

Institutional complexity and Corporate Environmental Strategy: Based on the Institutional Logic Perspective

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Abstract

Under the institutional pressure for sustainable development, environmental practices (EPs) can form a basis for defining the corporate environmental strategic (CES) orientation, substantive or symbolic. Awareness of the institutional logics, guiding and shaping organization behavior, varied among fields. A cross sector analytical framework for understanding influence of different dominant logics, formed in Chinese institution transition, on CES was build. The empirical study on 372 listed companies showed that: despite all firms have to respond to environmental pressure, they responded differently due to heterogeneous logic. Specifically, in state logic dominant field, corporate preferred substantive strategy that represents lot public interest; in market logic dominant field, performance played an important role in affecting CES, which is not significant in state logic field. Poor performance was often accompanied by symbolic strategy.

Keywords: Institutional logic; Substantive strategy; Symbolic Strategy; Chinese enterprise

Introduction

With a rise in symbolic strategy using in corporate environmental management, some researchers discussed this phenomenon literally. Many firms voluntarily disclosed their environmental information, especially relevant planned capital support in the future, which criticized for misleading intention by the academe (Wiseman, 1982). Patten's (2005) research on projected/actual spending with US firms from the chemical, petroleum, metals processing and paper industries found that 75% of the observations' projected environmental capital expenditures are overestimated. And these misleading disclosures "project an image of impending action on environmental matters that is not carried out in reality". Some extant literatures explained that the use of symbolic strategy in corporate environmental management, such as green-wash (Greer and Bruno, 2011), pseudo-CSR (Xiao, 2013), impression management (Bansal and Clelland, 2004) are derived from the irrelevance between economic efficiency and institutional pressure (Darrell and Schwartz, 1997). Which means that corporate environmental responses are mostly driven by institutional pressure, and has little to do with the enhancement of profit. In this context, some firms prefer to implement symbolic strategy rather than substantive strategy (Xiao, 2013). In Delmas and Montes-Sancho's (2010) research on firms cooperative strategies after joining the environmental voluntary agreements (VA), they finds that early joiners are more likely to pursue substantive strategy as they face more pressures from the state and local government, while symbolic cooperation is more likely to be adopted by late joiners. And the capital and effort the late joiners invest in environmental improvement is significantly decreased.

The analytical framework above ignored such a phenomenon that there still are some firms which substantively improve the nature environment and get paid well even promote energy conservation in their industry (Zhang and Zhang, 2011). This shows that the analysis method that simplifying relationship between organization and its institutional context to the deviation of the economic and social, efficiency and legitimacy is not flawless. This mode of thinking leads to the neglecting of the heterogeneity of organization behaviors.

Institutional logic, initially suggested by Friedland and Alford (1991), as the development of traditional

institution theory, moderated the organization behavior and strategy (Thornton, 2012). It highlights on the dialectical unity between institution and initiative, substance and symbol. Through this perspective, we can study the different organization strategies and behavior within the same institutional background. In institutional logic framework, organizations always face complex even conflicting institutional requirement (Greenwood et al, 2010). Each institutional order will guide organization how to behave according to its central logic. When organization face conflicting requirement from different logics, they may symbolically respond to the less important one, leave substantive cooperation to the dominant logic (Greenwood et al, 2011; Delmas and Toffel, 2008). Meanwhile, organizations responses are not likely to be the same in different institution field to the same issue. And the priority of the logic in their field guides the organization strategy and behavior.

This article introduced institutional logic to understand the heterogeneity in CES. The main research questions are stated as followed: (1) the complex institution context faced by Chinese firms and its formation. (2) what main logics are there in different fields, and how it affects firms environmental strategies? (3) How firms will respond, under different institutional logics, or even the combined logic? Based on theoretical and reality analysis, we empirically studied the research questions above through 372 listed companies in Shanghai and Shenzhen stock market.

Theoretical Basis

Institutional logic

The original use of institutional logics was by Friedland and Alford in 1991 that ironically attempted to research on quite a different direction----structural and cognitive isomorphism of organizational fields. They define institutional logics as: "...symbolic systems, ways of ordering reality and thereby rendering experience of time and space meaningful" (Friedland and Alford, 1991). According to their description, every organizational field will have its own main logic, which provide the "master principles of society" and guide social action (Thornton, 2002; Lok, 2010). The institutional logic idea was later drawn upon by scholars examining how institutional logics helped organizations to interpret the reality, what constitutes appropriate behavior, and how to succeed" (Thornton, 2004).

As the lately development of neo-institutional theory, institutional logics perspective has four important characteristics as followed: (1) emphasizes the acceptance of structure and subjective initiative(Binder, 2007). That means the interests and ration of the actors are changing with the external institution, which bridging the gap of the neo-institutionalism, even the sociological theory (Pache and Santos, 2010; Lounsbury, 2007; Barley and Tolbert, 1997). (2) Institution is both material and symbolic. The symbolic meaning is attached to a particular practice or substances that make deep research on the transition of a certain institution possible (Friedland and Alford, 1991; Delmas and Toffel, 2008). (3) Institution is historically contingent (Thornton, 2002; Thornton and Ocasio, 1999). The role of institution in shaping actors action selection is not active in any condition, and it is situational dependent. That is a critical integration of resource dependence theory and traditional economic theory. (4) Institution itself contains the possibility of multilevel analysis. As stressed by Friedland and Alford, simultaneous analysis on three levels is needed, which is individual level, organization level, and institution level. The institutional logic perspective has quite explanatory power in complex social phenomenon (Friedland and Alford, 1991). The advantages of the theory above make it widely applied in the field of organization field.

Overall, the previous literatures on institutional logic present two kinds of research orientation. One emphasizes the important role of a single dominant logic in a particular filed. Researchers hold this view believes that institution transition or a new behavior pattern is the outcome of the changing of the dominant logic in the field (Thornton, 2002; Greenwood et al, 2010). In other word, the dominant logic will change

over time, which leads to different organization structure and behavior responses. In Thornton's series work, he analyzed the process of market logic taking place of editor logic in higher education field of America during 1958~1990, which resulted in the structure and strategy adjustment (Thornton and Ocasio, 1999; Thornton, 2002; Thornton, 2004). Scott and his colleagues's (2000) work also showed that as the leader of the US health care sector is transforming from occupational physician to the government and market, organizations in this sector changed significantly in self-identity and strategy.

The other focus on the complex institutional background that facing organizations. That means there are multiple institutional logics, even contradictory logics coexistence in one field, competing for the control over organizations. Organizations cannot respond to one logic while comply with another, which leave an independently chosen space and the possibility of institution transition. Researchers in this area argue the coexistence of competitive logic in the same field shaped the organization diversity to some extent (Greenwood et al, 2010). Dunn and Jones (2010) found that because of the different groups and interests in US medical education industry, their interventions resulted in multiple logic coexistence and a dynamic tension in the field. Greenwood et al. (2010) research on Spanish companies showed that when the market logic rise, the regional government logic and family logic made a positive response to it, which leads to the heterogeneity of the local business in lay-offs and cuts.

These two researches orientation are only different in focus, and does not constitute an inherent conflict. On the contrary, there is possible of integration of the two. In this manuscript, we will admit the institutional complex, and at the same time we studied the pivotal role of dominant logic in guiding organization behavior. Based on this, we analyzed the EPs and CES. Only in this way, we can reasonably understand the reason of growing phenomenon of green-wash, pseudo-social responsibility and impression management. The next, we will analyze the institution background that facing Chinese firms, to make sure the appropriate of our hypothesis.

Institutional Complexity in China

As a typical "emerging and transition" country, China is in the historical stage of rapid economic growth and institution evolution, facing enterprise complex institutional environment, where state logic, market logic and social logic coexist and work competitively. This situation is gradually formed in last 30 years since "Open Policy", through the interaction among different social forces.

First, the government-led economic reforms laid a foundation for the introduction of the market institution. These years, market-oriented reforms are progressively advancing in multiple levels: eliminate regulatory barriers through administrative and financial system reform; maintain the stability of the market by establishing ground rules; promote the economic development by active use of market competition mechanism (Lin et al, 1995). For instance, "Company Law" was promulgated in 1993, which means the establishment of property system. From then, companies began operating accordance with the accounting system. At the same time, joint-stock reform of state-owned enterprise had been put on the agenda (Qu e al, 2009; Lin et al, 2001).

Today, the domination of public ownership is replaced by coexistence of diverse ownership (Naughton, 1996). Although railways, telecommunications, finance and other pillar industry are still controlled by the state, and in agriculture and most services industry market institution is playing a leading role (Ma, 2010; Qian and Xu, 1993). For most enterprise today, especially private enterprise, the competitive logic of market is an important logic guiding their behaviors. Even the state-owned enterprise has to pay attention to their financial performance.

Second, on the other hand, overextension in economic field also had side effect. Environmental pollution, energy waste along with the extensive economic growth has aroused wide social concern. Early in 1997, World Bank found that the loss caused by environmental degradation is up to \$60 billion every year in China. Then the environmental protection idea was growing. A typical sign of this is the rise of

environmental organization. To 2006, there at least 2000 environmental organization in China. And they are playing a positive role in popularizing environmental protection knowledge, resisting pollution projects, providing environmental consulting, and assisting in making rules (Ken, 2004; Ma, 2010). Meanwhile, individual consciousness about their surrounding is waking up (such as the PM2.5 event). Recently, there are several mass disturbances for corporate pollution, such as PX project in Xiamen. All the social response above highlighted the basic requirements for corporate environmental actions, which emphasized on that public interest is above enterprise or individual, and enterprise could not only consider the profit when it comes to development, it also has to taking the nature environment into account.

Third, with the development of economic and changes in domestic and international situation, the government moved its target from mainly economic to a comprehensive development goal including society, nature environment and economy. The core idea of the broader goal is "scientific development" and "harmonious society", which highlights the importance of the environmental friendly. Therefore, it is not allowed, according to the present state logic that promotes the economy at the cost of nature and society. All levels of government established specific environmental regulatory authorities, formulated a series of policies, and increased the penalties for pollution. However, since China has not yet established a mature market economy, the government is not like a neutral referee when manage the economy, but more like an active participator (Ken, 2004). The government often realizes its goals (including environmental protection) through state-owned enterprises.

To sum up, with the institution transition and integration, there are multiple logics coexistence in different fields. The interaction among state logic, market logic and the social logic not only result in institution integration, but also affect the enterprise cognition and behavior in the field. The content of the logic above is summarized in Table 1.

Table 1. Summarization of the three logics

Dimension/Logic	State Logic	Market Logic	Social Logic
Basis	Bureaucracy	Property arrangement	Common area
Mechanisms	Law	Contract	Self-governance
Internal Relations	Hierarchical relationship	Labour Relations	Partnerships
Code of Conduct	Multidimensional goals	Profits, efficiency	Community Development
Source of legitimacy	Coercive power	Economic interest	Moral / cultural support
Environmental Tactics	Legislation, penalties, demonstration	Loosely coupled, Ceremonial activities	Collective action, moral sanction

Source: Made by the author

However, as North (1990) noted, before widely social binding formed of the new institution, the old one will still work. Then, although faced the multiple logics coexistent situation, different field has its own logic. For now, in private field, market logic is the dominant logic with a rise of social logic. The guiding role of state logic is gradually faded¹. In state-owned enterprise field, the influence of the state logic is still strong, while with a growing compactor of market logic. And same as the private field, the influence of the social logic is improved.

¹ A typical example is recent "boycott" event, part of the enterprise' boycott is influenced by the government guidance.

Hypotheses

Generally, corporate response to environmental issues is derived from the institutional pressure and has little to do with the efficiency (Paulraj, 2009). In this article, corporate environmental action is considered as accepted the social logic guideline. And whether the market logic dominated the field will influence company's strategic behavior, especially the symbolic one. In this sense, CES will be divided into two categories, substantive strategy and symbolic strategy (Delmas and Montes-Sancho, 2010). The substantive approach is the practical action that company taken to improve the environment, which need a lot technical terms and implementation details and more literal interpretation in the responsibility report. Symbolic approach is an environmental commotion for the future or a vague praise of the past. Reflected in the responsibility report, there are not many details for this kind of approach. In short, which approach will be chosen by the company is influenced by the dominant logic in their field.

Institutional Complex

The External institution complexity shaped the heterogeneity of corporate behaviors. For instance, Greenwood et al. did a research on the transition of the Spanish government from dictatorship to democracy (1936-1939). It showed that there is an implied confrontation between state logic and market logic, which resulted in different layoffs behavior in different fields. In the field dominated by the state logic, dismissal was restricted and few enterprises implemented layoffs. While in the market logic dominant field, corporate layoffs increased significantly when the corporate performance dropped (Greenwood et al, 2010).

Market logic is based on the hypothesis of economic man, which advocates corporate behavior is mainly driven by self-interest. When the environmental issues receive widespread concern and it is not costly for enterprise shouldering their environmental responsibility, they will make responses regarding to the pressure. For example, a better environmental performance is helpful in obtaining stakeholders' support what will bring corporate resources (Binder, 2007). In this view, corporates may make high-profile commitment or environmental plans consistent with the social expectations, to seek for the support of stakeholders. But because the real implementation is costly, corporates probably shelved those plans after they get the support (Walker and Wan, 2011). On the contrary, the state logic is different. State as a multi-objective aggregate is responsible for the promotion of economic, social and environmental development. In environmental area, the state logic takes protecting the overall interests of society as the goal. Through a series of rules and meaning for EPs, the whole institutional framework is set up. For intense, the government has developed a series of environmental regulation to constraint corporate pollution and energy consumption behavior. From this perspective, there is a certain consistency between state logic and social logic. And state logic has strengthened the social logic to some extent.

Therefor, there is a big difference in environmental protection demands between different logics. It is expectable that under the direction of market logic, which mostly in private corporate field, firms focus more on economic efficiency and benefits, which means their resources invested in the field of environmental protection are limited, and usually with economic considerations. In the state-owned enterprise field that dominant by state logic, the situation is different. As an important tool that the government involving in economic, state-owned enterprise will first respond to national calls, and adopting and implementing appropriate action plans to improve the environment. For the reason above, there follows the hypothesis:

H1: Because of the different dominant logic, there is different in the environmental strategy between private enterprise and state-owned enterprise. The private enterprise is inclined to take symbolic strategy, while the state-owned enterprise prefers the substantive approach.

Market Logic

Under the direction of market logic, firms care more about how to effectively improve their environmental legitimacy than how to improve the natural environment. In other words, company have to concern about the environmental interest demands in the complex institution surrounding, but the economic benefits are the main driver of their actions. Even they are engaging in the pollution prevention action, it is probably due to the potential benefits, such as better reputation. Therefore, for most firms in market logic dominant field, whether to take substantive environmental activities depends primarily on enterprise resource adequacy and the economic payback. After the analysis above, we argue that in the private enterprise field that led by market logic, performance level is the main factor that influence CES. A high-performance company will have more resource to take substantive approach, while the low-performance firm is more likely to choose symbolic approach, as the resource limitation, to quickly enhance their legitimacy status without cost a lot. Different from the low-performance company, high-performance one may be more pragmatic. On the one hand, the resources are relatively abundant; on the other hand, they are typically risk-averse. With the growing of public knowledge and monitoring capabilities, the risk of taking symbolic actions is increased, which leave the firm the only substantive way to maintain their reputation (Bansal and Clelland, 2004). Therefore, we hypothesize:

H2: In the market dominant field, performance is an important factor in deciding the behavior mode selection. Low-performance firm is inclined to choose symbolic approach over the substantive one.

State Logic

Under the direction of the state logic, enterprises pay more attention to the implementation of the government's sustainable development plans. However, fragmented governance is quiet common in the government system. Different levels or departments of the government have different goals (Ken, 2004). In Zhou and Lian's research on a local EPB, they found that the target of the local government is different from the central government. And there are repeated games between them on environmental issues (Zhou and Lian, 2012). For the central government, environmental protection is urgent and serves the overall interests while the local government still will view it as a minor issue compared to the economic development. So it is expectable that different from the clear objectives and practical solutions that imposed on the enterprises by the central government, local government may propose vague goals for the environmental issues. A research on "promotion tournament" of local government shows that since the economic indicators are the most important in the promotion, local officials may be incented to achieve economic goal at the expenses of others(including the environmental objective)(Zhou, 2007). Therefore, it may be over optimistic to believe that the local state-owned enterprises will take the same action as the central enterprises. Therefor, we hypothesize:

H3: Under the direction of state logic, the central enterprises prefer more substantive approach than the local state-owned enterprises

Competitions between Logics

At the same time, the researchers from institution complexity remind us the possibility of the coexistence of diverse institutional logics. Sometimes a fierce competition between logics could lead to the differentiation of organizational behaviors. Pache and Santos believes that in a diverse institutional environment, different logics may make different, even conflicting requests on the organization (Pache and Santos, 2010). And their responses to one logic are likely to be adjusted by others. The state-owned enterprises are in this kind of

situation. On one hand, as one of the business organizations, it will be affected by the market logic. On the other hand, it is a tool of the government using to control the economy, especially in a transition country like China. It is quite common in state-owned enterprises that economic behaviors mixed with uneconomic behaviors. The state-owned enterprises gain stable income from monopoly, while investing resources to where they cannot get appropriate returns in time. However, we believe that with the marketization, market logic will compete with the state logic in state-owned enterprises field. And the effect that one logic put on the enterprise will be adjusted by the other. Therefore, we hypothesize:

H 4: *In state-owned enterprises field, the effects that state logic put on the CES will be adjusted by the market logic.*

The framework of this paper is depicted as follows:

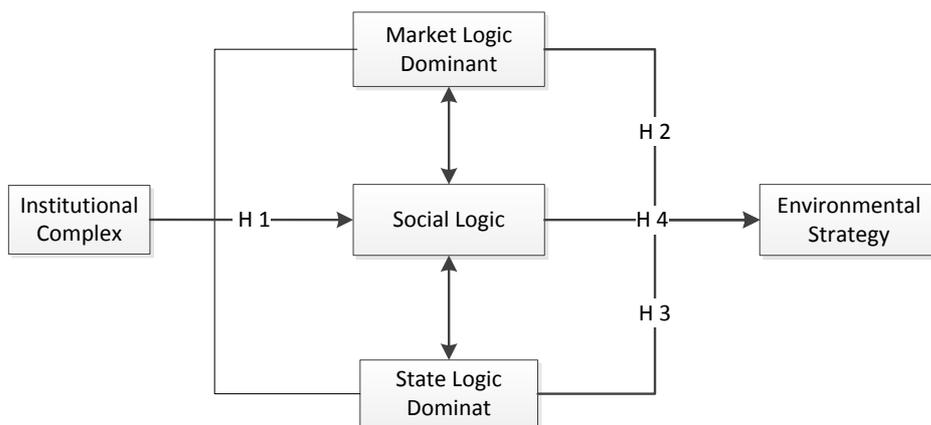


Figure 1. Corporate Environmental Strategies in Complex Institution

Methodology

Data

There were several reasons for using corporate environmental reports rather than other forms of data. Systematic measurement of the corporate environmental management is still in exploratory in China. And so far have not proven to be widely available to researchers. A survey could have been used, but the EPs discussed in this study are much larger than previous efforts, so the research team was concerned about the efficacy of a survey in collecting data. A field interview could have been used to overcome this weakness, but the time required to conduct a sufficient amount of such interviews was prohibitive. Given that the research team desired to perform a statistical analysis of the EPs, corporate environmental reports are a logical choice as they contain the information needed and are relatively easy to obtain. All reports needed are from the Shanghai and Shenzhen Stock Exchange websites and cninfo. And other financial data is from the GTA database

We selected listed companies who released an independent report (including sustainability report, social responsibility report and environmental report) in 2011 as initial samples. Excluding ST and companies in financial sector or with incomplete data, there are 372 samples involving 11 industries, with 6 in agriculture, 21 in mining, 182 in manufacture, 23 in electricity, 7 in construction, 30 in Transportation, 17 in information, 22 in wholesale and retail, 33 in real estate, 15 in services, and 16 in others.

Dependent Variable

The dependent variable in this study was corporate environmental strategy (CES). Using content analysis,

the qualitative information on the report was translated into quantitative one through a two- step coding. Pre-coding is conducted to confirm all kinds of EPs the sample companies involving, such as environmental regulations, certification, environmental governance, green supplier, environmental charity, waste reduction, energy management, recycling, green research and development, green product and ecological restoration. Then the research team coded the samples with agreed practices categories based on the pre-coding. If the sample company's environmental practices are consistent with one of the item in table 2 coded as 1 and otherwise as 0. The score of each company is calculated as $S_k = \sum_{n=1}^5 X_{kn}$. X_{kn} represents the scores on dimension N of sample K². When the score of the focal firm in EPs was above 3, it was classified as substantive one and otherwise as symbolic one.

Table 2. Company Coding System

Demission	Coding Item
1. Institutional integrity	Whether there are specific regulations on EMP? Whether there is environmental department and staffs?
2. Input greenness	Whether there is green R & D investment? Whether there are green standards on supplier selection?
3. Process Monitoring	Whether there are waste reduction practices? Whether there is an energy management system? Whether there is recycling management?
4. Output safety	Whether there is green material using to product green products? Whether there are ecological restoration practices?
5. External recognition	Whether there is a environmental certifications? Whether there is environmental charity or green public activities?

Independent Variables

The independent variables used in this study are performance, ownership and nature of the corporate control. Two variables, Performance A and Performance B, were used to identify firm performance A was defined as a ratio of net profit growth of focal firm to subsector average to which the focal firm belonged between 2010 and 2011. Performance B was defined as a ratio of sales growth of focal firm to subsector average to which the focal firm belonged between 2010 and 2011. Ownership was dummy coded. When the focal firm is state-owned enterprises, coded as 0 and private enterprises as 1. Nature of the corporate control was also measured by a dummy variable. When the focal firm is controlled by the central government coded as 0 and by the local government as 1.

Control Variables

We included size, industry, slack, leverage and ROA as control variables based on the recommendations and findings of previous (Walker and Wan, 2011). Given that different industries may be subject to different institutional pressures related to the natural environment, industry was dummy coded using Xiao and Hu's method (Xiao and Hu, 2005). Focal firms in heavy polluting industries were coded as 1 and otherwise as 0. Size was controlled because larger firms tend to pollute more. In addition, previous research has used size as a proxy for firm visibility as highly visible companies are often under increased scrutiny from media, which also lead to stronger institutional pressures. It was measured as the log of total assets. Slack was included because previous study has found a positive relationship between the amount of resources available for environmental protection and the importance of environmental management in the firm overall strategy (Lee and Rhee, 2007). Leverage is an indicator referred to risk. Prior studies have found level of risk to be related

² As a matter of fact, symbolic approach is different from non- environmental approach. Given that all samples have published an independent report, it showed their concern about the nature environment. Therefor, when the focal firm gets a 0, it means they just discussed the importance of the environmental protection or expressed their concern and commitment, without any proof.

to all kinds of economic actions and non-economic actions. It measured as total liabilities divided by shareholder's equity. ROA was controlled because as a typical non-economic strategy, CES will be affected by firm financial situation.

Results and discussion

Descriptive Statistics

Table 3 provides descriptive statistics and the correlation matrix for the dependent variable, independent variables, and control variables of interest in this study. The correlation matrix shows that CES is significantly correlated to: Ownership ($r=-0.13$), meaning compared to the PE, the SOE tend to perform substantive strategy; Performance ($r_a=0.12$, $r_b=0.09$), meaning firms with better performance tend to choose substantive strategy; size($r =0.20$), meaning larger firms tend to behave more substantively in environmental protection; industry($r =0.19$), meaning firms in heavy polluting industry tend to take substantive ES. In addition, the maximum of the correlation coefficient is 0.48 between variables, and the VIF is less than 2, which indicates that there is not severe multicollinearity among variables.

Table 3. Descriptive statistics and correlation

Var.	Mean	S.D.	1	2	3	4	5	6	7	8
1.ROA	0.05	0.05								
2.Size	9.98	0.58	-0.09 ^t							
3.Industry	0.41	0.49	0.00	-0.01						
4.Leverage	1.56	1.37	-0.48**	0.45**	-0.06					
5.Slack	1.59	1.42	0.32**	-0.27**	-0.24**	-0.51**				
6.Perf. A	1.62	5.12	0.14**	0.33**	0.07	0.13**	-0.06			
7.Perf. B	1.46	3.60	0.05	0.34**	0.10 ^t	0.19**	-0.09 ^t	0.48**		
8.Ownership	0.23	0.43	0.10 ^t	-0.23**	-0.06	-0.15**	0.20**	-0.02	-0.03	
9.EMS	0.23	0.42	-0.01	0.20**	0.19**	0.10*	-0.12*	0.12*	0.09 ^t	-0.13**

Spearman Correlation, ** sig<0.01, * sig<0.05, t sig<0.1. N=372

Regression

Table 4 presents the result of logistic regression of our hypotheses. In Model 1, we test the relationship between CES and control variables for firm size, industry, ROA, leverage and slack. The results of this model show that the coefficients for firm size and industry are significant. This significance is consistent through most of the remaining models.

In Model 2, we test Hypotheses 1 to examine the contribution of institutional logic to CES. The coefficient for institutional logic is positive and significant. Thus, we observe support for Hypotheses 1; institutional logic has a positive association with CES.

In Models 3, we test Hypotheses 2 regarding the contribution of performance to CES in private enterprise field, with 87 observations. In this model, the coefficients for Performance A and Performance B are significant. Therefore, we observe support for Hypotheses 2; both performances have positive association with CES.

In Model 4, we test Hypotheses 3 regarding the contribution of the nature of control to CES in state-owned enterprise field, with 285 observations. The coefficient for the nature of control is positive and significant. Thus, we observe support for Hypotheses 3; the nature of control has a positive association with c CES in state-owned enterprise field.

In Model 5, we test Hypotheses 4 regarding the interaction between the nature of control and performance on the contribution of CES in state-owned enterprise field, with 285 observations. The

coefficient for the performance is not significant. Either is the interaction between the nature of control and performance. Therefore, we fail to observe support for Hypotheses 4 using interaction terms as the dependent variables.

Table 4. The logistic regression of institution logic on CES.

Variables	EMS(N=372)		EMS(PE)		EMS (SOE)	
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 5
Constant	-9.028** (13.573)	-8.250** (11.064)	-13.080(0.978)	-9.329** (11.185)	-9.372** (10.864)	
ROA	-0.847(0.094)	-0.664(0.057)	-4.458(0.288)	-0.951(0.094)	-0.942(0.091)	
Size	0.874** (12.522)	0.804** (10.379)	1.194(0.739)	0.853** (9.913)	0.857** (9.683)	
Industry	0.892** (11.507)	0.887** (11.311)	0.563* (0.429)	0.948** (10.473)	0.945** (10.373)	
Leverage	-0.121(0.796)	-0.124(0.842)	-0.633(0.568)	-0.061(0.198)	-0.060(0.190)	
Slack	-0.177(1.313)	-0.156(1.086)	-0.152(0.148)	-0.114(0.546)	-0.114(0.537)	
Own.		-0.569 ^t (2.382)				
PE:Perf.A			0.199* (5.429)			
PE:Perf.B			0.150* (4.678)			
SOE:C-L				-0.653* (3.542)	-0.653* (3.519)	
SOE:Perf.A				-0.001(0.36)	-0.002(0.222)	
SOE:Perf.B				0.001(1.112)	0.001(0.211)	
C-L×Perf. A					0.001(0.018)	
C-L×Perf. B					0.001(0.036)	
-2 Log likelihood	367.635	365.078	47.117	296.681	296.640	
Chi-square (χ^2)	31.185**	33.745**	18.654*	29.149**	29.191	
Cox & Snell R ²	0.081	0.087	0.195	0.098	0.098	
Nagelkerke R ²	0.123	0.132	0.365	0.143	0.143	

Abbreviations – PE (Private enterprise); SOE (State-owned enterprises); C-L (enterprise controlled by the central government or the local government)

Non-standardized Coefficients (Wald)

** Significant at sig<0.01, * significant at sig<0.05, t significant at sig<0.1

Discussion

In this study, we theorized and examined a central research question: the influence of dominant logic on CES under complex institution condition. We developed four hypotheses to explore the effects of different dominant logics on CES. In this section, we review the results by hypothesis and discuss the dependent variables jointly, rather than separately as we did in the previous section. By discussing the dependent variables together, we can compare the implications of dependent variable choice for measuring the contribution of institutional logics to CES.

In our first hypothesis, we theorized the basic relationship to determine if different dominant logics in a complex institutional environment contribute to the differentiated CES. In testing Hypothesis 1, we set a proxy variable of ownership to distinguish state logic field with market logic field, and observed support for the argument that ownership would have a significant negative relationship with CES. This finding suggests that corporates with different ownerships tend to have different environmental strategies. Given the coding method we described in methodology section, it also appears to support our reasoning that corporates in state logic field tend to implement substantive strategy, while corporates in market logic field prefer symbolic strategy. These results show that private enterprises and state-owned enterprises incline to take different environmental strategies in Chin transition period.

In our second hypothesis to determine whether the performance of enterprises in the field dominated by market logic affects the selection of substantive or symbolic environmental strategy. In testing Hypothesis 2, we observed support for the argument that performances will have a positive contribution to relative CES. These findings suggest that in private enterprises field, dominated by market logic, firms with good performance tend to implement substantive strategy, while enterprises with poor performance prefer

symbolic strategy. The result also appears to support our reasoning that resources available for EPs will affect relative firm strategy, which consistent with the view from resource dependent researchers (Sharma, 2000).

In our third hypothesis to determine if the nature of control of enterprises in the field dominated by state logic affects the selection of environmental strategies. In testing Hypothesis 3, we observed support for the argument that nature of control will have a positive contribution to relative firm environmental strategies. The finding suggest that in state-owned enterprises field, dominated by state logic, firms controlled by central government tend to implement substantive strategy, while enterprises controlled by local government prefer symbolic strategy. This result also supports Zhou's argument that the agency relationship and conflict between central and local government lead to the difference of environmental objectives among different levels of government, which appeared in heterogeneous strategies and practices (Zhou and Lian, 2012).

In our fourth hypothesis, we theorized the implication of market logic's influence on the contribution of state logic to the CES in the state-owned enterprises field. We had predicted a positive moderating relationship for performance, but failed to observe support for this hypothesis. The result suggests that in state-owned enterprise field the market logic's moderation did not measurably contribute to corporate EMS. There are several possible reasons for this finding. First, the emphasis government put on environmental issues recently strengthens the role of state logic. For instance, there is a clear goal of energy conservation and emission reduction in the Twelfth Five-year Plan, which request a reduce in carbon dioxide emissions per GDP of 17%, energy consumption per GDP of 16%, emissions of major pollutants of 8-10%. Some organization even power cut, which clearly inconsistent with the market logic. Second, the role of market will be increased in the economy marketization process. And to this point, there are many countries we can learn from, such as Japan. But now, the market logic is mainly active in less controlled field, like private enterprise field, and inhibited in state logic dominant field. This consistent with Huang and Yu's view that SOE, as an important tool for the government involving in economic, always engage in activities against profit pursuit (Huang and Yu, 2006). This founding may indicate that most environmental activities of the SOE are driven by political pressure, either than the market-led. Thus, SOE as an important starting point to achieve industrial transformation and upgrading is probably more insensitive to indicator-based assessment than economic incentives.

Conclusions and Limitations

CES has been at the center of a growing literature in the corporate environmental strategic field. Institution theory and institutional logic analyses provide us with a fresh perspective to understand corporate environmental activities. While most relative research for China is qualitative or theoretical, less quantitative research (Xiao and Zhang, 2013). This manuscript started from the institutional complexity in China and the guiding role of dominant logic to corporate behavior, reviewed the transition in China which formed the institutional environment of all Chinese enterprises faced. We premised that corporate environmental activities and strategies are reasonable responses to social logic and state logic. Meanwhile, we proposed that different dominant logic is the basic reason that corporates implement different environmental strategies. Based on the empirical analysis of listed companies, we found that: (1) different dominant logics in a complex institutional environment contribute to the differentiated corporate environmental strategies. Corporates guided by state logic tend to implement substantive environmental strategy, while corporates under market logic direction prefer symbolic strategy. (2) In private enterprise field that dominant by market logic, performance has a positive contribution to relative CES. Poor performance firms inclined to choose symbolic strategy over substantive strategy. (3) In state-owned enterprise field, the nature of control affects the selection of environmental strategies. Firms controlled by central government tend to implement substantive strategy, while enterprises controlled by local government prefer symbolic strategy. We also

found that in this field, performance did not significantly influence CES.

Theoretical contribution of the conclusion above is as follow: first, it confirms institutional logic related argument in a complex institutional environment of China. A clear dominant logic will shape organization behavior in a consistent way. Second, when there are competing logics in a field, the influence of other logic will be limited by the dominant one. This indicates potential dynamic analysis of institutional logics. Third, this manuscript provided an institutional perspective in understanding symbolic behavior, green-wash and pseudo-CSR.

There are also two practical contribution of our article: first, institution transition will cause variation in organization cognition and behavior. As a super-organization, the government will encounter less policy resistance when keeping field dominant logic in mind to involve in relative industries. Second, when a dominant logic emerges in a certain field, all the organizations' cognition and behavior there will be consistently affected. If there is contradiction request between the policy and the dominant logic, symbolic behavior will increase. This is the so-called "You have your policies, and I have my ways of getting around them". Therefore, the dominant logic of a field is matters a lot to the effectiveness of policies.

There are some limitations of this article. In this paper, we only discussed this subject within listed companies. And the lack of information from non-listed companies limited the application of our conclusion. The second limitation is that because the research design was cross-sectional, the present study does not shed light on changes in environmental strategies over time. Here, yearly follow-up analysis conducted over a long period, say a decade, would be able to capture whether or not these firms moved to more substantive or symbolic positions. The third limitation is our measure of environmental strategies, which was derived from dependent reports. Though many of the reports used in this study followed a similar format, there is no standard way of releasing this information. Thus an intuitive direction for future research would be to use standardized measures of EMS and EMPs. Our hope is that this study provides a starting point for such an exploration of corporate environmental strategies and behaviors.

Reference

- Bansal P, Clelland I. 2004. Talking trash: Legitimacy, impression management, and unsystematic risk in the context of the natural environment. *Academy of Management Journal* 47: 93-103.
- Barley S R, Tolbert P S. 1997. Institutionalization and structuration: Studying the links between action and institution. *Organization Studies* 18: 93-117.
- Binder A. 2007. For love and money: Organizations' creative responses to multiple environmental logics. *Theory and Society* 36: 547-571.
- Darrell W, Schwartz B N. 1997. Environmental disclosures and public policy pressure. *Journal of Accounting and Public Policy* 16: 125-154.
- Delmas M A, Montes - Sancho M J. 2010. Voluntary agreements to improve environmental quality: Symbolic and substantive cooperation. *Strategic Management Journal* 31: 575-601.
- Delmas M A, Toffel M W. 2008. Organizational responses to environmental demands: Opening the black box. *Strategic Management Journal* 29: 1027-1055.
- Dunn M B, Jones C. 2010. Institutional logics and institutional pluralism: The contestation of care and science logics in medical education, 1967–2005. *Administrative Science Quarterly* 55:114–149.
- Friedland, Roger and Alford, R. Robert. 1991. Bringing society back in: Symbols, practices, and institutional contradictions. in *The New Institutionalism in Organizational Analysis*, ed. Walter W. Powell and Paul J. DiMaggio. University of Chicago Press: Chicago.
- Greenwood R, Diaz A M, Li S X, Lorente J C. 2010. The multiplicity of institutional logics and the heterogeneity of organizational responses. *Organization Science* 21: 521–539.
- Greenwood R, Raynard M, Kodeih F, et al. 2011. Institutional complexity and organizational responses. *The*

- Academy of Management Annals* 5: 317-371.
- Greer J, Bruno K. 1996. Greenwash: The reality behind corporate environmentalism. Third World Network: Penang, Malaysia.
- Huang S J, Yu J. 2006. The nature, objectives and social responsibility of state- owned enterprises. *China Industrial Economy* 215: 68-76.
- Ken L. 2004. Governing China: From revolution through reform, second revised edition. W.W. Norton: New York.
- Lee S Y, Rhee S K. 2007. The change in corporate environmental strategies: a longitudinal empirical study. *Management Decision* 45: 196–216.
- Lin J Y, Cai F, Li Z. 2001. State-owned enterprise reform in China. Chinese University Press: Hongkong.
- Lok J. 2010. Institutional logics as identity projects. *Academy of Management Journal* 53: 1305-1335.
- Lounsbury M. 2007. A tale of two cities: Competing logics and practice variation in the professionalizing of mutual funds. *Academy of Management Journal* 50: 289–307.
- Ma J. 2010. Socioeconomic changes and state-rebuilding: China since the reform. *Journal of Public Administration* 1: 29-29.
- Naughton B. 1996. Growing out of the plan: Chinese economic reform, 1978-1993. Cambridge university press: Cambridge.
- North D C. 1990. Institutions, institutional change and economic performance. Cambridge university press: Cambridge.
- Pache A C, Santos F. 2010. When worlds collide: The internal dynamics of organizational responses to conflicting institutional demands. *Academy of Management Review* 35: 455-476.
- Patten D M. 2005. The accuracy of financial report projections of future environmental capital expenditures: A research note. *Accounting, Organizations and Society* 30: 457-468.
- Paulraj A. 2009. Environmental motivations: a classification scheme and its impact on environmental strategies and practices. *Business Strategy and the Environment* 18: 453-468.
- Qian Y, Xu C. 1993. Why China's economic reforms differ: the M - form hierarchy and entry/expansion of the non - state sector. *Economics of Transition* 1: 135-170.
- Qu J D, Zhou F Z, Ying X. 2009. From macromanagement to micromanagement---reflections on thirty years of reform from the sociological perspective. *Social Sciences in China* 6: 104-127.
- Scott W R, Ruef M, Mendel P J, Caronna C A. 2000. Institutional change and healthcare organizations: From professional dominance to managed care. University of Chicago Press: Chicago.
- Sharma S. 2000. Managerial interpretations and organizational context as predictors of corporate choice of environmental strategy. *Academy of Management Journal* 43: 681–697.
- Lin B, Sun L P, Wang H S, et al. 1995. Changes in China's social structure following the reforms. *Social Sciences in China* 2: 70-80.
- Thornton P H, Ocasio W. 1999. Institutional logics and the historical contingency of power in organizations: Executive succession in the higher education publishing industry, 1958-1990. *American Journal of Sociology* 105: 801-843.
- Thornton P H. 2002. The rise of the corporation in a craft industry: Conflict and conformity in institutional logics. *Academy of Management Journal* 45: 81-101.
- Thornton P H. 2004. Markets from culture: Institutional logics and organizational decisions in higher education publishing. Stanford University Press: Stanford and California.
- Thornton P H, Ocasio W, Lounsbury M. 2012. The institutional logics perspective: A new approach to culture, structure, and process. Oxford University Press: Oxford.
- Walker K, Wan F. 2011. The harm of symbolic actions and green-washing: Corporate actions and communications on environmental performance and their financial implications. *Journal of Business Ethic* 109: 227-242.
- Wiseman J. 1982. An evaluation of environmental disclosures made in corporate annual reports. *Accounting,*

Organizations and Society 7: 53–63.

Xiao H J, Zhang J S, Li W Y. 2013. Research on the behaviors of pseud-CSR. *China Industrial Economy* 6:109-121.

Xiao S F, Hu W. 2005. A study on the environment information disclosure system of Chinese enterprises. *Accounting Research* 3: 47-52.

Zhang G, Zhang X J. 2011. Review and prospect of the green innovation research outline in foreign countries. *Foreign Economics and Management* 33: 25-32.

Zhou L A. 2007. Governing China's local officials: an analysis of promotion tournament model. *Economic Research Journal* 7: 36-50.

Zhou X G, Lian H. 2012. Modes of governance in the Chinese bureaucracy: A “control rights” theory. *Sociological Studie* 5: 69-93.