO	0.150***	0.164***	0.178***	0.102***	0.210***	0.110***
	(5.75)	(5.91)	(5.18)	(3.15)	(5.10)	(3.49)
TAGR	0.061***	0.068***	0.051***	0.067***	0.051***	0.073***
	(7.36)	(7.27)	(4.74)	(4.91)	(3.87)	(5.88)
INDR	-0.003	0.009	−0.026	0.009	0.022	0.001
	(-0.18)	(0.60)	(−1.22)	(0.46)	(0.89)	(0.05)
TUNNEL	0.030	0.028	-0.011	0.068	0.009	0.006
	(0.88)	(0.81)	(-0.33)	(1.18)	(0.24)	(0.13)
CONS	0.002	0.028	0.095	0.092	-0.134	0.107
	(0.01)	(0.22)	(0.51)	(0.48)	(-0.61)	(0.52)
Year	Yes	Yes	Yes	Yes	Yes	Yes
E	1425	1425	711	714	713	712
F	23.492	18.941	8.232	10.853	11.521	6.450
AdjR <sup>2</sup>	0.460	0.409	0.440	0.270	0.413	0.278

and low social performance (L-CSP), high environmental performance (H-CEP) and low environmental performance (L-CEP), to confirm the role of social and environmental performances in CSV and financial performance. The same test as the Equations (3) benchmark regression revealed that CSV played a more significant role in CFP in the groups with H-CSP and H-CEP (Table 3, columns 3–6). Therefore, the role of CSV in improving financial performance is more significant when the social and environmental performances of enterprises are high. As demonstrated by the above analysis, enterprises can more effectively promote the improvement of financial performance while contributing to society and the environment. This conclusion further validates the "sharing value" mechanism in the CSV concept.

# 5.2 | Consequences test based on different resources

#### 5.2.1 | Resource provision perspective

Based on the resource-dependence theory, enterprises will release a series of their resources to obtain the support of stakeholders. Therefore, the consequences of CSV strategy are examined from technology resources and information resources.

Enterprises with CSV strategy focus more on green technology research, development, and innovation. Green technology will produce a significant resource-saving effect (Lin et al., 2014; Reinhardt, 1998). The innovations of green technology fit the basic concept of CSV, which can not only meet the needs of the ecological environment but also benefit enterprises. According to Cornaggia et al. (2015), the number of patent applications measures innovation ability. Adopted the green patent data in the CNRDS database, the green patent application volume (GPA) and green patents granted volume (GPG) measure the R&D and innovation ability in green technology.

Enterprises with CSV strategies increase the value of clusters by sharing knowledge and providing information resources (Marsé et al., 2015; Royo-Vela & Cuevas, 2022). There is a strong spillover effect on enterprises providing information resources. Using CSV to build the internal cluster of trust, the overflow cost of the information provided by a single enterprise can be converted into the benefits of the information obtained within the cluster. Enterprises with CSV strategy are likely to provide information to gain more revenue than the cost paid, so they are more willing to provide and share information with the outside world. The ability of enterprises to provide information was investigated through the enterprise transparency index. According to Xin et al. (2014), company transparency (TRANS) is measured, and the data are from CSMAR.

A fixed effect Equation (6) is constructed at the time and individual levels to explore whether CSV strategy will affect the investment of technology and information resources.

$$\mathsf{GPA}_{\mathsf{i},t}/\mathsf{GPG}_{\mathsf{i},t}/\mathsf{TRANS}_{\mathsf{i},t} = \alpha_0 + \alpha_1 \, \mathsf{CSV}_{\mathsf{i},t} + \alpha_2 \, \mathsf{Control}_{\mathsf{i},t} + \varepsilon_{\mathsf{i},t} \tag{6}$$

where  $\mathsf{GPA}_{i,t}$  and  $\mathsf{GPG}_{i,t}$  represent the annual technical resources input level, and  $\mathsf{TRANS}_{i,t}$  indicates the annual information resources input level.

Table 4 (1–3) provides the regression results of GPA, GPG, and TRANS on CSV. In columns (1) and (2), the CSV regression coefficients are 0.511 and 0.230, significantly positively correlated at 5% and 10%. The number of green patent applications and authorizations increases considerably with the increase in CSV. These results confirm that enterprises with more CSV activities are more inclined to develop green technologies. In column (3), the regression coefficient of CSV is 0.008, which is significant at 1%. Thus, CSV strategy is conducive to improving the transparency of enterprises and meeting the external demand for enterprise information resources. Since the original TRANS data is missing, the sample size of regression is different from the above.

#### 5.2.2 | Resource acquisition perspective

With the resource-based theory, the consequences of CSV strategy are investigated from the perspectives of obtaining market resources, human resources, and capital resources.

Enterprises with CSV strategy have easier access to market resources. They gain social recognition for their products and services, build a beautiful corporate image, and improve their reputation (Fernández et al., 2020), contributing to more attention in the market. According to Luo et al. (2022), MEDIA attention is taken as the proxy variable of market resources, which is defined as "Ln (the total number of times newspapers and media reported the listed company in that year)." It is obtained from the CNRDS database. The logic of using media attention is that, as an essential information intermediary, the more times newspapers are reported, the more attention they are likely to receive from the market and the more market resources enterprises can obtain.

Enterprises with CSV strategy are conducive to acquiring human resources. As a critical human resource for enterprises, team cohesion is essential to enhancing competitive advantage (Crutchley et al., 2002). CSV strategy achieves employee satisfaction by improving their quality of work and life. It ensures that employees face their work with a positive attitude. The harmonious working atmosphere provides environmental support for establishing mutual trust and tacit understanding between employees and enterprises, improving the cohesion and stability of the team. According to Zhang et al. (2018), the stability of the executive team (STMT) is used to measure the acquisition level of human resources. The data are from CSMAR and manually calculated.

Enterprises with CSV strategy also assist in obtaining capital resources. They pay more attention to innovation and are keen to explore new markets, which need sufficient financial support (Zhang et al., 2019). Thus, enterprises will make more efforts to protect shareholders, creditors, and other stakeholders, to obtain stable financial resources (Cheng et al., 2014; Ji et al., 2020). Since the external

financing of an enterprise includes equity financing and debt financing, the equity capital cost (R\_MPEG) and the debt capital cost (COST) are selected as the proxy variables of capital resources (Easton, 2004; Li & Liu, 2009). The larger the indexes, the lower the level of financial resources based on the cost of equity capital and debt financing.

Fixed effects Equation (7) is constructed at the time and individual levels to explore the CSV consequences in terms of access to market resources, human resources, and financial resources.

$$\begin{aligned} & \mathsf{MEDIA}_{i,t}/\mathsf{STMT}_{i,t}/\mathsf{R}\_\mathsf{MPEG}_{i,t}/\mathsf{COST}_{i,t} \\ &= \alpha_0 + \alpha_1 \, \mathsf{CSV}_{i,t} + \alpha_2 \, \mathsf{Control}_{i,t} + \varepsilon_{i,t} \end{aligned} \tag{7}$$

where MEDIA $_{i,t}$  indicates the annual market resource acquisition level; STMT $_{i,t}$  represents the annual human resource acquisition level; R\_MPEG $_{i,t}$  signifies the annual acquisition level of capital resources based on equity financing; COST $_{i,t}$  denotes the annual acquisition level of capital resources based on debt financing.

In Table 4, columns (4), (5), (6), and (7) illustrate the regression results of MEDIA, STMT, R\_MPEG, and CSOT on CSV, respectively. In column (4), the coefficient of CSV is 0.034, which is significant at 5%, indicating that CSV can improve media attention and obtain market resources. In column (5), the coefficient of CSV is 0.009.

demonstrating a significant positive correlation at the level of 5%. Thus, CSV strategy can strengthen the stability of the senior management team and generate high-quality human resources. In column (6), the CSV coefficient is -0.003, which is significant at the 10% level, suggesting that CSV can lower the cost of equity capital and make it easier to obtain equity financing. However, the CSV coefficient is not statistically significant in column (7), implying that CSV strategy may not reduce debt financing costs. Due to the absence of the original data, there are missing values in R\_MPEG and COST, resulting in the difference between the main regression observation and the preceding ones.

#### 6 | SUGGESTIONS

Based on our findings, we propose several policy suggestions to achieve corporate sustainable development through the CSV strategy. (1) Change the view that enterprise and social interests are opposite. It is necessary to strengthen the CSV consciousness of enterprise management and internal social responsibility education. Enterprises should actively respond to the call of the national government to undertake the obligations of saving energy and controlling pollution

TABLE 4 Consequences test

Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	GPA	GPG	TRANS	MEDIA	STMT	R_MPEG	COST
CSV	0.511**	0.230*	0.008***	0.034**	0.009**	-0.003*	0.001
	(2.31)	(1.82)	(2.72)	(2.00)	(2.27)	(-1.94)	(1.34)
SIZE	5.033***	2.735**	0.015	-0.059	0.014	-0.001	-0.003
	(2.61)	(2.19)	(0.98)	(-0.65)	(0.77)	(-0.11)	(-0.99)
LEV	-5.240	-0.138	-0.076	0.091	0.003	-0.026	0.062***
	(-1.29)	(-0.08)	(-1.45)	(0.32)	(0.05)	(-0.78)	(5.47)
CR	0.432	4.811*	0.036	-0.495	0.011	-0.125***	-0.027
	(0.08)	(1.75)	(0.51)	(-1.15)	(0.11)	(-3.11)	(-1.06)
FAR	-2.618	0.673	-0.021	-1.075**	0.195**	-0.061	0.027*
	(-0.48)	(0.21)	(-0.28)	(-2.34)	(2.04)	(-1.34)	(1.84)
ADM	-12.730	3.425	-0.816***	1.408	0.004	-0.166	-0.051
	(-0.82)	(0.45)	(-4.90)	(1.05)	(0.02)	(-0.93)	(-1.46)
CFO	−3.726	0.255	0.117*	0.384	0.080	-0.006	0.012
	(−1.17)	(0.13)	(1.67)	(0.92)	(0.72)	(-0.19)	(0.71)
TAGR	-1.631	-1.066	0.098***	0.460***	0.073**	0.008	-0.000
	(-1.00)	(-1.12)	(3.83)	(2.81)	(2.27)	(0.49)	(-0.05)
INDR	5.258	-4.615	0.088*	−0.374	0.052	-0.068**	0.003
	(1.18)	(-1.64)	(1.78)	(−1.15)	(0.53)	(-2.31)	(0.27)
TUNNEL	-28.617	-11.513	-0.052	0.110	-0.057	-0.059	0.023***
	(-1.13)	(-1.29)	(-0.72)	(0.22)	(-0.50)	(-1.04)	(2.96)
CONS	-107.178**	-60.804**	0.006	3.831*	0.356	0.315	0.069
	(-2.49)	(-2.14)	(0.02)	(1.81)	(0.87)	(1.32)	(0.84)
Year	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	1425	1425	1403	1425	1425	866	1388
F	3.078	3.270	6.134	14.665	2.852	6.773	6.439
AdjR <sup>2</sup>	0.105	0.114	0.124	0.244	0.042	0.167	0.124

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emissions according to law, establish the concept of building a harmonious socialist society, and consciously assume due social responsibilities. (2) Innovate the production mode of the value chain. In the process of value creation, enterprises should actively seek new methods of value creation to perform internal operations and management better. By redefining productivity in the value chain, enterprises can reduce the negative impact of the production process on society, optimize value chain operations, and improve the positive effects of value chain activities on society.

#### 7 | CONCLUSIONS

Based on resource-dependence theory and resource-based theory, the impact of CSV strategy on enterprise performance is theoretically analyzed and empirically tested from the perspectives of resource provision and resource acquisition. The results demonstrate that CSV strategy is beneficial to improve corporate social, environmental and financial performances, which contributes to corporate sustainable development. This conclusion still holds after a series of endogenous treatments and robustness tests. In further analysis, the mechanism test with the concept of "sharing value" verifies that social and environmental performances play a mediating role in CSV and corporate financial performance. In other words, it can enhance its own competitiveness by fulfilling social and environmental responsibilities. Besides, the examination of the consequences of different resources demonstrates that CSV promotes enterprises to release technical and information resources, contributing to the acquisition of market resources, human resources, and financial resources.

This paper contributes to the following aspects based on the existing literature. First, the resource-dependence theory and the resource-based theory are enriched from the perspective of CSV strategy. Resources are essential factors affecting the competitive advantage of enterprises (Huang et al., 2015; Qiu et al., 2020). Implementing CSV strategy is a process of internal and external resources flow. Thus, the theoretical framework of CSV strategy from the perspective of resource provision and resource acquisition is established to enrich the relevant theories. Second, the literature on the outcomes of CSV strategy is enriched through empirical research. Most researchers use case studies to analyze the relationship between CSV strategy and enterprise performance (Elamrani & Lemtaoui, 2016; Ollivier de Leth & Ros-Tonen, 2021; Senevirathna, 2018), leading to a need for sufficient data support and analysis. A large sample is adopted to test the impact of CSV strategy empirically. The outcomes of CSV strategy on corporate sustainable development are also expanded.

In practice, the study of CSV strategy could improve the willingness of enterprises to integrate the needs of stakeholders of the whole industrial chain into their strategies. It impels enterprises to implement CSV strategy and bases for improving enterprise value. In addition, the research on CSV strategy provides a reference for policy making. In formulating policies, government departments should balance social responsibility and obtaining the economic benefits of enterprises. It is conducive to corporate sustainable development.

A couple of limitations are in this paper. Since the operation links of manufacturing enterprises are highly consistent with the three paths of CSV strategy, this paper chooses the manufacturing industry as the sample for research. However, it did not strictly consider the possible differences between non-manufacturing and manufacturing enterprises and did not conduct specific research on other industries. Due to the above limitations, those results may not be guaranteed for other industries, and the applicability of the research conclusions may vary in different industries. Besides, Limited by the availability of data, the index system of CSV strategy established could be better. Since most enterprises only publicize their efforts in some aspects, more data that can reflect the accurate level of CSV strategy need to be collected through questionnaires or on the spot. Therefore, this paper only collects data from corporate reports, which may lead to differences from the actual situation of enterprises.

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#### SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

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## **APPENDIX**

TABLE A1 CSV measurement

TABLE A1 CSV measurement		
Path	Activities	Evaluation criterion
Reconceiving the products and markets (PATH1)	CSV1: providing products or services that meet social needs	New products or services are beneficial to social and environmental development, or are tailored to stakeholder needs
	CSV2: providing products or services for marginal or bottom-of-the-pyramid markets	Provide products or services to rural markets, western markets, or poor areas where there is a lot of demand
	CSV3: engaging an industrial poverty alleviation program	Actively engaged in industrial poverty alleviation projects and carried out industrial assistance activities for poor areas
Redefining productivity in the value chain (PATH2)	CSV4: reducing logistics costs	The top five suppliers are all Chinese enterprises, or the main suppliers are from the same province as the enterprise, or they are committed to reducing logistics costs
	CSV5: adopting environmental protection equipment	Adopt energy-saving, water-saving, and other environment-friendly equipment, or upgrade existing equipment to achieve the effect of saving resources
	CSV6: committed to technological or managerial innovation in the production process to improve resource utilization	Improve the utilization rate of raw materials, such as production process innovation or technological transformation, or building flexible production lines, such as how many tons of coal can be saved each year, or there are waste recycling and reuse behaviors, such as waste heat power generation, waste recycling, reuse of reclaimed water
	CSV7: paying attention to R&D activities that enhance social value	Product research and development activities have behaviors that are conducive to social welfare, such as product research and development process and transformation and use of packaging pay attention to energy saving and environmental protection
	CSV8: employing employees' training activities	Carry out training activities to improve staff's technical level and personal ability
	CSV9: establishing employee incentive mechanism	There are stock incentives, material incentives, or spiritual incentives to stimulate employees' potential to improve productivity, such as employee stock ownership plans, setting up awards
	CSV10: providing customers with benefits beyond their normal sales services	Take customer demand as the guidance, and establish a complete customer service system, such as providing "super standard" service in the pre-sale, sale, and after-sales
	CSV11: has green marketing or public service	When publicizing the products or services of enterprises, it is necessary to make contributions to society and improve the reputation of enterprises through public welfare activities
Enabling local cluster development (PATH3)	CSV12: is committed to industry-university-research cooperation	Implement industry-university-research cooperation with universities, research institutes, and other relevant institutions, or make contributions to talent training and social employment, such as providing internship bases and setting up postdoctoral workstations
	CSV13: promoting industrial upgrading	Conducive to the transformation and upgrading of the industrial chain, to improve the modernization level of the whole industry chain, such as participating in the international or national industry standards
	CSV14: nurturing or supporting suppliers and improving management capabilities	Help suppliers to improve management level or production efficiency, and promote the common

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## TABLE A1 (Continued)

Path	Activities	Evaluation criterion
		development and progress of both parties, such as regular supplier training organization and regular negotiation with suppliers
	CSV15: cooperating with the surrounding communities to drive the development of the surrounding areas	Promote the development of surrounding communities, such as establishing production cooperation organizations with surrounding communities and farmers

## **TABLE A2** Variable definitions

Variable name	Descriptions
CSP	Corporate social responsibility scores from HEXUN
CEP	Sewage fee/Revenue *1000
CFP	Net profit/Average total assets
CSV	The number of CSV activities
SIZE	LN (total assets + 1)
LEV	Total liabilities/Total assets
CR	Total current assets/Total current liabilities
FAR	Net fixed assets/Total assets
ADM	Overhead/Operating income
CFO	Net cash flow from operations/Average total assets
TAGR	Growth in total assets/Total assets
INDR	Number of independent directors/Total number of board members
TUNNEL	Other receivables/Average total assets
YEAR	Dummy variables

TABLE A3 IV test

Variable	(1)	(2)	(3)	(4)
	Step 1	Step 2	Step 2	Step 2
	CSV	CSP	CEP	CFP
LCSV	0.280*** (6.58)			
MEAN_CSV	0.051 (0.69)			
MEAN_LN	−7.810* (−1.68)			
CSV		0.582* (1.72)	0.372*** (4.99)	0.003*** (2.94)
SIZE	0.208	2.798***	0.425***	0.004**
	(1.16)	(5.16)	(3.21)	(2.13)
LEV	-0.300	-15.171***	0.982*	-0.112***
	(-0.53)	(-4.53)	(1.70)	(-8.61)
CR	1.249*	9.571**	0.101	0.033**
	(1.66)	(1.99)	(0.08)	(2.10)
FAR	0.352	7.154	0.193	-0.015
	(0.46)	(1.08)	(0.15)	(-0.76)
ADM	0.453	6.557	-1.798	-0.198***
	(0.25)	(0.50)	(-1.05)	(-5.01)
CFO	0.539	27.295***	-0.978	0.289***
	(0.67)	(3.45)	(-0.77)	(7.56)
TAGR	0.003	10.156***	-0.357	0.101***
	(0.01)	(4.26)	(-0.76)	(9.07)
INDR	0.273	3.267	-1.023	0.008
	(0.41)	(0.46)	(-0.86)	(0.45)
TUNNEL	-1.353	4.168	0.301	-0.013
	(-1.38)	(0.57)	(0.26)	(-0.60)
CONS	-2.314	-48.683***	-10.328***	-0.047
	(-0.57)	(-3.63)	(-3.21)	(-1.04)
Year	Yes	Yes	Yes	Yes
N	1073	1073	1073	1073
F	12.81	13.757	22.150	113.439
AdjR <sup>2</sup>	0.299	0.120	0.168	0.518
Anderson LM (p-val)		559.080 (0.000)	559.080 (0.000)	559.080 (0.000)
Sargan		5.698	0.669	3.495
(p-val)		(0.058)	(0.716)	(0.174)

**TABLE A4** Propensity score matching

Variable	Matched/unmatched	Treated mean	Control mean	Bias (%)	Т	P > T
SIZE	U	22.865	22.353	42.4	0.00	1.270*
	М	22.831	22.817	1.1	0.17	0.863
LEV	U	0.469	0.489	-9.6	0.09	0.910
	М	0.473	0.477	-1.9	-0.29	0.770
CR	U	0.493	0.480	7.5	0.18	0.910
	М	0.489	0.476	8.0	1.22	0.222
FAR	U	0.323	0.332	-5.3	0.35	0.860
	М	0.326	0.337	-7.2	-1.10	0.272
ADM	U	0.070	0.080	-20.7	0.00	0.780*
	М	0.070	0.070	0.1	0.02	0.987
CFO	U	0.068	0.046	31.7	0.00	0.970
	М	0.065	0.068	-4.8	-0.76	0.446
TAGR	U	0.104	0.093	5.8	0.31	0.850
	М	0.102	0.095	3.7	0.58	0.561
INDR	U	0.376	0.370	8.4	0.14	1.020
	М	0.376	0.380	-5.7	-0.86	0.392
TUNNEL	U	0.039	0.049	-13.8	0.02	0.510*
	М	0.039	0.038	1.4	0.27	0.790

Note: \*If variance ratio outside [0.84; 1.20] for U and [0.83; 1.20] for M.

TABLE A5 PSM test

IABLE AS	PSIVI LEST		
Variable	(1)	(2)	(3)
	CSP	CEP	CFP
CSV	0.791*	0.082**	0.002**
	(1.89)	(2.04)	(2.01)
SIZE	3.787**	0.330	0.004
	(2.24)	(1.36)	(0.67)
LEV	-24.808***	1.358	-0.125***
	(-3.50)	(1.46)	(-5.65)
CR	-10.789	-0.168	0.054**
	(-1.22)	(-0.16)	(2.09)
FAR	-21.665**	0.699	-0.042
	(-2.51)	(0.85)	(-1.64)
ADM	-64.093***	-18.056**	-0.656***
	(-2.71)	(-2.42)	(-6.40)
CFO	6.268	0.661	0.153***
	(0.80)	(0.62)	(4.93)
TAGR	8.005***	0.582	0.069***
	(2.95)	(1.61)	(6.43)
INDR	2.231	0.310	0.016
	(0.27)	(0.37)	(0.93)
TUNNEL	16.113*	1.478*	0.021
	(1.79)	(1.73)	(0.78)
CONS	-28.232	-9.245	-0.001
	(-0.76)	(-1.56)	(-0.01)
Year	Yes	Yes	Yes
N	1075	1075	1075
F	7.362	2.729	16.232
AdjR <sup>2</sup>	0.231	0.118	0.441

TABLE A6 Placebo test

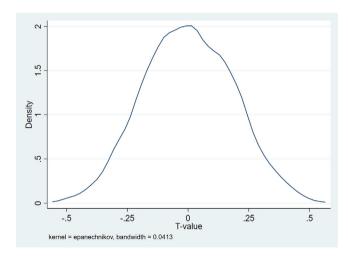
I ABLE A6	Placebo test		
Variable	(1)	(2)	(3)
	CSP	CEP	CFP
CSV_N	-0.063	0.010	0.0004
	(-0.33)	(0.43)	(0.82)
SIZE	3.869***	0.393	0.003
	(2.89)	(1.65)	(0.57)
LEV	-24.478***	0.886	-0.124***
	(-4.62)	(1.20)	(-6.12)
CR	-5.246	1.065	0.069**
	(-0.73)	(1.00)	(2.54)
FAR	-11.329	0.537	-0.000
	(-1.53)	(0.74)	(-0.01)
ADM	-58.470***	-15.181*	-0.479***
	(-3.05)	(-1.95)	(-5.63)
CFO	11.280*	1.069	0.168***
	(1.70)	(0.86)	(5.91)
TAGR	6.062**	0.336	0.068***
	(2.39)	(1.07)	(7.39)
INDR	4.139	0.110	0.010
	(0.60)	(0.16)	(0.65)
TUNNEL	7.104	1.443	0.030
	(0.93)	(1.60)	(0.86)
CONS	-36.540	-10.774*	-0.006
	(-1.18)	(-1.83)	(-0.04)
Year	Yes	Yes	Yes
N	1425	1425	1425
F	7.222	2.506	17.106
AdjR <sup>2</sup>	0.193	0.101	0.399

**TABLE A7** Interactive fixed effects test

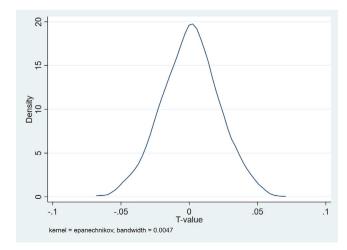
IABLE A/	interactive fixed ef	Tects test	
	(1)	(2)	(3)
	CSP	CEP	CFP
CSV	0.446**	0.080**	0.003***
	(2.38)	(2.52)	(3.47)
SIZE	1.537***	0.361***	0.002
	(3.60)	(2.83)	(0.74)
LEV	-22.132***	0.839*	-0.135***
	(-9.53)	(1.74)	(-12.20)
CR	6.579*	1.378*	0.058***
	(1.89)	(1.95)	(3.54)
FAR	0.705	0.856	-0.004
	(0.18)	(1.23)	(-0.23)
ADM	-25.136***	-13.276***	-0.472***
	(-2.91)	(-7.54)	(-11.72)
CFO	28.051***	0.820	0.172***
	(5.96)	(1.10)	(9.82)
TAGR	10.556***	0.435	0.071***
	(5.77)	(1.60)	(11.02)
INDR	4.759	0.177	-0.001
	(1.05)	(0.25)	(-0.05)
TUNNEL	1.292	1.339*	0.034*
	(0.27)	(1.65)	(1.77)
CONS	-16.015	-10.057***	0.053
	(-1.57)	(-3.45)	(0.86)
Year	Yes	Yes	Yes
N	1425	1425	1425
F	119.265	13.067	66.417
AdjR <sup>2</sup>	_	_	-

**TABLE A8** Variable substitution test

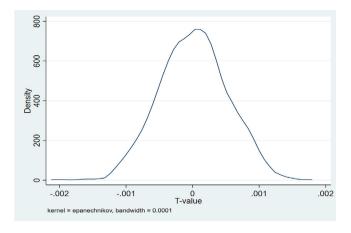
Variable	(1)	(2)	(3)	(4)	(5)	(6)
	CSP	CEP	CFP	CSP_R	CEP_R	CFP_R
CSVSIZE	19.521** (2.55)	1.830* (1.92)	0.041** (2.04)			
CSV				0.009* (1.93)	0.097** (2.07)	0.057** (2.22)
SIZE	3.793***	0.389	0.003	0.036**	0.411	-0.675***
	(2.86)	(1.63)	(0.55)	(2.00)	(1.26)	(-5.42)
LEV	-24.046***	0.925	-0.123***	-0.143**	-1.254	0.985**
	(-4.67)	(1.24)	(-6.09)	(-2.03)	(-1.19)	(2.14)
CR	-5.892	1.006	0.067**	-0.190**	1.512	-1.000
	(-0.83)	(0.97)	(2.50)	(-1.98)	(1.24)	(-1.38)
FAR	-11.121	0.548	-0.000	-0.134	1.079	-2.109**
	(-1.52)	(0.77)	(-0.00)	(-1.52)	(1.48)	(-2.50)
ADM	-60.332***	-15.370**	-0.483***	-0.097	-3.667	-1.227
	(-3.18)	(-1.98)	(-5.72)	(-0.40)	(-1.09)	(-0.78)
CFO	10.552	1.016	0.167***	0.019	-0.608	2.101***
	(1.60)	(0.83)	(5.91)	(0.22)	(-0.58)	(3.60)
TAGR	6.179**	0.348	0.069***	0.000	-0.878	0.065
	(2.44)	(1.10)	(7.42)	(0.01)	(-0.98)	(0.37)
INDR	3.377	0.065	0.009	0.011	1.122	-0.126
	(0.49)	(0.09)	(0.59)	(0.12)	(0.63)	(-0.34)
TUNNEL	8.002	1.541*	0.032	0.087	2.520*	0.070
	(1.10)	(1.73)	(0.92)	(0.80)	(1.96)	(0.12)
CONS	-38.070	-10.914*	-0.009	-0.384	-9.139	17.113***
	(-1.25)	(-1.85)	(-0.07)	(-0.94)	(-1.11)	(5.92)
Year	Yes	Yes	Yes	Yes	Yes	Yes
N	1425	1425	1425	1425	1425	1425
F	7.563	2.526	17.394	6.285	2.336	10.938
AdjR <sup>2</sup>	0.200	0.105	0.401	0.230	0.019	0.256



**FIGURE A1** T-value of CSV on CSP. CSP, corporate social performance; CSV, creating shared value



**FIGURE A2** *T*-value of CSV on CEP. CEP, corporate environmental performance; CSV, creating shared value



**FIGURE A3** T-value of CSV on CFP. CFP, corporate financial performance; CSV, creating shared value