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Political connections, government subsidies and firm financial performance: Evidence from renewable energy manufacturing in China

Huiming Zhang [a,*], Lianshui Li [a], Dequn Zhou [b], Peng Zhou [b]

[a] China Institute of Manufacturing Development, Nanjing University of Information Science & Technology, Nanjing 210044, China
[b] Institute of Soft Energy Science, Nanjing University of Aeronautics and Astronautics, Nanjing 210016, China

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ABSTRACT

The relationship among political connections, government subsidies and firm financial performance of wind and solar manufacturing companies is analyzed based on panel data model. The results illustrate that government subsidies, in long and short-terms, have significant positive effects on the financial performance of wind energy manufacturing companies; however, a government background of firm executives weakens subsidy effects. In contrast, both key variables, government subsidies and an interaction term of subsidies & political connections, have insignificant effects on the financial performance of solar energy manufacturing companies. Following from the empirical analysis, this paper proposes the suggestions: (1) Reform subsidy policies of wind manufacturing companies, and increase indirect subsidies for key wind energy equipments. (2) Strengthen a strict supervision on wind energy manufacturing companies with political background. (3) Adopt effective measures to reduce individual decision-making in listed wind energy manufacturing companies, and promote collective decisions to reduce the institutional possibilities of rent-seeking. (4) Make clear rules for the use of government subsidies in solar energy manufacturing companies.

1. Introduction

The renewable energy manufacturing industry functions as a basis for the renewable energy industrial chain as well as acting as a prerequisite for promoting competitiveness in the renewable energy industry. Currently, major energy producers and consumers such as the United States, Germany, Japan and Brazil have formulated policies to support renewable energy manufacturing with subsidies.

China has also attached importance to the development of the renewable energy manufacturing industry. In recent years, it has promulgated *Notice of Planning Commission and Ministry of Science and Technology on the Issues of Further Supporting Renewable Energy Development* (1999), *Guidance on Accelerating the Localization Wind Power Generation Technology and Equipment* (2000), *Proposals for Implementation of Tax Support Policy on Development of Bio-energy and Bio-chemical Industry* (2006), *Interim Management Measures for Special-Project Funds of Wind Power Generation Equipment Industrialization* (2008), *Interim Management Measures for Financial Subsidies of PV Building* (2009), *Subsidies for Golden Sun Project* (2010) and *Implementation Project of Brace up the Fundamental Parts in Machinery Industry* (2010). These advocate the use of subsidies to promote the development of renewable energy manufacturing. At the micro level, the central and local governments use VAT returns, fiscal subsidies, tax incentives and innovation awards to subsidize renewable energy manufacturing firms.

Government subsidies received by different renewable energy producers may, however, vary greatly. Even for the same renewable energy producer, the subsidies received in different years may differ sharply. A number of studies have indicated that political connections of executives are valuable resources and have played a significant role in deciding the amount of subsidies [1–3].

The corporate political connection highlights the fact that senior managers, including board members, major shareholders or persons in management authority hold positions or have been in

* Corresponding author.
E-mail address: hm.zhang_16@163.com (H. Zhang).

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government agencies [4]. It exists throughout the economic transition period in China, which is conducive to enhancing the firms' value by using this resource with the change of system environment. In the corporate crisis, however, the political relations will help to obtain financial support. Political connections are common in the renewable energy manufacturing industry. The executives in some listed renewable energy manufacturing companies such as Bearing Science & Technology Ltd., Times New Material Technology Ltd., Sinoma Science & Technology Ltd. and Yin Xing Energy Ltd. have government backgrounds. This gives rise to two issues that this paper attempts to explore: (1) to what extent do government subsidies influence the financial performance of firms and (2) whether political connections affect the effectiveness of subsidies to the enterprise.

In theory, the effectiveness of government subsidies can be looked at from two different viewpoints: the promotion of efficiency and the results of rent-seeking. The former argues that the subsidies received by firms with political connections will advance R&D input and thus improve financial performance, while the latter holds that firms with political connections obtain subsidies through an act of rent-seeking by officials who have the power to allocate fiscal subsidies. In this case, because the granting of subsidies is not based on a firm's promising prospects or social contributions, it follows that subsidies based on political connections are not beneficial to company performance [3,5].

Considering the above, this paper wishes to make two following contributions: (1) Analyze the relationship between government subsidies and financial performance of renewable energy manufacturing companies. (2) Explore the influence of political connections on the effectiveness of subsidies.

The arrangement of the remaining parts of this paper is as follows: Section 2 reviews references. Section 3 describes the methods used including model construction, definitions of variables and data sources. Section 4 includes empirical research results and analysis. Section 5 provides some policy recommen dations.

2. Literature review

The research work related can be categorized as follows.

(1) The relationship between political connections and firm financial performance. ① Positive impact of political connections on firm financial performance. Based on the data of Chinese firms, Li et al. examined the role of affiliation with the ruling Communist Party in the operation of private enterprises. The findings revealed that the Party membership of private entrepreneurs had a positive effect on the performance of their firms when human capital and other relevant variables were controlled [6]. Goldman et al. showed that the announcement of the nomination of a politically connected individual to a company's board of directors in the United States would lead to a positive stock return [7]. Taking listed private enterprises between 2004 and 2006 as samples, Luo and Liu maintained that the closer political relations private firms had with governments, the more possible those enterprises would enter high-barrier industries and the better performance they would achieve in high-barrier industries than other enterprises [8]. Amore and Bennedsen employed a difference-in-differences model to confirm positive impacts of political power on the profitability of Danish firms related by family to local politicians. The estimates are consistent with an elasticity of firm performance to political power [9]. ② Negative impact on firm financial performance. A game model with government official and entrepreneur as two players was established by Shleifer and Vishny, which confirmed a grabbing hand role of political connections [10]. The theoretical research results were echoed by Boubakri et al., who investigated the extent of political connections in newly privatized firms using a sample of 245 privatized firms headquartered in 27 developing and 14 developed countries over the period 1980–2002. According to their findings, politically connected firms exhibit a poor accounting performance compared with their non-connected counterparts [11]. A survey of Fan et al. on Chinese listed companies suggested that the government background of executives did not help increase the value of the company, but led to a decline in its business performance [12]. Li et al. carried out an empirical study from the aspect of double influence of political connections. Regression results showed that PC index had a significant negative relationship with company financial performance [13]. A focus on the association between Malaysian politically connected firms and leverage by Bliss and Gul confirmed that borrowing politically connected (abbreviated PCON) firms had significantly lower ROA compared to non-PCON firms [14]. ③ Complicated relations between political connections and firm financial performance. Whether the political connections affect firm financial performance significantly may depend on certain prerequisites such as types of political connections [5], ownership [15–17] and the time lag [18], which demonstrated the complicated relations between the two variables.

(2) The relationship between subsidies and the firm financial performance. Most scholars argue that subsidies do not increase but, on the contrary, lower the financial performance of the companies. Beason et al. analyzed the investment subsidy effects and found government subsidies led to low growth of enterprises and decline in returns to scale [19,20]. Employing a database of firms in the Greek food and drinks manufacturing sector for the period 1982–1996, Tzeleis and Skuras proved the negative and insignificant effects of subsidization on the efficiency measure [21]. Balsar et al. investigated top 100 enterprises in Istanbul and Chinese agricultural companies, respectively. Their empirical study results also supported the viewpoints of Beason and Tzeleis [22,23]. Taking listed Chinese companies between 2002 and 2004 as samples, Tang and Luo studied the motive and effect of government subsidies. According to their findings, subsidies were in distinctive positive correlation with firm performance, that is, subsidies did not remarkably facilitate the economic performance of the firms [24].Contrary to the major viewpoints, a few studies reinforced the positive effects of subsidies. For example, Duch-Brown et al. compared the performance of publicly subsidized companies with that of similar, but unsubsidized companies in Catalonia, and indicated that recipient firms on average seem to increase their value added as a direct result of public subsidy programs [25]. Likewise, Leng and Wang showed that tax subsidies and income subsidies could increase the current profit [26].

(3) The relationship among political connections, subsidies and firm financial performance. In a sample of firms from 42 countries, Faccio and Masulis found that politically connected firms were significantly more likely to be bailed out than similar non-connected firms because the former could receive more subsidies. However, among bailed-out firms, politically connected firms exhibit significantly worse