The Expenditure on and Efficiency of Corporate Social Responsibility Activities: Evidence from Targeted Poverty Alleviation Projects

Xiaobei Huang
hberyl@163.com
Associate Professor of Accounting
School of Economics and Management
North China University of Technology
China

Yunling Song
syunling@163.com
Associate Professor of Accounting
School of Economics and Management
Inner Mongolia University
China

Jianing Lv
lvjianingimu@163.com
School of Accounting
Capital University of Economics and Business
China

Ling Zhou (corresponding author)
zhoul@unm.edu
(505) 277-0335
Associate Professor of Accounting
Anderson School of Management
University of New Mexico
U.S.A.

Abstract:

Chinese firms are required to disclose their expenditures on targeted poverty alleviation (TPA) projects and the number of people being lifted out of poverty as a result. This unique setting provides both the input and output of a specific corporate social responsibility (CSR) activity, allowing us to examine the determinants of firms' CSR spending and its efficiency. We find that political pressure from the government is the main driver behind Chinese firms' TPA spending. TPA spending also increases with firms' visibility and resources. Firms under greater political pressure manage their TPA projects less efficiently, lifting fewer people out of poverty with greater expenditure. Firms that are more profitable than their industry peers run their TPA projects more efficiently.

Keywords: corporate social responsibility, corporate social performance, poverty alleviation, China

This draft: June, 2020

Introduction

Despite extensive research on corporate social responsibility (CSR), we know little about firms' actual expenditures on specific CSR activities and their efficiencies. Few papers study these issues because we lack accurate measures of CSR activities' inputs and outputs, and it is difficult to establish direct links between the inputs and outputs (e.g., Brammer and Millington 2008, Moser and Martin 2012). In the U.S., CSR expenditures are typically combined with non-CSR expenditures and not reported separately (e.g., Barnea and Rubin 2010). The output of CSR activities is generally measured by ratings issued by various institutions which tend to disagree with each other and cannot be directly linked to specific CSR activities (e.g., Chatterji, Durand, Levine, and Touboul, 2015, Huang and Watson 2015).

In this paper, we overcome the above problems by examining Chinese firms' participation in targeted poverty alleviation (TPA) projects. Poverty elimination is the No. 1 goal in United Nations' 2030 Sustainable Development Goals (SDG). China has a more ambitious goal to eliminate poverty[1] by 2020. Chinese President Xi Jinping proposed the notion of targeted poverty alleviation in 2013, requesting local governments to keep track of poverty-stricken villages and households and to ensure that assistance reaches these targets. A key strategy of the targeted poverty alleviation movement is to encourage the participation of business enterprises. As an effort to motivate firms to contribute to TPA projects, since 2016, public firms in China have been required to disclose their expenditures on TPA projects and the amount of people lifted out of poverty as a result[2] (Appendix 1 provides an excerpt from an annual report to

---

[1] The Chinese government defines people in poverty as those earning less than 2,300 RMB ($416) a year in 2011 purchasing price parity terms, or around $1.10 a day. This benchmark is lower than the World Bank poverty line of $1.90 a day, or just under $700 a year, in 2011 purchasing price parity terms.

[2] Firms could participate in the TPA movement in many different ways, including making donations, building plants in poverty-stricken towns and hiring local people etc. Some TPA projects may not directly lift people out of poverty (e.g., education and medical services). Please see later sections for more details.

demonstrate the types of TPA projects and the related disclosure). This unique setting not only provides us with accurate measures of the input and output of a particular CSR activity, it also directly links the output to the input, allowing us to examine the determinants of CSR expenditures and to evaluate their efficiency (the relation between the input and output). Answers to these important questions could help regulators, firms and other stakeholders make more informed decisions when allocating CSR resources.

We find that political pressure is the main force driving Chinese firms' TPA expenditures. In particular, a firm spends more on TPA projects if it is owned by the state, or its Chair or CEO has political connections. Such firms face greater pressure to contribute to TPA projects to help achieve the poverty elimination goal set by the government. Moreover, a firm's TPA expenditures increase if it is registered in a poor province, where the local government has stronger incentives to reduce poverty. TPA expenditures also increase when the local government is less decentralized, i.e., when the government has greater influences on firms.

Besides political pressure, mandatory CSR reports, firm size and profitability are also positively correlated with TPA expenditures, indicating that firms with greater visibility and resources contribute more to TPA projects. Surprisingly, firms' slack resources, measured by the current ratio, have a negative impact on TPA spending. One possible explanation is that the Chinese government has strong influence on firms' access to the capital markets and bank loans (Zhang et al. 2010), forcing firms with less slack resources, i.e., those with stronger financing needs, to contribute to TPA projects to please the government. If this is the case, this finding provides further support that Chinese firms are pushed into TPA projects under political pressure.

Public companies in China are required to classify their TPA projects to nine categories, including industrial development, transfer employment (e.g., providing vocational training to people in poverty), relocation (i.e., moving people out of poverty-stricken areas), education, health care, ecological protection, minimum social welfare, social assistance (e.g., donating to charities focusing on poverty alleviation), and others. To examine the efficiency of TPA projects, we focus only on the industrial development category. First, this type of TPA projects involves building plants/business enterprises that could directly lift people out of poverty, allowing us to link TPA expenditures (the input) to the number of people being lifted out of poverty (the output). In contrast, some other types of TPA projects, such as providing health care or education to people in poverty, do not reduce poverty directly and their output is not readily measurable. Second, public companies' business experience and expertise give them advantage over other members of the society in the industrial-development type of TPA projects. Understanding how efficiently companies alleviate people out of poverty through industrial development could lead to improvement in the overall efficiency of poverty alleviation.

We find evidence that political pressure weakens the input-output relation of TPA projects, i.e., firms facing greater political pressure lift fewer people out of poverty with the same amount of expenditures. These results hold after controlling for the difficulty of TPA projects, measured by the accessibility of the TPA project locations, suggesting that firms facing greater political pressure manage TPA projects less efficiently. Given that these firms spend more on TPA projects, valuable resources might have been wasted.

We also find that more competent firms, i.e., firms that are more profitable than their industry peers, lift more people out of poverty with the same amount of TPA expenditures. This

is consistent with such firms actively managing their TPA projects and transferring their business expertise to these CSR activities.

Lastly, we find that firms facing greater political pressure, larger firms and firms with less slack resources are more likely to choose the industrial-development type of TPA projects over other TPA projects.

Our paper contributes to the CSR literature in several ways. First, we are able to obtain a precise measure of firms' expenditures on a specific CSR activity to examine determinants of firms' CSR spending. Prior literature has listed the lack of data on actual expenditures on individual CSR activities as a key limitation of archival CSR studies (e.g., Moser and Martin 2012). The mandatory disclosure of TPA expenditures allows us to provide convincing evidence on the relative importance of political factors versus economic factors in driving firms' CSR spending.

Second, to our knowledge, we are the first paper to investigate the efficiency of an individual CSR activity using firm-level inputs and outputs. Few papers study whether and how efficiently firms' CSR activities achieve their stated goals because of severe difficulties in measuring the achievement of CSR activities (e.g., Brammer and Millington 2008). Most papers use ratings provided by companies such as Kinder, Lydenburg, and Domini (KLD) to measure firms' CSR performance[3]. However, the ratings created by different institutions show a troublesome degree of disagreement, indicating that they might not be a great measure of the outcome of firms' CSR activities (Chatterji et al. 2015, Huang and Watson 2015). More

---

[3] Chen et al. (2018) use city-level pollution data to measure firms' CSR performance, which is an indirect measure since city-level pollution is not necessarily driven by firms investigated in the paper.

importantly, these ratings cannot be directly linked to specific CSR activities, inhibiting analysis on the effectiveness and efficiency of CSR activities. In this paper, we are able to isolate and link an individual component of CSR performance (the number of people lifted out of poverty) to expenditures on a specific CSR activity (the industrial-development type of TPA projects), and document factors affecting the efficiency of that CSR activity.

We also contribute to the theory and practice of poverty alleviation, highlighting the role of business enterprises. The State Council Leading Group Office of Poverty Alleviation and Development has listed enhancing the efficiency of poverty reduction as one of the challenges China faces. We address this challenge by showing that while political pressure increases firms' expenditures on TPA, it reduces the efficiency of TPA. The government should shift more attention from the input to the output in order to reduce poverty more efficiency. In addition, we show that the business expertise of successful companies seems to be transferrable to their CSR activities. To fully utilize companies' expertise, policy makers may want to encourage successful businesses to actively manage their CSR activities instead of passively handing over donations to some other organizations. These findings justify the UN's call for businesses to apply their expertise in achieving the sustainable development goals.

In the next section, we discuss the institutional background of the TPA movement and develop hypotheses. We describe the sample construction process and relevant statistics in the "Sample construction and description" section. The research design and empirical results related to the determinants and efficiency of TPA expenditures are discussed in the "Determinants of expenditures on TPA projects" and the "Relation between the number of people out of poverty and TPA expenditures" section, respectively. We provide supplementary analysis on firms'

choices of the industrial-development type of TPA projects in the next section. The last section concludes.

Institutional Background and Hypothesis Development

Eliminating poverty in all its forms everywhere is the No. 1 goal in UN's list of 2030 Sustainable Development Growth Goals (SDGs). Unlike their predecessor, the Millennium Development Goals (MDGs), the SDGs explicitly call on all businesses to apply their creativity and innovation to solve sustainable development challenges. According to SDG Compass, while many businesses have set targets related to carbon emission, water usage and other environmental issues, it is relatively rare for businesses to set targets related to poverty alleviation, and one reason could be that it is more difficult to monitor and measure these targets. China's targeted poverty alleviation movement provides partial solution to the monitoring and measuring problem related to poverty reduction by keeping accurate records of people in poverty receiving assistance.

In 2012, the Communist Party of China's Central Committee made the solemn promise at the party's 18th National Congress to lift all of China's impoverished people out of poverty by 2020. Since then, poverty alleviation has been a key and recurring topic on Chinese leaders' agenda, appearing on the priority list of every major parliamentary meeting.

In 2013, President Xi proposed targeted poverty alleviation as the essential strategy in winning the battle against poverty for the first time. Local governments are required to identify poverty-stricken villages and towns, register people living in poverty and ensure that assistance reaches these people. A key characteristic of the targeted poverty alleviation strategy is to enlist concerted efforts of the whole society, especially those of business enterprises. The Chinese

government has repeatedly stressed the importance of involving business enterprises in the TPA efforts (e.g., State Council of China 2014, 2015, 2018). For example, the State Council of China has urged companies to join the TPA action themed "ten-thousand firms for ten-thousand villages" in 2015 and 2018. The government has also issued various policies to encourage firms' participation in the TPA projects, including tax benefits, government subsidies (e.g., State Council of China 2015), and priority reviews of merger and acquisition activities involving companies in poverty-stricken areas (People's Bank et al. 2017).

The government's strategy to involve companies in TPA projects has been successful. Since 2012, central-government-owned enterprises have contributed more than 7.5 billion RMB (about $1.1 billion) to TPA projects. Datang Telecom provides anecdotal evidence showing the commitment of central-government-owned enterprises to the TPA movement. This company reported significant losses in both 2016 and 2017, and was marked for special treatment in 2018 because of that. Still, the company contributed 150,000 RMB (about $21,000) to TPA projects every year from 2016 to 2018. Non-state-owned enterprises have also become a major player. Up to June 2018, about 55,400 private enterprises have provided targeted assistance to 62,800 villages, helping 7.6 million people in poverty (Chinese Academy of Social Sciences 2018).

To encourage public companies to participate in TPA projects, in September 2016, China Securities Regulatory Commission (CSRC) required the Shanghai Stock Exchange and Shenzhen Stock Exchange to create guidance on public firms' disclosure of poverty-alleviation related social responsibilities. In December 2016, both stock exchanges issued guidance requiring listed firms to disclose their expenditures on TPA projects and the number of people lifted out of poverty by such projects in their annual reports following a standard format (please see

Appendix 1 for an example).[4] Because people in poverty are registered and tracked by the government, the reliability of firms' disclosures is reasonably assured. The TPA setting thus provides us high quality data to examine expenditures on a particular CSR activity and its efficiency. This is in sharp contrast to the CSR disclosures in the U.S., which are voluntary, raising concerns about the reliability and completeness of these disclosures as measures of inputs and outcomes of CSR activities (Moser and Martin 2012).

Compared to other corporate social responsibilities, the political pressure for Chinese firms to engage in TPA projects is much greater. First, the Chinese government has committed to a clear and firm goal to eliminate poverty by 2020, and has also set up specific annual goals for poverty alleviation (e.g., the 2019 goal is to lift 10 million people out of poverty). This differs from other CSR activities which typically do not have a short-term, easily measurable goal. Second, the central government has divided up the poverty alleviation task, and assigned each province a certain number of people they should lift out of poverty every year. The central government has been evaluating poverty alleviation performance of local governments annually (e.g., The State Council of China, 2016). Thus, local governments are highly motivated to push firms to participate in TPA projects. Lastly, President Xi has been personally involved in poverty reduction and has listed this issue as a priority during his speeches at the annual consultative and parliamentary sessions every year since 2012.

We thus expect political pressure to be a key determinant of firms' TPA expenditures. If CSR decisions are made strategically to benefit firms (e.g., McWilliams and Siegel 2001), firms facing greater political pressure would spend more on TPA to satisfy stakeholders (e.g., Freeman

---

[4] In contrast, firms are not required to disclose their expenditures and achievements on other CSR activities.

1984), establish political legitimacy (e.g., Zhao 2012), improve long-term firm performance and sustainability (e.g., Baron 2001), and develop reputation and competitive advantages (e.g., Branco and Rodrigues 2006, McWilliams and Siegel 2010). Alternatively, if top executives spend on CSR activities for personal benefits (e.g., Wright and Ferris 1997), they would also increase TPA spending under greater political pressure to improve their relationship with the government.

We state our Hypothesis 1a in alternative form.

Hypothesis 1a (H1a): Firms facing greater political pressure spend more on TPA projects.

The strategic view of CSR predicts that firms will increase CSR spending when they benefit more from improved reputation resulted from CSR. Prior literature has shown that CSR activities could improve firms' reputation among consumers and investors (e.g., Mohr et al., 2005; Park et al., 2017; Charkravarthy et al., 2014), which in turn could lead to better financial performance. Firms with greater visibility, i.e., those receiving greater public attention, are more likely to be noticed for their TPA efforts, and hence are more likely to spend on TPA projects to improve reputation (e.g., Jeong and Kim 2016). We state Hypothesis 1b in alternative form.

Hypothesis 1b (H1b): Firms with greater visibility spend more on TPA projects.

Finally, the contributions to CSR are limited by firms' resources. We expect TPA expenditures to increase with resources available to firms, which leads to our Hypothesis 1c (stated in alternative form).

Hypothesis 1c (H1c): Firms with more resources spend more on TPA projects.

To examine the efficiency of TPA projects, we have to link the input (expenditures) to the output. Public firms in China are required to disclose total expenditures on all TPA projects, and the corresponding total numbers of people lifted out of poverty, followed by expenditures and numbers of people assisted in each individual TPA project category. As discussed in the introduction, The TPA projects are classified to nine categories. Projects in some of these categories (e.g., ecological protection) do not lift people out of poverty directly, and firms will disclose the number of people assisted rather than the number of people lifted out of poverty by these projects. We cannot rank firms' TPA performance in these categories since the number of people assisted is not a meaningful performance measure (i.e., 50 people receiving flu shots is not necessarily "better" than 10 people receiving cancer treatments). The number of people lifted out of poverty is a far more accurate and comparable performance measure because it is well-defined and tracked by the government. Category 1 (industrial development) and 9 (others) are the only two types of TPA projects that consistently report these numbers. Hence to examine the outcome of TPA projects, we focus only on the industrial-development type.

We expect political pressure to affect the input-output relation of the industrial-development type of TPA, but we do not predict its direction. On the one hand, the government's goal is to eliminate poverty and so it should be focusing on the output of the TPA projects, i.e., the number of people alleviated from poverty. When the government is a more important stakeholder with stronger influence on firms' operations and executives' careers, firms have stronger incentives to please the government by managing their TPA projects more efficiently to alleviate more people out of poverty. That is, political pressure could have a positive impact on the efficiency of TPA projects.

On the other hand, it is much more difficult for the government to influence the output of a TPA project than the input. While the government could urge firms to spend on TPA projects, it has little control over how firms actually conduct these projects. Firms facing greater political pressure might feel that they have successfully satisfied the stakeholders' demand and developed reputation and competitive advantages once they contribute to TPA projects, regardless of the actual outcome of these projects (Laufer 2003). Without real interests in helping people out of poverty, they have no incentives to manage their TPA projects efficiently. In addition, firms facing greater political pressure might be pushed to take on more challenging TPA projects that demand more investments to help people deeply entrenched in poverty. For example, it takes much more to alleviate people living in remote mountains out of poverty than those close to highways. Hence, political pressure could have a negative impact on the input-output relation of TPA projects.

Because political pressure could affect the efficiency of TPA projects in both directions, we state H2a in null form.

Hypothesis 2a (H2a): Political pressure does not affect the relation between TPA expenditures and the number of people being lifted out of poverty.

If a firm engages in TPA projects to enhance its reputation, it might have incentives to maximize the number of people lifted out of poverty for a given amount of expenditures. The more people being lifted out poverty, the greater the improvement in the firm's reputation. We expect firms with greater visibility to be more motivated to run their TPA projects efficiently because their reputational gains would be greater. We state H2b in alternative form.

Hypothesis 2b (H2b): Firms' visibility strengthens the relation between TPA expenditures and the number of people being lifted out of poverty.

If firms are actively involved in the management of their TPA projects, we expect more competent firms to be able to lift more people out of poverty for a given amount of expenditures. Firms that are more competent in their own businesses likely have more capable managers, more advanced technologies, and/or better corporate governance. Firms could apply such advantages to their TPA projects to improve efficiency. We state H2c in alternative form.[5]

Hypothesis 2c: Firms' competence strengthens the relation between TPA expenditures and the number of people being lifted out of poverty.

Sample Construction and Description

As shown in Appendix 1, besides summary descriptions of TPA projects, firms also provide detailed information in a standardized table. Firms first present the total expenditures on TPA projects and the total number of people lifted out of poverty by these projects, followed by similar information for each of the nine categories of TPA projects. We collect these variables, and other firm-related variables from CSMAR, a popular database on China's public firms.

We exclude financial firms from our analysis because their TPA expenditures consist primarily of special loans to people in poverty, which differ in nature from other firms' TPA expenditures.

Our sample starts from all public firms issuing annual reports between 2016 and 2018. After eliminating financial firms and firms without available control variables, we end up with 8,094

---

[5] H2c is about firms' competence, which differs from firms' resources discussed in H1c. We have no reason to expect resources, or firms' ability to afford TPA expenditures, to affect the efficiency of their TPA projects.

observations. As shown in Table I Panel A, 1,913 firm-years, or 23.6% of the sample, report non-zero TPA expenditures. Among firms that report positive TPA expenditures, 42.9%, or 820 firm-years, report that they have lifted some people out of poverty.

Table I Panel A also shows that the percentage of firms with TPA expenditures has increased from 18.5% in 2016 to 23.7% in 2017 and 28% in 2018, indicating more extensive participation in TPA projects over time. Among these firms, the percentage of companies that have lifted people out of poverty is stable in 2016 (43.8%) and 2017 (43.7%), but declines slightly in 2018 (41.7%).

Table I Panel B shows the by industry distribution of our sample firms. The majority of our sample firms are in manufacturing. The utilities industry and the mining industry have the highest participation rate in TPA projects (49.6% and 48.4%, respectively), followed by the transportation, warehousing and postal industry (41.3%). One possible explanation for the high participation rate is that these industries tend to be dominated by state-owned firms, which face greater political pressure to engage in TPA projects. Among firms reporting TPA spending, those in the utilities industry and the mining industry are also most likely to lift people out of poverty (73.6% and 66.3%, respectively)[6], followed by the agriculture, forestry, husbandry and fishery industry (64.3%).

Table I Panel C shows the distribution of our sample across provinces. The more developed provinces, such as Guangdong, Zhejiang and Jiangsu, have the largest numbers of public companies, but firms in less developed provinces are more likely to engage in TPA projects. The top three provinces with the highest participation rate, Tibet (88.6%), Guizhou (74.6%) and

---

[6] This percentage is higher in the comprehensive industry at 100%, but because there are only three firms reporting TPA expenditures in that industry, the percentage may not be meaningful statistically.

Yunnan (50.6%), are among the bottom 5 in the 2018 per capita GDP ranking. This evidence is consistent with firms in poor areas being more motivated to engage in TPA projects, either because of demands from local governments and other stakeholders or because of top executives' personal moral imperatives. In terms of the percentage of firms lifting people out of poverty, Jilin (72.7%), Hainan (66.7%) and Gansu (66.7%) lead the way.

Table II shows the amount of expenditures in each category of TPA projects. The most popular TPA projects are in industrial development and social assistance, with more than 1,000 firm-years. The least popular TPA projects are relocation (108 firm-years) and minimum social welfare (137 firm-years). Industrial development is by far the most costly type of TPA projects (mean expenditure =136,193,900 RMB, median =700,000 RMB). The least expensive type of TPA projects is transfer employment (mean expenditure = 1,178,326 RMB, median=54,000 RMB). Among firms reporting numbers of people lifted out of poverty, the industrial development category lifts more people out of poverty (mean= 2,554, median =185) than the others category (mean= 2,041, median=123). For the other types of TPA projects, firms report numbers of people receiving assistance which are not comparable with numbers of people alleviated out of poverty.

Table III Panel A shows overall TPA expenditures for the entire sample including firms not reporting TPA expenditures (considered as zero spending). The average TPA expenditure (*TPA_EXP*) is 1,360,000 RMB, while the median is zero since the majority of public firms do not contribute to TPA projects.

Table III Panel A also shows the summary statistics of other variables used in empirical analyses. Please refer to Appendix 2 for variable definitions. In our sample, 12% of firms are

owned by the central government (*CSOE*), 22% are owned by local governments (*LSOE*), 12.4% have political connections (*PC*), 26.5% have to issue CSR reports (*MAND_CSR*), and 26.7% are registered in poor provinces (*POVERTY*).

Table III Panel B shows the Pearson correlation coefficients. The univariate correlations between *TPA_EXP* and explanatory variables are generally consistent with the expectation that greater political pressure leads to more TPA spending. Specifically, firms owned by the central government (*CSOE*), firms in provinces with less decentralized governments (*DECENTRAL*), firms in poor provinces (*POVERTY*) tend to have greater TPA expenditures. There is also evidence that visibility increases TPA spending as *TPA_EXP* is positively correlated with mandatory CSR reports (*MAND_CSR*), number of analysts following (*COVER*), and total assets (*SIZE*). Consistent with the resource constraint hypothesis (H1c), *TPA_EXP* is positively correlated with *ROA*. However, it is negatively correlated with the current ratio (*SLACK*), indicating firms with less slack resources are more likely to contribute to TPA projects.

Determinants of Expenditures on TPA Projects

Research design

We use the following model to examine determinants of firms' TPA expenditures.

$logTPA\_EXP = \beta_0 + \beta_i$ {political pressure measures: *CSOE, LSOE, PC, POVERTY, DECENTRAL*} + β_j {visibility measures: *MAND_CSR, ADV, COVER, SIZE*} + β_k {firm resource measures: *ROA, SLACK, LEV*} + *year dummies* + *industry dummies* (1)

The dependent variable is the natural log of firms' expenditures on TPA projects (*logTPA_EXP*). Given that some firms choose not to participate in the TPA projects and *TPA_EXP* could be zero, we estimate Equation (1) using the Tobit regression.

Unless otherwise specified, the financial variables used in Equation (1) (e.g., *SIZE* and *LEV*) are measured at the beginning of the year.

To test H1a, we include several proxies for political pressure. First, *CSOE* (*LSOE*) is an indicator variable for enterprises owned by the central government (the local government). Unlike private enterprises which focus on profit maximization, state-owned-enterprises (*SOEs*) have the obligation to satisfy certain social responsibilities deemed appropriate by the state. Given that the state is committed to eliminate poverty and the state controls SOEs and the promotion of their top executives, *SOEs* likely will contribute more to TPA projects than firms owned by individuals. We expect the coefficients on *CSOE* and *LSOE* to be both positive. The pressure to spend on TPA projects could also differ between *SOEs* owned by local governments (*LSOE*) and *SOEs* owned by the central government (*CSOE*), but the direction is no clear. While the central government has explicitly stated participation in TPA as an important measure of *CSOEs'* social performance (e.g., State Council of China, 2018), local governments could also push *LSOEs* to contribute to TPA projects to achieve TPA goals assigned by the central government.

Second, we predict that firms with political connection (*PC*) are under greater pressure to spend on TPA projects. Following the prior literature (e.g., Faccio 2007, Fan et al. 2007), we consider a firm to have *PC* if its chairperson or CEO is a current or former government official, or a member of the Chinese People's Congress or the Chinese People's Political Consultative Conference (CPPCC). Prior literature shows that firms with *PC* are more likely to gain favorable treatments from the government through charity donations (e.g., Du and Chen, 2016), and that they contribute more to charities after natural disasters (Jia and Zhang 2010). We expect political connection (*PC*) to have a positive impact on *TPA_EXP*.

Third, we expect firms registered in poverty-stricken provinces to face greater political pressure to participate in TPA projects. Local governments in these provinces are impelled by the central government to eliminate poverty, and they will in turn urge companies to contribute. It is also possible that firms in such provinces spend more on TPA as a strategy to satisfy stakeholders other than the local governments or to satisfy top executives' personal moral imperative. We define *POVERTY* to be equal to one if a firm is registered in a province with more poverty-stricken towns[7] than the national median, zero otherwise.

The last proxy for political pressure is *DECENTRAL*, which measures the degree of decentralization of the provincial government where a firm is registered (Cai et al. 2018). Local governments with higher degree of decentralization have less influence on firms, and hence *DECENTRAL* should have a negative impact on *TPA_EXP*.

To test H1b, we include four proxies for firm visibility in Equation (1), which are all expected to have positive coefficients. First, *MAND_CSR* is a dummy variable equal to one if a firm is required to issue a CSR report annually. The Shanghai Stock Exchange requires firms in its "Corporate Governance Index" (this index includes firms with the best governance practices), firms with shares listed overseas, and financial firms to issue annual CSR reports; the Shenzhen Stock Exchange has the same requirement on firms in its "Shenzhen 100 Index" (this index includes the largest firms). The disclosure mandate draws attention to these firms' CSR activities, and thus, *MAND_CSR* is a measure of the visibility of firms' CSR activities. Firms that have to issue CSR reports could receive greater reputational gains by contributing to TPA

---

[7] A town with more than two percent of its population in poverty will be designated as a "poverty-stricken town." In China's western regions, the standard is three percent. Poverty-stricken towns are eligible for preferential policies and financial support for poverty alleviation.

projects. We acknowledge that firms required to issue CSR reports are not randomly selected, so *MAND_CSR* could capture other firm characteristics, especially firm size. We control for certain firm characteristics such as size, profitability and leverage in Equation (1) so that *MAND_CSR* should catch the effects of mandatory CSR disclosures.

While *MAND_CSR* measures specifically the visibility of a firm's CSR activities, we also include three proxies for the visibility of the firm itself. We use a firm's sales expense to sales revenue ratio in the previous year (*ADV*) to measure the importance of consumers to the firm. Firms that spend heavily on sales expenses (most likely advertising) have greater visibility and value their reputation among consumers more. Participation in TPA projects could potentially improve their reputation and lead to better financial performance. We use the natural log of the number of analysts covering a firm (*COVER*) to measure firms' visibility in the capital markets. The last measure of visibility is the natural log of firms' total assets at the beginning of the year (*SIZE*). Firms followed by more analysts and larger firms receive more attention and hence their TPA expenditures could potentially bring greater reputational improvement. However, firm size could be a proxy for many other factors, including available resources. We would caution against interpreting the coefficient on *SIZE* alone as evidence supporting or refuting H1b.

To test H1c, we include three proxies for firms' resources in Equation (1). We use return on assets (*ROA*) to measure profitability, the current assets to current liabilities ratio (*SLACK*) to measure slack resources (e.g., Bourgeois 1981), and the total liabilities to total assets ratio (*LEV*) to measure leverage. More profitable firms and firms with more slack resources and lower leverages can afford to spend more on TPA projects. In addition, *SIZE* could also be a proxy for resources and is expected to have a positive coefficient.

We include year dummies in the regression to control for the time trend in firms' participation in TPA projects. We include industry dummies to control for varying CSR practices across industries.

Empirical results

The estimation results of Equation (1) are presented in Table IV. Column (1) - (3) show the results for political pressure measures, visibility measures, and firm resource measures, respectively, while Column (4) combines all three set of explanatory variables.

We find robust evidence that firms facing greater political pressure spend more on TPA projects, supporting H1a. Specifically, Column (1) and (4) show that *CSOE*, *LSOE*, *PC*, and *POVERTY* have positive coefficients, while *DECENTRAL* has a negative coefficient. That is, firms owned by the state, with politically connected top executives, located in poor provinces and provinces with less decentralized government contribute more to TPA projects.

Turning to visibility measures, Column (2) and (4) show that *MAND_CSR* has a significantly positive coefficient, suggesting that firms required to issue CSR reports spend more on TPA projects, i.e., the visibility of firms' CSR activities increases their TPA spending. This result complements Chen et al.'s (2018) finding that the implementation of the CSR disclosure mandate leads to improved corporate social performance.

Besides the visibility of CSR activities, a measure of the visibility of the firm itself, *SIZE,* also has a significantly positive coefficient. However, we hesitate to draw any solid conclusion about visibility based on *SIZE* alone given that it could be a proxy for many other factors.

Overall, we find some support for H1b that firms spend more on TPA projects when they are more visible, especially when their CSR activities receive more attention.

As to the effects of firms' resources on TPA expenditures, we find that *ROA* has a significantly positive coefficient in both Column (3) and (4), supporting H1c that firms with more resources can afford to contribute more to TPA projects. To the extent that *SIZE* is also a measure of resources, the positive coefficient on *SIZE* supports H1c too. *SLACK* has a significantly negative coefficient, i.e., firms with less slack resources (lower current ratios) actually contribute more to TPA projects. This seeming surprising result is consistent with Chen et al.'s (2018) finding that firms with less cash spend more on CSR. We consider this result as further evidence that Chinese firms are compelled to participate in TPA projects under the government's pressure. In particular, firms with less slacks likely have greater financing need, and prior research has shown that firms' access to bank loans could be affected by their relationship with the government (Zhang et al., 2010). These firms may contribute to the TPA projects to please the government for access to finance. *LEV* has a significantly positive coefficient in Column (3), but not in Column (4), providing weak evidence that high leverage firms may spend more on TPA projects. This is again consistent with firms in need of financing making greater contributions to TPA projects to satisfy the government.

Relation between the Number of People Out of Poverty and TPA Expenditures

Research design

We use the following model to examine the efficiency of TPA projects, i.e., the relation between the output (number of people lifted out of poverty) and input (TPA expenditures).

$NPOP = \beta_0 + \beta_1\ logTPA\_EXP + \beta_i$ {political pressure measures: *CSOE, LSOE, PC, POVERTY, DECENTRAL*} × *logTPA_EXP* + β_j {visibility measures: *MAND_CSR, ADV, COVER, SIZE*} × *logTPA_EXP* + β_k {firm competency measure: *ADJ_ROA*} × *logTPA_EXP* + *control variables*

(including all variables used in Equation 1, and *ADJ_ROA*) + *year dummies* + *industry dummies*

(2)

As explained before, we only use TPA projects in the industrial development category to examine efficiency. The sample used to estimate Equation (2) includes 881 firm-years with all necessary control variables that disclose expenditures in this category.[8]

The dependent variable, *NPOP*, is the number of people lifted out of poverty in the current year, measured in thousands, and *logTPA_EXP* is the natural log of the TPA expenditure (measured in 10,000 RMB) in that same year. Given that not all firms with expenditures on TPA projects are able to lift people out of poverty in the same year, *NPOP* could be zero. Hence, we estimate Equation (2) using the Tobit regression.

To test H2a (H2b), we examine the interactions between the political pressure measures (visibility measures) introduced in Equation (1) and *logTPA_EXP*, which capture how political pressure measures (visibility measures) affect the input-output relation of TPA projects.

To test H2c, we introduce a new variable to measure firms' competence. *ADJ_ROA* is a firm's *ROA* minus the industry median *ROA*, and firms that are more profitable than their industry peers are considered to be more competent or capable. We expect the interaction between *ADJ_ROA* and *logTPA_EXP* to have a positive coefficient.

---

[8] We consider the number of people lifted out of poverty by the industrial-development type of TPA projects to be zero if a firm-year does not report this number. We believe this is appropriate because firms have no incentives to hide this number. In robustness checks, we exclude firm-years not reporting numbers of people lifted out of poverty. The sample size is reduced to 500, and the regression results are qualitatively similar (available upon request).

We also include in Equation (2) all variables used in Equation (1) plus *ADJ_ROA* as control variables.

We include year dummies in the regression to control for the time trend in alleviating people out of poverty. As the battle against poverty goes on, it could become increasingly difficult to alleviate people out of poverty because people who have not been lifted are mostly mired in deep poverty.

We include industry dummies because the literature has shown that different industries have different effects on poverty alleviation. (e.g., Loayza and Daddatz 2010).

Empirical results

The regression results are presented in Table V. Column (1) shows the results without any interaction terms, Column (2), (3), and (4) show the results with interactions between TPA expenditures and political pressure measures, visibility measures, and the competence measure, respectively. Column (5) shows the results with all interactions.

As expected, *logTPA_EXP* has a significantly positive impact on *NPOP* in all regressions. Based on its coefficient in Column (1), when the *TPA_EXP* increases from 700,000 RMB (the median expenditure on the industrial-development type of TPA projects as reported in Table II) to 710,000 RMB (an increase of about $1,500), four (0.6550*(log(71)-log(70))*1,000 =4.03) more people will be lifted out of poverty.

Column (2) presents the results with interactions between political pressure measures and *logTPA_EXP*. The coefficients on *LSOE×logTPA_EXP* and *POVERTY×logTPA_EXP* are significantly negative, while the coefficient on *DECENTRAL×logTPA_EXP* is significantly positive. With the same amount of TPA spending, firms owned by local governments, firms in

poor areas, and firms in provinces with *less* decentralized governments lift fewer people out of poverty. These results suggest that political pressure weakens the association between the input and outcome of TPA projects.

As to visibility measures, Column (3) shows that *MAND_CSR×logTPA_EXP* and *SIZE×logTPA_EXP* have significantly positive coefficients. Firms required to issue CSR reports and larger firms are more efficient in their TPA spending, supporting H2b that visibility strengthens the relation between TPA inputs and outputs.

Column (4) shows that firms' abnormal profitability (*ADJ_ROA*) has a positive impact on the relation between *logTPA_EXP* and *NPOP*, supporting H2c that more competent firms manage their TPA projects more efficiently.

The results are generally similar when we include all the above interactions in the regression as presented in Column (5). The only exception is that the coefficient on *MAND_CSR×logTPA_EXP* is no longer significant.

Robustness test

It is possible that some TPA projects take a long time to become effective, so *NPOP* reported in the current year could be driven by TPA expenditures in previous years. However, given that both the government and firms are motivated to eliminate poverty as quickly as possible, most TPA projects likely produce fast results. We believe that the potential mismatch between *NPOP* and current-year *TPA_EXP* is unlikely a big issue, and any mismatch would bias against finding significant correlations between the two variables. Nevertheless, to make sure that the potential mismatch in timing does not significantly alter our results, we estimate Equation (2) using each firm's average *NPOP* and *logTPA_EXP* over the sample period as a

robustness check. This approach minimizes the potential mismatch problem because it matches a TPA project's total output with the total input over the entire sample period instead of annually matching the output with the input.

Table VI presents the regression results when all variables in Equation (2) are measured at sample averages. The sample includes 479 unique firms, and because each firm now appears only once, we do not include year dummies in the regression.

The results are generally consistent with that in Table V. The only difference is that the coefficient on *CSOE×logTPA_EXP* is significantly positive in Table VI, but not Table V.

Overall, we have robust evidence that political pressure tends to weaken the input-output relation of a TPA project, while visibility and competence strengthens the relation.

Additional Analysis: Controlling for the Difficulty of TPA Projects

Although we find that political pressure weakens the input-output relation of TPA projects, we cannot conclude that firms under greater political pressure are less efficient in managing their TPA projects. It is possible that these firms are pressured to take on more challenging TPA projects which demand more expenditures to lift people out of poverty. To rule out this alternative explanation, we re-estimate Equation (2) after adding controls for the difficulty of TPA projects.

It is understandably challenging to measure the difficulty of TPA projects. The proxy we use is the accessibility of a TPA project's location. Firms are not required to disclose where their TPA projects are located, but some do voluntarily provide such information. For firms with the industrial-development type of TPA projects, we manually collect the locations of their projects from the annual reports. Among the 881 firm-years with the industrial-development TPA

projects, 395 firm-years remain after excluding firms that do not disclose locations, and firms that have TPA projects in multiple locations.

For these 395 firm-years, we use the following three measures to capture the accessibility of the TPA project location: 1) *ROADACC* is the percentage of rural households with access to public roads; 2) *KMS* is the natural log of the number of kilometers of roadways; and 3) *RAIL_KMS* is the natural log of the number of kilometers of railways. We obtain the percentage of rural households with access to public roads from the National Bureau of Statistics' 2017 Poverty Monitoring Report of Rural China, which does not cover all provinces. As a result, our number of observations is reduced to 303 when we use *ROADACC* to measure accessibility. We obtain roadway and railway kilometers from CSMAR.

When TPA projects are located in easily accessible areas (greater *ROADACC*, *KMS* and *RAIL_KMS*), we expect the projects to be less challenging, i.e., they can lift more people out of poverty with fewer expenditures. We add the interactions between these accessibility measures and *logTPA_EXP* to Equation (2), and expect these interaction terms to have positive coefficients.

Table VII presents the estimation results of Equation (2) after adding the interactions between each accessibility measure and TPA expenditures. We also include the accessibility measures as stand-alone variables, and all variables in the original Equation (2). We only present the interactions between political pressure measures and *logTPA_EXP* and the interactions between accessibility measures and *logTPA_EXP* for conciseness.

Table VII yields two important observations. First, the interactions between all three accessibility measures and *logTPA_EXP* have significantly positive coefficients, suggesting that

the accessibility measures are valid proxies for TPA project difficulty (more accessible, less difficult). Second, after controlling for accessibility, political pressure still has a negative impact on the input-output relation of TPA projects. Specifically, *CSOE×logTPA_EXP*, *LSOE×logTPA_EXP* and *PC×logTPA_EXP* have significantly negative coefficients, i.e., firms owned by the state and firms with political connections lift fewer people out of poverty with the same TPA expenditures. The set of political pressure measures with significant coefficients are different from that in Table V, which could be due to differences in the samples and/or additional control variables in Table VII. Nevertheless, the overall finding is the same: political pressure weakens the input-output relation of TPA projects. Given that we have controlled for TPA project difficulty in Table VII, the results are consistent with firms under greater political pressure managing TPA projects less efficiently, probably because they do not really care about poverty elimination.

Supplementary Analysis: Firms' Choices of TPA Project Types

In this section, we explore factors affecting firms' choices of TPA project types to further understand the motivations behind CSR activities. More specifically, we investigate whether political pressure, firm visibility, resources and competence affect firms' choices between the industrial-development type of TPA projects versus all other types of TPA projects. We distinguish industrial development from all other TPA categories because it could directly lift people out of poverty and thus directly contribute to the goal to eliminate poverty. It likely provides persistent stable income, keeping people out of poverty for a long time. Also, business enterprises have relative advantage over other society members in industrial development.

We define an indicator variable *ID* equal to one if a firm spends on industrial-development type of TPA projects in a year, and zero otherwise. Within the 1,913 firm-years with TPA spending, we regress *ID* on political pressure, visibility, resources and competence measures developed in Equation (1) and (2) using the logit regression.

The results are presented in Table VIII. We find that political pressure increases firms' propensity to choose the industrial-development type of TPA projects over other types of TPA projects. In particular, *CSOE*, *LSOE* and *POVERTY* have significantly positive coefficients, while *DECENTRAL* has a negative coefficient. Firms owned by the state, located in poor provinces and provinces with less decentralized governments are more likely to choose the industrial-development type of TPA projects. These results are consistent with the central and local governments urging firms to contribute to projects that directly lift people out of poverty.

Besides political pressure, the only other factors with robust and significant impacts on *ID* are *SIZE* (the coefficient is positive) and *SLACK* (the coefficient is negative). It is not surprising that larger firms are more likely to choose the industrial-development type of TPA projects which demand significant investments that small firms may not be able to afford. The negative coefficient on *SLACK* could be interpreted as firms with less slack resources and thus greater financing needs contributing to TPA projects that directly lift people out of poverty to please the government. This could be further evidence that political pressure increases firms' tendency to choose the industrial-development type of TPA projects.

Firms' competence, measured by *ADJ_ROA*, does not have a significant coefficient. Untabulated results show that firms' investment efficiency does not affect *ID* either.

We obtain similar results when we use the percentage of spending on the industrial-development type of TPA projects over firms' total spending on TPA as the dependent variable.

Overall, firms are more likely to choose the industrial-development type of TPA projects over other TPA projects when they face greater political pressure.

Conclusions

We are one of the first papers to examine determinants of firms' expenditures on an individual CSR activity and its efficiency.

We find that political pressure increases firms' spending on TPA projects, but weakens the input-output relation of TPA projects, i.e., firms facing greater political pressure spend more on TPA, but alleviate less people out of poverty for the same amount of expenditures. These results are robust after controlling for the difficulty of TPA projects, suggesting that firms manage TPA projects less efficiently when they are pushed by the government to engage in TPA. Given that these firms spend more on TPA projects, valuable resources might have been wasted.

We also find that firms more profitable than their peers are more efficient in their TPA projects.

These findings have significant policy implications. In particular, policy makers and interest groups may encourage firms to adopt a more outcome-oriented approach regarding their CSR activities, focusing more on the outputs of instead of inputs to CSR activities. Firms successful in their own business should be urged to actively manage their CSR activities instead of making passive donations to other organizations.

Our paper suffers several caveats. First, our paper uses data from China, where the government plays a significant role in the economy. Our finding that political pressure drives firms' CSR activities might not be generalizable to other countries.

Second, we rely on firms' own reports for TPA expenditures and the number of people alleviated out of poverty, which could contain biases and errors. For example, sometimes it could be difficult to differentiate between normal business expenditures and TPA spending. When firms have some discretion in the classification, they likely have incentives to inflate both their TPA expenditures and the number of people benefited.

Third, some TPA projects may provide valuable nonfinancial benefits to people, such as education and medical services, which cannot be captured by the number of people lifted out of poverty and would be left out of our efficiency analysis.

Lastly, top executives' ethics and personal characteristics could be another important determinant of TPA spending and efficiency. We plan to include them in future research.

References:

Barnea, A., and A. Rubin. 2010. Corporate social responsibility as a conflict between shareholders. *Journal of Business Ethics* 97: 71–86.

Baron, D. 2001. Private politics, corporate social responsibility and integrated strategy. *Journal of Economics and Management Strategy*, 10, 7–45.

Bourgeois III, L.J., 1981. On the measurement of organizational slack. *Academy of Management Review*, 6(1), pp.29-39.

Brammer, S. and Millington, A., 2008. Does it pay to be different? An analysis of the relationship between corporate social and financial performance. *Strategic Management Journal*, *29*(12), pp.1325-1343.

Branco, M. C., & Rodrigues, L. L. 2006. Corporate social responsibility and resource-based perspectives. *Journal of Business Ethics*, 69(2), 111–132.

Chakravarthy, J., deHaan, E., and Rajgopal, S. 2014. Reputation repair after a serious restatement. *The Accounting Review*, 89 (4), 1329-1363.

Cai, G., Zheng, G., Ma, X., and Lu, R., 2018. Decentralization and the mixed-ownership reform in China. *Economics Research* 2018 (9), pp. 99-115.

Chatterji, A.K., Durand, R., Levine, D.I. and Touboul, S., 2016. Do ratings of firms converge? Implications for managers, investors and strategy researchers. *Strategic Management Journal*, *37*(8), pp.1597-1614.

Chen, Y.C., Hung, M. and Wang, Y., 2018. The effect of mandatory CSR disclosure on firm profitability and social externalities: Evidence from China. *Journal of Accounting and Economics*, *65*(1), pp.169-190.

China Securities Regulatory Commission (CSRC). 2016. CSRC's opinions on using the capital markets to serve in China's fight against poverty. In Chinese.

Chinese Academy of Social Sciences, Research Center for Corporate Social Responsibility. 2018. Research Report on Chinese Enterprises' Poverty Alleviation-2018. In Chinese.

Du, Y., and Chen, J. 2016. Political connection, charity donations and government subsidy-Evidence from listed firms with losses in China. *Research on Finance and Economics*, 42 (5), pp.4-14. In Chinese.

Faccio, M., 2006. Politically connected firms. *American economic review*, *96*(1), pp.369-386.

Fan, J.P., Wong, T.J. and Zhang, T., 2007. Politically connected CEOs, corporate governance, and Post-IPO performance of China's newly partially privatized firms. *Journal of financial economics*, *84*(2), pp.330-357.

Freeman, R. E. (1984). Strategic management: A stakeholder approach. Boston: Pitman/Ballinge

GRI, United Nations, wbcsd: SDG Compass: The Guide for Business Action on the SDGs.

Huang, X. ., and Watson, L. 2015. Corporate social responsibility research in accounting. *Journal of Accounting Literature*, (34), pp.1-16.

Jia, M., and Zhang, Z. 2010. Does political connection influence corporate philanthropy? *Management World*, (4), pp. 99-113.

Jeong, Y. and Kim T. 2016. Between legitimacy and efficiency: An institutional theory of corporate giving. *Academy of Management Journal* 62 (5), pp. 1583-1608.

Laufer, W. S. 2003. Social accountability and corporate greenwashing. *Journal of Business Ethics*, 43(3), 253–261.

Loayza, N.V. and Raddatz, C., 2010. The composition of growth matters for poverty alleviation. *Journal of development economics*, *93*(1), pp.137-151.

Moser, D. V. , & Martin, P. R. .2012. A broader perspective on corporate social responsibility research in accounting. *Accounting Review*, 87(3), pp. 797-806.

Margolis, J. D., H. A. Elfenbein, and J. P. Walsh. 2009. Does It Pay to Be Good. . . And Does It Matter? A Meta-Analysis of the Relationship Between Corporate Social and Financial Performance. Working paper, Washington University.

McWilliams, A., & Siegel, D. (2001). Profit-maximizing corporate social responsibility. *Academy of Management Review*, 26(4), 504–505.

McWilliams, A., & Siegel, D. S. (2010). Creating and capturing value: strategic corporate social responsibility, resource-based theory, and sustainable competitive advantage. *Journal of Management*, 37, 1480–1495.

Mohr L A , Webb D J , Harris K E . Do Consumers Expect Companies to Be Socially Responsible? The Impact of Corporate Social Responsibility on Buying Behavior[J]. *Journal of Consumer Affairs*, 2005, 35(1):45-72.

Park E , Kim K J , Kwon S J . Corporate social responsibility as a determinant of consumer loyalty: An examination of ethical standard, satisfaction, and trust[J]. *Journal of Business Research*, 2017,76, pp.8-13.

People's Bank, China Banking Regulatory Commission, China Securities Regulatory Commission, and China Banking and Insurance Regulatory Commission. 2017. Opinions on financial support to the fight against poverty in poverty-stricken areas.

State Council of China. 2014. Opinions on further motivation of all members of the society to participate in poverty alleviation. In Chinese.

State Council of China. 2015. Resolution on winning the fight against poverty. In Chinese.

State Council of China. 2016. Evaluation methods for provincial party committees and governments' poverty alleviation. In Chinese.

State Council of China. 2018. Guidance on winning the fight against poverty in three years. In Chinese.

Wright, P., & Ferris, S. P. (1997). Agency conflict and corporate strategy: The effect of divestment on corporate value. *Strategic Management Journal*, 18(1): 77–83.

Zhang M, Zhang S, Shen H.H. (2010). Political Connection and the Efficiency of Credit Resource Allocation——Evidence from Chinese Private Listed Firm. *Management World*, 2010, 22(11):143-153. In Chinese.

Zhao, M. 2012. CSR-based political legitimacy strategy: Managing the state by doing good in China and Russia. *Journal of Business Ethics* ,111: 439-460.

Appendix 1: Excerpt from China Fortune Land Development Co. Ltd 2017 Annual Report

Item V Significant Events

Note 17: Corporate social performance

Part 1. Poverty alleviation

1. Targeted poverty alleviation plan

    The company followed the central, the provincial and the municipal governments' poverty alleviation strategies closely, and diligently implemented the requirements in China Securities Regulatory Commission's Guidance on Utilizing the Capital Markets to Serve the State's Poverty Alleviation Strategy. To fulfill the corporate social responsibility of a non-state-owned enterprise and to build a poverty alleviation framework propelled by the joint efforts of the government, the society and the market, the company leveraged on its resource advantage as a public company to accomplish the goal of alleviating the town of Laiyuan out of poverty by the planned time.

2. Summary of targeted poverty alleviation in the current year

    In the current reporting period, the company's total spending on poverty alleviation projects was 44,280,000 RMB.

    In the current reporting period, the company chose to assist the town of Laiyuan, which has many people in poverty, a high poverty rate, and weak infrastructure, to reduce poverty. On December 15, 2017, the company signed an agreement with the government of Laiyuan, Hebei Province on poverty alleviation. According to the agreement, the company would provide support in all aspects to poverty alleviation and development projects and industrial development plans towards the goal of alleviating Laiyuan out of poverty by 2020. The focus would be on building resettlement houses, remodeling dangerous and old houses, and infrastructure construction in poverty-stricken areas; building high standard public service facilities for education, medicine and commerce; developing three industries to alleviate poverty including photovoltaic power generation, produce processing, and tourism. The company would cater to leading enterprises in agriculture, promote large-scale planting of traditional Chinese herbal medicine and intensive processing of agriculture produce, and push for tourism development in Laiyuan. By strengthening their earning ability, people in poverty will obtain long-term stable income and live a life with reasonable guarantees.

    To implement the above agreement in a scientific and solid way, China Fortune and the Laiyuan government decided to carry out the project in three phases over two years. China Fortune will build resettlement houses, remodel dangerous old houses, and construct infrastructure and public service facilities in poverty-stricken areas in 188 Laiyuan villages over two years. The total living area will be 10,000,000 square meters, benefiting 16,000 households in poverty. So far, the construction plans for Xieshan Village, Shibapan Village, Tuanyuan Village, Xialaofang Village, Beipodi Village, and Liujiazhuang Village have been completed. All 66 houses under contract in Shibapan Village have been demolished, and the land has been

cleared; two model houses have been completed and on display. In Xieshan Village, 242 households have signed contracts, and land clearance is in process. In Tuanyuan Village, 456 households have signed contracts, and demolishment is in process. In Xialaofang Village, 115 households have signed contracts, fences and land clearance in the resettlement area have been completed. In addition, the company has gone through two rounds of location selection for the photovoltaic power plant project, and has initiated the third round.

3. Achievement in targeted poverty alleviation

Measure	Amount and description
I. Overall	
1.1. cash expenditures	44,280,000 RMB
1.2. monetary equivalent of non-cash assets	0
1.3. number of people out of poverty	244
II. Expenditures by category	
1. Poverty alleviation by industrial development	
1.1. Type of industrial development	other
1.2. Number of industrial development projects	1
1.3. Expenditures on industrial development projects	17,000,000 RMB
1.4. Number of people lifted out of poverty	244
2. Poverty alleviation through transfer employment	
2.1. Expenditures on vocational training	0
2.2. number of people receiving vocational training	0
2.3. people in poverty obtaining employment	0
3. poverty alleviation through relocation	0
4. Poverty alleviation through education	
4.1. Expenditures on helping poor students	202,000 RMB
4.2. Number of poor students helped	101
4.3. expenditures on improving education resources in poor area	3,798,000 RMB
5. Poverty alleviation through health care	0
6. Poverty alleviation through ecological protection	0
7. minimum social welfare	
7.3. Expenditures on disabled people in poverty	80,000 RMB

7.4. Number of disabled people in poverty helped	1
8. Poverty alleviation through social support	
8.2. expenditures on targeted social projects	20,000,000 RMB
9. Other projects	
9.1. Number of projects	3
9.2. Expenditures	3,200,000 RMB
9.3. Number of people helped out of poverty	0

III. Awards received (description, level)

China Fortune received the honorary title of "Top 10 Socially Responsible Privately-Owned Enterprises", and the Targeted Poverty Alleviation Award at the sixth Shared Responsibility Annual Meeting organized by the China Social Responsibility 100 Forum

4. Targeted poverty alleviation follow-up plan

The company has signed *The Framework Agreement of China Fortune's Assistance to Lifting the Entire Town of Laiyuan out of Poverty* with the government of Laiyuan, Hebei Province on December 15, 2017, and passed the expenditure plan on this project in the 34th meeting of the Sixth Board of Directors on January 22, 2018. According to the expenditure plan, the company would spend 200 million RMB on moving and resettling village residents, important poverty alleviation projects such as building resettlement houses and remodeling dangerous old houses, and developing poverty alleviation industries such as the construction of photovoltaic power generation plants.

The poverty alleviation of the town of Laiyuan would be implemented in three phases over two years. To satisfy people's needs, the company would create a scientific plan and provide solid assistance with an emphasis on moving and resettling village residents, remodeling dangerous old houses, building infrastructure and the photovoltaic power generation industry.

Appendix 2: Variable Definitions

Variables	
NPOP	Number of people lifted out of poverty, in thousands
TPA_EXP	Expenditures on TPA projects in 10,000 RMB
logTPA_EXP	Natural log of TPA_EXP
ID	=1 if a firm spends on industrial-development type of TPA projects, 0 otherwise
Political Pressure measures	
CSOE	=1 if a firm is owned by the central government, 0 otherwise
LSOE	=1 if a firm is owned by the local government, 0 otherwise.
PC	=1 if the chairperson or CEO is a current or former government official, a member of the People's Congress or the Chinese People's Political Consultative Conference, 0 otherwise
POVERTY	=1 if a firm is registered in a province with more poverty-stricken towns than the national median, 0 otherwise
DECENTRAL	An index developed by Cai et al. (2018) which measures the decentralization degree of provincial governments in China; the index is based on principal components analysis of fiscal surplus and spending levels of provincial governments, and the local unemployment rate and marketization.
Visibility measures	
MAND_CSR	=1 if a firm is required to issue an annual CSR report, 0 otherwise
ADV	Sales expenses/sales revenue in the previous year
COVER	Natural log of number of analysts covering a firm
SIZE	Natural log of total assets at the beginning of the year
Resource measures	
LEV	Total liabilities/total assets, measured at the beginning of the year
ROA	Return on assets, or net income of the previous year/total assets at the end of the previous year
SLACK	Current assets/current liabilities, measured at the beginning of the year
Competence measure	
ADJ_ROA	ROA-industry median ROA
TPA project difficulty measures	
ROADACC	Percentage of rural households with access to public roads in a province.
KMS	Natural log of the number of kilometers of roadways in a province.
RAIL_KMS	Natural log of the number of kilometers of railways in a province.

Table I Sample Distribution

Panel A：Distribution of firms by year

Year	No. of firms	No. of firms with TPA expenditures	(2)/(1)	No. of firms with number of people out of poverty	(4)/(2)
	(1)	(2)		(4)	
2016	2505	464	0.185	203	0.438
2017	2656	629	0.237	275	0.437
2018	2933	820	0.28	342	0.417
Total	8094	1913	0.236	820	0.429

Panel B: Distribution of firms by industry sector

Industry sector	No. of firms	No. of firms with TPA expenditures	(2)/(1)	No. of firms with number of people out of poverty	(4)/(2)
	(1)	(2)		(4)	
Utilities	244	121	0.496	89	0.736
Mining	190	92	0.484	61	0.663
Transportation, warehousing and postal	201	83	0.413	29	0.349
Agriculture, forestry, animal husbandry and fishery	119	42	0.353	27	0.643
Construction	214	73	0.341	34	0.466
Water, environment and public facilities management	103	35	0.34	21	0.6
Culture, sports and entertainment	127	41	0.323	24	0.585
Health and social work	24	7	0.292	0	0
Wholesale and retail	435	110	0.253	36	0.327
Real estate	364	85	0.234	23	0.271
Manufacturing	5185	1124	0.217	441	0.392
Leasing and business services	115	16	0.139	7	0.438
Scientific research and technology services	76	10	0.132	1	0.1
Education	8	1	0.125	0	0
Information transmission, software and information services	593	67	0.113	24	0.358
Accommodation and catering	28	3	0.107	0	0
Comprehensive industry	68	3	0.044	3	1
Total	8094	1913	0.236	820	0.429

Table I- Continued

Panel C: Distribution of firms by Province

Province	No. of firms (1)	No. of firms with TPA expenditures (2)	(2)/(1)	No. of firms with number of people out of poverty (4)	(4)/(2)
Tibet	35	31	0.886	13	0.419
Guizhou	59	44	0.746	22	0.500
Yunnan	87	44	0.506	25	0.568
Jiangxi	102	47	0.461	22	0.468
Hainan	77	33	0.429	22	0.667
Qinghai	33	14	0.424	6	0.429
Guangxi	92	38	0.413	20	0.526
Hubei	250	103	0.412	54	0.524
Shananxi	122	50	0.410	27	0.540
Gansu	82	33	0.402	22	0.667
Henan	208	79	0.380	44	0.557
Hunan	232	88	0.379	44	0.500
Sichuan	297	112	0.377	52	0.464
Shanxi	32	12	0.375	7	0.583
Ningxia	36	13	0.361	3	0.231
Xinjiang	129	46	0.357	19	0.413
Inner Mongolia	69	23	0.333	8	0.348
Fujian	286	89	0.311	26	0.292
Anhui	253	78	0.308	37	0.474
Chongqiong	120	29	0.242	10	0.345
Hebei	145	34	0.234	21	0.618
Liaoning	205	45	0.220	24	0.533
Beijing	748	163	0.218	66	0.405
Heilongjiang	99	19	0.192	7	0.368
Guangdong	1242	224	0.180	113	0.504

Shanghai	624	110	0.176	23	0.209
Tianjin	125	20	0.160	6	0.300
Jiangsu	832	122	0.147	29	0.238
Shandong	464	66	0.142	15	0.227
Zhejiang	899	93	0.103	25	0.269
Jilin	110	11	0.100	8	0.727
total	8094	1913	0.236	820	0.429

Table II Expenditures and Number of People Lifted Out of Poverty by TPA Category

TPA Categories	No. of firms reporting expenditures	Mean Expenditures	Median expenditures	Mean number of people out of poverty	Median number of people out of poverty
Industrial Development	1,119	136,193,900	700,000	2,554	185
Transfer Employment	376	1,178,326	54,000	NA	NA
Relocation	108	NA	NA	NA	NA
Education	451	13,074,430	474,000	NA	NA
Health Care	394	4,551,666	181,500	NA	NA
Ecological Protection	235	13,199,630	195,000	NA	NA
Minimum Social Welfare	137	1,200,417	90,000	NA	NA
Social Assistance	1,115	7,623,632	350,000	NA	NA
Others	961	17,517,670	384,100	2,041	123

Note: CSMAR, the database we use, only provides the number of people lifted out of poverty for TPA projects in the Industrial Development and Others categories. For TPA projects in other categories, it provides the number of people receiving assistance instead.

Table III Summary Statistics

Please refer to Appendix 2 for variable definitions.

Panel A: Descriptive statistics

	N (firm-years)	Mean	Q1	Median	Q3	Std. dev.
TPA_EXP	8094	136	0	0	0	697.3
CSOE	8094	0.12	0	0	0	0.326
LSOE	8094	0.22	0	0	0	0.414
PC	8094	0.124	0	0	0	0.329
POVERTY	8094	0.267	0	0	1	0.442
DECENTRAL	8094	0.863	0.524	1.156	1.369	0.93
MAND_CSR	8094	0.265	0	0	1	0.441
ADV	8094	0.073	0.023	0.045	0.089	0.083
COVER	8094	1.271	0	1.386	2.197	1.051
LEV	8094	0.427	0.259	0.414	0.58	0.208
ROA	8094	0.036	0.013	0.034	0.062	0.054
SLACK	8094	2.313	1.152	1.668	2.638	2.126
SIZE	8094	8.446	7.574	8.306	9.155	1.263

Table III Continued

Panel B: Pearson correlation coefficients

	TPA_EXP	CSOE	LSOE	PC	DECENTRAL	MAND_CSR	ADV	COVER	LEV	ROA	SLACK	SIZE	POVERTY
TPA_EXP	1												
CSOE	0.071***	1											
LSOE	0.017	-0.196***	1										
PC	-0.001	-0.036***	0.036***	1									
DECENTRAL	-0.076***	-0.062***	-0.125***	-0.007	1								
MAND_CSR	0.155***	0.224***	0.161***	0.014	-0.015	1							
ADV	-0.026**	-0.128***	-0.075***	0.007	-0.058***	-0.063***	1						
COVER	0.152***	0.053***	-0.082***	0.056***	0.083***	0.202***	0.058***	1					
LEV	0.094***	0.152***	0.201***	0.015	-0.073***	0.168***	-0.243***	-0.008	1				
ROA	0.043***	-0.068***	-0.104***	-0.024**	0.086***	0.032***	0.100***	0.364***	-0.376***	1			
SLACK	-0.076***	-0.086***	-0.145***	-0.023**	0.027**	-0.115***	0.151***	-0.057***	-0.634***	0.241***	1		
SIZE	0.252***	0.228***	0.224***	0.004	-0.023**	0.458***	-0.180***	0.345***	0.494***	0	-0.342***	1	
POVERTY	0.068***	0.057***	0.120***	0.029***	-0.501***	-0.017	-0.003	-0.027**	0.071***	-0.081***	-0.053***	0.014	1

***/**/*: significant at the 1%/5%/10% level, respectively.

Table IV   Determinants of TPA Expenditures

The dependent variable is *logTPA_EXP*. Please refer to Appendix 2 for variable definitions.

	(1)	(2)	(3)	(4)
CSOE	4.0087***			1.7227***
	(14.83)			(6.76)
LSOE	2.8414***			1.4352***
	(12.48)			(6.77)
PC	1.1198***			0.9872***
	(3.88)			(3.78)
POVERTY	1.9257***			2.0355***
	(8.87)			(10.35)
DECENTRAL	-0.7953***			-0.8558***
	(8.35)			(9.93)
MAND_CSR		2.2311***		2.0679***
		(10.94)		(10.37)
ADV		1.7984		1.4085
		(1.59)		(1.25)
COVER		0.0584		0.1613
		(0.65)		(1.64)
SIZE		1.6414***		1.3773***
		(18.77)		(14.35)
LEV			7.0219***	-0.2518
			(10.43)	(0.38)
ROA			17.2128***	7.8127***
			(8.72)	(3.94)
SLACK			-0.1969***	-0.1366**
			(2.92)	(2.29)
Constant	-6.1360***	-16.9410***	-6.2373***	-16.2397***
	(8.51)	(18.15)	(7.62)	(16.73)
Industry Dummies	YES	YES	YES	YES
Year Dummies	YES	YES	YES	YES
Pseudo R^2	0.0612	0.0784	0.0397	0.1058
N	8094	8094	8094	8094

***/**/*: significant at the 1%/5%/10% level, respectively.

Table V Efficiency of the Industrial-Development-Type of TPA Projects

The dependent variable is *NPOP*. Please refer to Appendix 2 for variable definitions.

	(1)	(2)	(3)	(4)	(5)
	No Interactions	Political Pressure ×logTPA_EXP	Visibility ×logTPA_EXP	Competence ×logTPA_EXP	All
logTPA_EXP	0.6550***	1.0798***	0.2874**	0.6069***	0.8918***
	(9.94)	(8.76)	(2.17)	(9.41)	(5.38)
CSOE*logTPA_EXP		-0.0692			-0.2012
		(0.47)			(1.36)
LSOE*logTPA_EXP		-0.9962***			-0.8898***
		(7.09)			(6.46)
PC*logTPA_EXP		-0.2174			-0.2085
		(1.32)			(1.32)
POVERTY*logTPA_EXP		-0.4136***			-0.2371*
		(3.17)			(1.83)
DECENTRAL*logTPA_EXP		0.1739**			0.1880***
		(2.55)			(2.82)
MAND_CSR*logTPA_EXP			0.2909**		0.2053
			(2.22)		(1.64)
ADV*logTPA_EXP			0.7630		0.4706
			(0.89)		(0.58)
COVER*logTPA_EXP			0.0736		-0.0733
			(1.23)		(1.21)
SIZE*logTPA_EXP			0.2082***		0.2297***
			(3.64)		(4.23)
ADJ_ROA*logTPA_EXP				8.7659***	6.2337***
				(6.38)	(4.48)
Constant	-2.8438**	-5.3220***	-2.3534*	-3.8911***	-6.1447***
	(2.23)	(4.11)	(1.81)	(3.11)	(4.59)
Control Variables	YES	YES	YES	YES	YES
Industry Dummies	YES	YES	YES	YES	YES
Year Dummies	YES	YES	YES	YES	YES
Pseudo R2	0.0548	0.0843	0.0677	0.0668	0.1000
R2	881	881	881	881	881

***/**/*: significant at the 1%/5%/10% level, respectively.

Table VI Robustness Check: Efficiency of the Industrial-Development Type of TPA Projects Tested with the Sample Average

Same regressions as in Table V (the dependent variable is *NPOP*), but every variables is measured at the sample average. Please refer to Appendix 2 for variable definitions.

	(1)	(2)	(3)	(4)	(5)
	No Interactions	*Political Pressure ×logTPA_EXP*	*Visibility ×logTPA_EXP*	*Competence ×logTPA_EXP*	*All*
logTPA_EXP	0.8870***	1.2215***	0.4724**	0.8101***	0.9757***
	(8.43)	(6.08)	(2.31)	(7.88)	(3.81)
CSOE*logTPA_EXP		0.4505*			0.3777*
		(1.96)			(1.67)
LSOE*logTPA_EXP		-1.0584***			-0.8793***
		(4.78)			(4.09)
PC*logTPA_EXP		-0.1142			-0.0896
		(0.56)			(0.46)
POVERTY*logTPA_EXP		-0.5087**			-0.3807*
		(2.34)			(1.79)
DECENTRAL*logTPA_EXP		0.2210*			0.2454**
		(1.88)			(2.15)
MAND_CSR*logTPA_EXP			0.4781**		0.2796
			(2.22)		(1.39)
ADV*logTPA_EXP			0.1598		0.4022
			(0.12)		(0.34)
COVER*logTPA_EXP			0.1150		-0.0436
			(1.36)		(0.51)
SIZE*log_TPA_EXP			0.1800*		0.1789**
			(1.96)		(2.07)
ADJ_ROA*log_TPA_EXP				9.0825***	6.8911***
				(4.76)	(3.51)
Constant	-4.2604**	-6.4087***	-4.0312**	-4.8267***	-6.8522***
	(2.29)	(3.33)	(2.11)	(2.67)	(3.46)
Control Variables	YES	YES	YES	YES	YES
Industry Dummies	YES	YES	YES	YES	YES
Pseudo R^2	0.0576	0.0896	0.0698	0.0703	0.1046
N	479	479	479	479	479

***/**/*: significant at the 1%/5%/10% level, respectively.

Table VII Efficiency of the Industrial-Development-Type of TPA Projects after Controlling for Project Difficulty

The dependent variable is *NPOP*. Please refer to Appendix 2 for variable definitions.

	TPA_Accessibility= *ROADACC*		TPA_Accessibility= *KMS*		TPA_Accessibility= *RAIL_KMS*	
logTPA_EXP	0.1439***	0.2253***	0.1240***	0.2025***	0.1196***	0.1858***
	(6.64)	(5.09)	(7.45)	(6.00)	(7.25)	(5.59)
*CSOE*logTPA_EXP*		-0.1061**		-0.1362***		-0.1422***
		(2.02)		(3.14)		(3.35)
*LSOE*logTPA_EXP*		-0.1336**		-0.1183***		-0.1217***
		(2.59)		(3.23)		(3.30)
*PC*logTPA_EXP*		-0.0862*		-0.0805*		-0.1124***
		(1.69)		(1.93)		(2.62)
*POVERTY*logTPA_EXP*		0.0214		0.0184		0.0391
		(0.49)		(0.54)		(1.16)
*DECENTRAL*logTPA_EXP*		0.0023		-0.0017		0.0007
		(0.11)		(0.12)		(0.04)
*TPA_Accessibility*logTPA_EXP*	0.0771**	0.0716*	0.0710**	0.0651**	0.0887**	0.1059***
	(2.02)	(1.74)	(2.31)	(2.07)	(2.54)	(2.85)
Constant	22.1369	19.9401	2.0929	1.1487	1.3570	1.4544
	(1.45)	(1.25)	(1.51)	(0.80)	(1.02)	(1.07)
Control Variables	Y	Y	Y	Y	Y	Y
Industry Dummies	Y	Y	Y	Y	Y	Y
Year Dummies	Y	Y	Y	Y	Y	Y
Pseudo R2	0.1110	0.1403	0.1175	0.1548	0.1420	0.1856
R2	303	303	395	395	395	395

***/**/*: significant at the 1%/5%/10% level, respectively.

Table VIII Why Firms Choose the Industrial-Development Type of TPA Projects

The dependent variable is *ID*. Please see Appendix 2 for variable definitions.

	(1)	(2)	(3)	(4)
CSOE	1.1045***			0.8031***
	(8.35)			(5.66)
LSOE	0.7950***			0.6383***
	(7.09)			(5.40)
PC	0.1387			0.1282
	(0.93)			(0.83)
POVERTY	0.3485***			0.4372***
	(3.41)			(4.09)
DECENTRAL	-0.0243			-0.0545
	(0.64)			(1.36)
MAND_CSR		0.1694		0.1578
		(1.56)		(1.40)
ADV		0.3393		0.9125
		(0.53)		(1.36)
COVER		-0.0644		-0.0228
		(1.30)		(0.40)
SIZE		0.3685***		0.3064***
		(8.40)		(5.72)
LEV			1.3113***	0.0301
			(3.62)	(0.07)
ROA			8.3074	9.0251
			(1.49)	(1.54)
SLACK			-0.0979**	-0.0949**
			(2.14)	(1.97)
ADJ_ROA			-7.6817	-9.1065
			(1.39)	(1.57)
Constant	-1.0947***	-3.8391***	-1.1933***	-4.0812***
	(6.58)	(9.59)	(3.25)	(7.47)
Industry Dummies	YES	YES	YES	YES
Year Dummies	YES	YES	YES	YES
Pseudo R^2	0.0596	0.0608	0.0373	0.0942
N	1913	1913	1913	1913

***/**/*: significant at the 1%/5%/10% level, respectively.