

The Effects of Corporate Governance and Institutional Environments on Export Behaviour in Emerging Economies

Evidence from China

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Abstract:

- This paper examines the impact of corporate governance and institutional environments on the export behaviour of firms in emerging economies. We argue that the role of corporate governance should be analysed from both principal-agent and principal-principal perspectives. We hypothesise that institutional environments moderate the effects of corporate governance on export behaviour.
- Analysis of a sample of Chinese listed firms supports our argument that outside directors and CEO shareholding help firms make export decisions, while the effects of ownership concentration may be non-monotonic.
- Sample firms' export propensity is higher the better the institutional environments of their locations. This positive effect of institutional environments comes both directly and from the moderating of the effects of corporate governance.

Keywords: Export behaviour · Corporate governance · Institutions · Chinese listed firms

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Introduction

Despite the rapidly growing literature on the role of corporate governance in business strategic decisions, the way in which corporate governance impacts upon the internationalisation decisions of firms in emerging economies is less clear (Wright et al. 2005). Economic transition in these economies has dramatically changed the corporate governance practices there and provides ideal research opportunities for the study of the interdependence of corporate governance and internationalisation strategies (Filatotchev et al. 2008). Among existing studies, scholars mainly rely on agency theory to explain the effects of corporate governance on these decisions (Filatotchev et al. 2001, Filatotchev et al. 2008). Although principal-agent conflicts between owners (principals) and managers (agents) are important in emerging economies, the conflicts between controlling owners (principles) and minority owners (principals) also play an important role in shaping the corporate governance structure and strategic decisions of firms in these economies (Morck et al. 2005, Young et al. 2008). Moreover, the institutional context of these economies makes the enforcement of agency contracts costly and problematic (Wright et al. 2005). However, few studies have taken the special features of corporate governance in emerging economies into account when applying standard agency theory.

The institutional-based view has become an important perspective in international business research on emerging economies (Henisz/Swaminathan 2008, Hoskisson et al. 2000, Wright et al. 2005). In particular, scholars argue that strategic choices are not only driven by industry conditions and firm capabilities, but are also a reflection of the formal and informal constraints of the particular institutional framework that managers confront (Peng et al. 2008). As a potentially important determinant of internationalisation decisions, institutions may not only directly affect firms' internationalisation strategies, but also indirectly through interplay with other antecedents of internationalisation such as corporate governance (Gao et al. 2008, Young et al. 2008). However, existing studies have rarely explored the link between institutions and strategic choices in international business (Teegen et al. 2004).

This paper examines the impact of corporate governance and institutions on export decisions using a sample of 779 Chinese-listed manufacturing firms for the period of 2002–2005. We choose China as the research setting for several reasons. First, with China's WTO entry in 2001, Chinese firms have entered a new era in which internationalisation has become an important strategic consideration on the agenda of many Chinese companies. Second, like many emerging economies, China has adopted corporate governance concepts which were originally designed to solve principal-agent conflicts in developed economies. However, the standard corporate governance framework has not been fully established in China, and principals cannot be treated as a single entity with common interests (Young et al. 2008). Therefore, China represents an ideal setting to investigate the impact of principal-principal conflicts on various organisational outcomes (Su et al. 2008). Third, being a large emerging economy with uneven institutional development across different regions, and in the process of economic transition, China is an exciting laboratory in which to examine the institutional-based view of international business strategy (Peng et al. 2008).

This paper offers several contributions to the literature of corporate governance and internationalisation in the context of emerging economies. We adopt an integrative framework within which corporate governance and institutional environments are considered to be important factors affecting export strategy. We take a first step towards investigating how principal-principal conflicts between large shareholders and small shareholders affect the export strategy of Chinese firms. Our adoption of the principal-principal perspective extends the literature on firms' export strategy in emerging economies which has mainly focused on examining the role of corporate governance from the principal-agent perspective (Buck et al. 2001, Filatotchev et al. 2008). We recognize large variations in institutional environments across Chinese regions as a unique opportunity for a single-country study to explore the implications of differences in institutional environments on internationalisation strategy. Furthermore, we examine the interrelationship between corporate governance factors and institutional environments in influencing firms' export decisions as this perspective has been neglected by the existing studies. The findings of our study provide useful insights into how internal corporate governance mechanisms interact with external institutional environments, jointly affecting the internationalisation strategy of firms in emerging economies. These findings have important managerial and policy implications.

In the following section we discuss our analytical framework and develop our hypotheses. This is followed by a description of our data and methodology. Our findings are then presented and the paper ends with a discussion of the implications of our findings, and some conclusions.

Conceptual Framework and Hypotheses

We embrace a framework which considers the role of both corporate governance and institutions in firms' export strategies (Fig.1). For the role of corporate governance, we consider both principal-agent and principal-principal perspectives. Traditional corporate governance theories originated in developed economies where major governance conflicts are between owners (principals) and managers (agents). It may be problematic to simply apply these corporate governance theories to emerging economies, as corporations in emerging economies usually have controlling owners, which may cause conflicts between controlling shareholders (principals) and minority shareholders (principals) (Young et al. 2008). Hence, examining the role of corporate governance from the principal-principal perspective, we extend the existing literature on firms' export strategy in emerging economies by taking the distinctive characters of these economies into account.

Our framework emphasizes that institutions play critical roles in the export decisions of firms in emerging economies. As the rules of the game in a society, institutions affect people and organisations as players (North 1990). In emerging economies, the transition from a relationship-based transaction structure to a rule-based transaction structure affects the strategic decisions of firms (Peng 2000). In particular, the institutional context makes the enforcement of agency contracts more costly and enhances both the principal-agent and principal-principal conflicts of the corporate governance practice in emerging economies (Young et al. 2008).

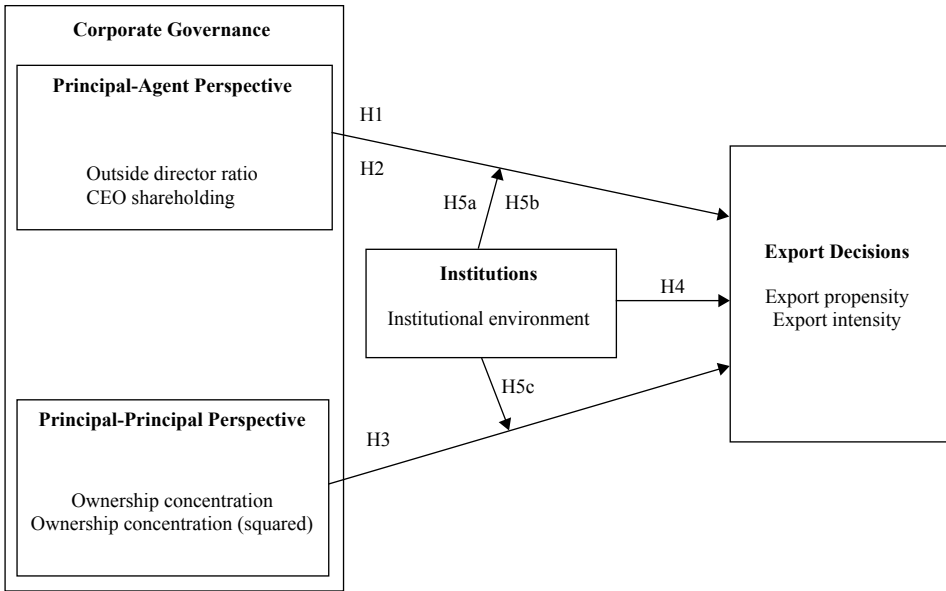


Fig. 1: Analytical Framework of Corporate Governance, Institutions, and Export Decisions

Our framework further features the interplay between institutional environments and corporate governance factors in affecting the export behaviour of firms in emerging economies. Most existing studies in the corporate governance literature focus on a universal link between corporate governance practices and strategic outcomes (Filatotchev et al. 2008, Peng 2004), but neglect interdependencies between the organisation and diverse environments, which may lead to variations in the effectiveness of different governance practices (Aguilera et al. 2008). Our study pays particular attention to the interaction between the corporate governance of Chinese firms and the institutional environments of Chinese regions in an attempt to gain insights into their special roles in the process of export decisions.

Corporate Governance and Export Behaviour

Exporting is often the first stage of internationalisation for firms in emerging economies (Pan/Tse 2000). In countries that were planned economies, such as China, firms did not have the right to engage in exporting before the economic reforms. In the process of transition, constraints on exporting and other forms of internationalisation have gradually been relaxed. For Chinese firms, exporting has been the most important internationalisation decision as administrative controls on overseas direct investment by Chinese firms have only recently been relaxed (Buckley et al. 2007). The dynamic change provides us with a natural context to test theories concerning exporting strategies (Filatotchev et al. 2001).

It is well documented that export business is more risky than domestic business as it involves shipping risks, foreign exchange risks, international political risks, among others

(Nelson 2000). When a firm expands its business beyond the domestic market, it faces new challenges in terms of the great diversity of cultures, customers, competitors and regulations in foreign markets (Sanders/Carpenter 1998). The complexity associated with foreign markets increases information-processing demands for the top management team and information asymmetry between managers and shareholders, and causes more serious principal-agent conflicts (Filatotchev et al. 2001, Filatotchev et al. 2008).

In theory, internationalisation does not guarantee high performance. According to the recently proposed 3-stage general theory of the multinationality/performance (M/P) link, the M/P relationship is negative at the initial stage, positive at the mid-stage, and negative at the over-expanded stage of internationalisation (Contractor et al. 2003). Although firms in emerging economies may not benefit initially from internationalisation, given that they are in the early stages, there should be considerable positive benefits that accrue from the middle stage of internationalisation (Contractor 2007). Hence, internationalisation should be valuable for the longer-term growth of firms in these economies. Since internationalisation may be considered to be an important channel for maximizing firm value and enhancing firm performance (Liu/Buck 2007, Wei/Liu 2006), improved corporate governance which alleviates principal-agent conflicts may facilitate exporting decisions and raise export sales. Thus, improved corporate governance may have a positive effect on the export strategies of firms in emerging economies.

One important governance mechanism is the use of outside directors. Given the institutional context of emerging economies, outside directors do not play as strong a role in monitoring and control as in developed countries (Lau et al. 2007, Peng 2004). However, outside directors may have information and service roles and assist in the managerial decision making. The education and experience of outside directors may lead them to be concerned more with long-term strategies, including internationalisation (Tihanyi et al. 2003). They may play service roles in the decision-making process, and their knowledge and international vision may help firms to deal with managerial challenges associated with internationalisation (Filatotchev et al. 2008). Thus, we hypothesize:

Hypothesis 1: A higher ratio of outside directors has a positive effect on the propensity of firms to become exporters, and leads to higher export intensity.

In the corporate governance literature, executive compensation is considered as another important governance mechanism that helps to alleviate principal-agent conflicts (Denis/McConnell 2003). CEO equity ownership serves to align the interests of CEOs with that of stockholders and thereby reduces their self-interested risk aversion (Sanders/Hambrick 2007). Exporting is a challenging and risky business that requires the top management to react actively to constantly changing and diversified external environments (Lien et al. 2005). CEO equity ownership compensates managers for undertaking the risky and challenging strategy of exploring the world market. Thus, we hypothesize:

Hypothesis 2: A higher ratio of CEO shareholding has positive effects on the propensity of firms to become exporters, and leads to higher export intensity.

Young et al. (2008) argue forcefully for a principal-principal perspective for the role of corporate governance in emerging economies where corporate governance conflicts often occur between controlling shareholders and minority shareholders. The principal-princi-

pal perspective proposes a non-monotonic relationship between ownership concentration and firm competitiveness. When the degree of ownership concentration is relatively low, controlling shareholders may be motivated by their stakes to raise shareholder value by promoting value-enhancing strategic decisions (Shleifer/Vishny 1997). However, when the degree of ownership concentration is relatively high, controlling shareholders may be encouraged to pursue their own interests at the expense of minority shareholders (Morck et al. 2005).

Applying the principal-principal perspective to analyzing the export decisions of Chinese listed firms, we note that various government bodies holding state shares are controlling shareholders in many Chinese listed firms whose strategic goals differ from those of minority shareholders. The former pursues multiple goals, many of which are social and non-profit seeking and which are imposed by the government or through direct government intervention (Bai et al. 2006). Hence principal-principal conflicts arise. When the level of ownership concentration is moderate, and the level of principal-principal conflicts is low, the value maximisation motives are dominant over social and non-profit seeking goals. Firms are able to adopt internationalisation strategies to seek long-term growth by exposing themselves to international markets. When ownership concentration reaches a threshold level, the state domination may lead controlling shareholders to pursue social and/or non-profit seeking goals, which may result in resources being diverted away from an international strategic focus to a domestic one, even though exporting may represent potential business opportunities. Thus, we hypothesize:

Hypothesis 3: An inverted-U relationship is expected between ownership concentration and export propensity and export intensity.

Institutional Environments and Export Behaviour

Recent research on firms' strategic choices emphasizes the importance of institutions, and significantly expands our understanding of the strategic behaviour of firms in emerging markets (Hoskisson et al. 2000, Wright et al. 2005). Treating institutions as independent variables, some authors argue that "institutions directly determine what arrows a firm has in its quiver as it struggles to formulate and implement strategy and to create competitive advantages" (Ingram/Silverman 2002).

Institutional environments play an important role in supporting the effective functioning of the market mechanism and facilitating the market transactions of firms and individuals (Meyer et al. 2008). Well established institutional environments help reduce information asymmetries, hence lowering the cost of searching for information needed for exporting. In this sense, well developed institutional environments facilitate firms' export strategies. Moreover, institutional environments provide institutional contexts in which corporate governance is able to function effectively. A strong institutional environment ensures transparency and contract enforcement which helps reduce agency costs and encourages CEOs to make long-term strategic decisions, such as internationalization.

In the literature of internationalisation, earlier studies focused mainly on the effects of institutional environments in host countries on the strategic decisions of multinational enterprises from developed countries. For example, Delios and Henisz (2000) found that

the host country government expropriation hazard is associated with the lower ownership position of Japanese multinational enterprises. More recently, studies show that home country institutional environments have strong impacts on the internationalisation strategies and performance of firms from emerging economies (Hitt et al. 2006, Wan/Hoskisson 2003). China has pursued a gradual approach in its institutional reform, thus has various levels of institutional development across regions (Child/Tse 2001). In some regions, governments are less likely to intervene into the market, given that non-state enterprises are more developed and the market economy is more advanced. We argue that more developed institutional environments help reduce firms' transaction and agency costs in the internationalisation process, and encourage firms taking internationalisation strategies. Thus, we hypothesize:

Hypothesis 4: Firms located in regions with better institutional environments are more likely to become exporters and have higher export intensity.

The institutional context in emerging economies makes the enforcement of agency contracts more costly and problematic (Wright et al. 2005). In a study of the moderating effect of home-country institutional environments, Wan and Hoskisson (2003) found that the common negative effect of overdiversification on firm performance is more serious for firms with weaker home-country institutional environments. This finding supports the argument that the level of the institutional environment may affect firm strategic decisions not only directly, but also indirectly by moderating the effectiveness of corporate governance (Young et al. 2008).

The effectiveness of outside directors depends on the institutional environment within which firms operate. In regions where government intervention is strong and the legal framework is less developed, the opinions of outside directors may have less of an effect on firm decisions. With uneven institutional development in Chinese regions, the effectiveness of outside directors is expected to differ from region to region. In the regions where the government is less likely to intervene in the market economy, outside directors may play a more effective role and contribute positively to firms' internationalisation strategy. However, in the Chinese regions where the government is more likely to intervene in enterprises, outside directors may play less effective roles in firms' internationalisation strategies. Thus, we hypothesize:

Hypothesis 5a: The level of institutional development positively moderates the impact of outside directors on export behaviour.

Although CEO shareholding may align the interests of CEOs with stockholders and mitigate agency problems, the literature also notes the entrenchment problem where higher equity stakes give CEOs more freedom to misallocate resources (Stulz 1988). The entrenchment agency problem is more serious in emerging economies than in developed economies due to a lack of well developed institutions (Morck et al. 2005). In China, institutional constraints are found to limit the effective application of the CEO shareholding mechanism (Firth et al. 2007). However, the potential convergence of institutions that support market capitalism suggests that the governance role of CEO shareholding may be increased in the process of institutional transition (Young et al. 2008). Applying this argument to regions with uneven institutional development within China, we expect

that the governance role of CEO shareholding will be more effective in regions with more developed institutions, which may be reflected in firms' export decisions. Thus, we hypothesize:

Hypothesis 5b: The level of institutional development positively moderates the impact of CEO shareholding on export behaviour.

As stated in Hypothesis 3, there may be an inverted-U relationship between ownership concentration and export propensity/intensity. This relationship reflects the conflict between the profit-seeking motives and the constraints of social and non-profit-seeking goals imposed by the government. We expect that institutional environments may moderate this inverted-U relationship. In regions where institutional environments are better developed, there tend to be fewer government interventions at the microeconomic level. As a result, the profit-seeking motive is dominant over social and non-profit-seeking goals. Hence, well established institutional environments are able to moderate the non-profit-making objectives pursued by the government. In this case, a high level of ownership concentration is unlikely to prevent firms from adopting export strategies as controlling shareholders are not severely constrained by the government and are able to seek to boost shareholder value through internationalisation. Therefore, we hypothesize:

Hypothesis 5c: The level of institutional development moderates the expected inverted-U relationship between ownership concentration, and export propensity and intensity.

Data and Variables

Sample

We construct a dataset from several sources. Raw data on corporate governance and the financial performance of Chinese listed firms are drawn from WIND and SinoFin databases.¹ Data on firms' exporting behaviour are from the Customs General Administration of China (CGAC) database.² We match firms in these databases by name and registration address.³ Using information on firm location, we incorporate into the dataset the NERI institutional environment index of Chinese provinces, which is constructed by the National Economic Research Institute (NERI) of China. Our sample covers 2002–2005 as data from CGAC are only available for this period. The sample is an unbalanced panel with 2,637 firm-year observations.⁴

Dependent Variables

We use export propensity and export intensity as dependent variables in our analyses. Export propensity is a dummy variable indicating whether a firm is an exporter; export intensity is the ratio of export sales to total sales. Both measures have been widely used in the literature to capture the export behaviour of firms (Fernández/Nieto 2006). Our study examines the export decisions of Chinese listed firms, so we consider results from

the export propensity equation as our baseline results. In our sample of 2,637 firm-year observations, 1,376 (52 percent) are exporting observations. Following the recommendation to use multiple measures of internationalisation to improve validity (Sullivan 1994), we run the export intensity equation to see if the determinants of export propensity of Chinese firms also impact on their export intensity.

Independent Variables

Prior studies identify outside director ratio and CEO shareholding as two key variables of corporate governance.⁵ Emerging economies such as China have adopted these corporate governance concepts, and we consider them as the main independent variables in our study. *Outside director ratio* is measured as the number of outside directors divided by the total number of board directors.⁶ *CEO shareholding* is measured as the percentage of total equity in a firm that is owned by the CEO.

As discussed earlier, one important characteristic of emerging economies is ownership concentration that can lead to principal-principal conflicts. In our study, ownership concentration is measured by the Herfindahl index, which equals the squared sum of share percentages of the top-ten shareholders of the firm. The Herfindahl index incorporates both the number of stockholders and the distribution of shareholdings, and is therefore advantageous over the alternative measurement of the proportion of shares held by the largest shareholder. Following the literature, we use both ownership concentration and its squared term as independent variables to detect the inverted-U relationship implied by principal-principal conflicts.

One of the major objectives of our study is to examine the effect of *institutional environments* on the internationalisation decisions of firms in emerging economies, both directly and indirectly, through impacting the effectiveness of corporate governance. While it is usually difficult for a single-country study to identify such impacts, China offers a rare opportunity as significant variations in institutional environments exist both across regions and over time. The National Economic Research Institute (NERI) of China has developed an index that measures the levels of institutional development in the 31 provinces of China (Fan et al. 2007). The institutional development level is assessed in five fields by a total of 23 indicators (see Appendix for details). Each indicator is valued by a score between zero and ten, with 2001 as the base year. A larger score indicates a higher level of institutional development. The five fields of the index are: (1) government-market relations; (2) the development of the non-state enterprise sectors; (3) the development of commodity markets; (4) the development of factor markets; (5) the development of market intermediaries and the legal framework (Wang et al. 2008). The NERI index has been widely used in recent studies of the Chinese economy (Chena et al. 2006, Li et al. 2006, Wen 2007). Child and Tse (2001) categorized institutional reform in China into three categories: Government, structure of industries and firms, and business-relevant intermediate institutions. By comparing the five categories of the NERI index with the categories in Child and Tse (2001), we find that they match well with each other.

Control Variables

We control for several other variables that may affect firm export behaviour. The first three control variables are foreign shareholding, private shareholding, and state shareholding. Prior studies have found that FDI facilitated exporting by Chinese firms (Fernández/Nieto 2006). To account for this effect, we construct *foreign shareholding* as the percentage of shares owned by foreign investors, which includes those from Hong Kong, Macao and Taiwan. Consistent with the resource-based view, prior studies have also found that privately-owned firms are less likely to export due to limited access to key resources and a lack of the capabilities needed for exporting (Fernández/Nieto 2006). To control for this effect, we construct a variable for *private shareholding*, which is the percentage of shares owned by domestic private investors, excluding shares owned by the CEO of the listed firm. State-owned firms are better equipped with resources for exporting, but have lower incentives to make risky export decisions. We include *state shareholding* as the percentage of shares owned by the state to control for the effects of state ownership. We have made great efforts to improve the data on ownership. Specifically, we followed the methodology of Delios et al. (2006) and updated their ownership categorisation data to the period of 2002–2005. The methodology of Delios et al. (2006) yields more appropriate measures of ownership identity than the official ownership categorisation of listed firms in China which obscures the ultimate identity of a shareholder.

We consider four additional control variables derived from trade theories. According to the trade theory of comparative advantage, labour-intensive firms in China are more likely to become exporters. To capture this comparative-advantage determinant, we use *capital-labour ratio* measured as the ratio of fixed assets to the labour force of the firm. The trade theory based on economies of scale and learning-by-doing proposes that larger and more experienced firms have advantages in exporting. To capture these effects, we control for *firm size* measured by the logarithm of sales revenue and *firm age* measured by the logarithm of the number of years since the establishment of the firm. Recent trade theory of heterogeneous firms emphasizes the self-selection of productive firms as exporters (Melitz 2003). To consider this effect, we use *return on sales* (ROS) as a measure of firm productivity.

Geographic location influences the likelihood of exporting; firms located in coastal regions clearly have advantages in exporting over firms located in inland areas. To control for this location effect, we include dummies for the coastal region and the western region of China, using the central region as the benchmark. In addition, we use year dummies to control for unobserved influences in firm export behaviour across time, and industry dummies (ISIC 2-digit) to control for unobserved influences of firm export behaviour across industries.

Methodology and Results

Methods

Our baseline analysis uses export propensity as the dependent variable. In order to take advantage of the panel feature of the data, we adopt two modelling strategies: A random effect logit model and a fixed effect logit model. We use the Hausman test to test whether the null hypothesis that the extra orthogonality conditions imposed by the random effect estimator are valid.

We also test whether the hypotheses on export propensity also hold for export intensity. For models with export intensity as the dependent variable, we adopt two specifications: A random effect Tobit model and a GMM model. The GMM estimator has the advantage of eliminating unobserved, time-invariant, firm-specific effects and providing consistent estimates. To establish the direction of causality, all right-side variables (apart from regional and industry dummies) are used with a one-year lag, an approach commonly used in the literature (Filatotchev et al. 2001). With regard to the causality issue, the GMM estimator has the advantage of allowing for a large set of instruments of both lagged levels and first differences, and thus exploits more fully all of the available moment conditions (Blundell/Bond 1998).

In all random effect models, we include industry and year dummies to account for unobserved industry and time-specific effects. In fixed-effect models and GMM estimations, we do not include region and industry dummies as there is no within-group variance after firm-fixed effects are controlled for. We take the mean-centering approach in our regressions to deal with potential multicollinearity. We run OLS regression to check variance inflation factors (VIF) for our variables, and find that VIFs of all variables are far below the acceptable cut-off point. Thus, the issue of multicollinearity is not a concern.

Results

Table 1 presents the descriptive statistics and correlation matrix. We observe that the correlations between the dependent variables (export propensity or intensity) and the explanatory variables have the expected signs and are mostly statistically significant.

Table 2 reports the results of the export propensity equation. In Columns (1)–(3), the random-effect logit model is estimated. In Columns (4)–(6), the fixed-effect logit model is estimated.⁷ For each of the two sets of estimations, we first include control variables only, and then add corporate governance and institutional environment variables. We then add further interactions between the institutional environment and corporate governance variables.

The results in Table 2 show that almost all control variables are statistically significant in the random-effect logit models of Columns (1)–(3), but are statistically insignificant in the fixed-effect logit models of Columns (4)–(6). This is not surprising as fixed-effect models include firm-fixed effects, which absorb the effects of the firm-level control variables and may render them unidentifiable. We find from random-effect logit models that the estimated effects of control variables are mostly expected. Private shareholding makes a firm less likely to become an exporter, while foreign shareholding and state shareholding

Table 1: Descriptive Statistics and Correlation Matrix

| | MEAN | SD | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
|------------------------------|-------|-------|----------|----------|----------|----------|----------|----------|--------|----------|----------|---------|----------|----------|---------|---------|
| 1 Export propensity | 0.52 | 0.49 | - | | | | | | | | | | | | | |
| 2 Export intensity | 0.07 | 0.15 | - | | | | | | | | | | | | | |
| 3 Private shareholding | 14.51 | 19.39 | -0.08*** | 0.02 | | | | | | | | | | | | |
| 4 Foreign shareholding | 2.46 | 8.46 | 0.10*** | 0.10*** | -0.12*** | | | | | | | | | | | |
| 5 State shareholding | 20.85 | 18.98 | 0.01 | 0.01 | -0.19*** | -0.08*** | | | | | | | | | | |
| 6 Capital labour ratio | 0.37 | 1.43 | -0.10*** | -0.03 | 0.02 | -0.06 | -0.02 | | | | | | | | | |
| 7 Return on sales | 0.22 | 0.15 | -0.02 | -0.03 | 0.16*** | -0.01 | -0.07*** | -0.03 | | | | | | | | |
| 8 Firm size | 20.32 | 1.25 | 0.17*** | 0.02 | -0.16*** | 0.19*** | -0.004 | 0.25*** | -0.12 | | | | | | | |
| 9 Firm age | 2.02 | 0.43 | -0.09*** | -0.11*** | 0.02 | 0.02 | 0.05*** | 0.02 | -0.10* | 0.02 | | | | | | |
| 10 Coastal region | 0.53 | 0.49 | 0.15*** | 0.12*** | 0.01 | 0.10*** | 0.02 | 0.05*** | 0.08 | 0.18*** | 0.07*** | | | | | |
| 11 Western region | 0.16 | 0.39 | -0.13*** | -0.11*** | -0.01 | -0.08*** | 0.04** | -0.14*** | 0.08* | -0.17*** | -0.01 | - | | | | |
| 12 Ownership concentration | 0.25 | 0.19 | 0.02 | 0.05 | -0.39*** | -0.19*** | 0.07*** | 0.02 | -0.11* | 0.17** | -0.22*** | -0.02 | 0.01 | | | |
| 13 CEO shareholding | 0.27 | 2.34 | 0.08*** | 0.14*** | 0.22*** | -0.02 | -0.05** | 0.04 | 0.09** | -0.06*** | -0.12*** | 0.06*** | -0.05*** | -0.16*** | | |
| 14 Outside director ratio | 25.15 | 13.58 | 0.04** | 0.04 | 0.12*** | 0.00 | -0.03 | 0.10*** | -0.01 | 0.11*** | 0.20*** | 0.06*** | -0.05*** | -0.07*** | 0.07 | |
| 15 Institutional environment | 6.67 | 1.83 | 0.20*** | 0.13*** | 0.09*** | 0.15*** | -0.006 | 0.07*** | -0.10 | 0.18*** | 0.12*** | 0.38*** | -0.28*** | -0.12*** | 0.13*** | 0.12*** |

Note: Pearson correlation coefficients are reported; ***p<0.01; **p<0.05; *p<0.1.

Table 2: Determinants of Export Propensity

| | Random effect logit model | | | Fixed effect logit model | | |
|---|---------------------------|-------------------|--------------------|--------------------------|--------------------|---------------------|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| Controls | | | | | | |
| Private shareholding | -0.010** (0.004) | -0.016* (0.09) | -0.014 (0.010) | 0.007 (0.012) | 0.014 (0.016) | 0.014 (0.016) |
| Foreign shareholding | 0.072** (0.029) | 0.055* (0.029) | 0.055** (0.028) | 0.0051 (0.045) | 0.021 (0.060) | 0.025 (0.069) |
| State shareholding | 0.0077 (0.010) | 0.011 (0.010) | 0.0094 (0.009) | 0.012 (0.014) | 0.020 (0.015) | 0.022 (0.015) |
| Capital labor ratio | -3.99* (2.29) | -3.89* (2.17) | -3.17 (2.21) | -3.83 (6.04) | -8.73 (8.13) | -7.62 (7.23) |
| Return on sales | 0.70** (0.31) | 0.70** (0.34) | 0.52* (0.31) | -0.58 (1.44) | -0.61 (1.56) | -0.58 (1.60) |
| Firm size | 0.50** (0.24) | 0.68*** (0.24) | 0.63*** (0.23) | 0.53 (0.43) | 0.65 (0.48) | 0.69 (0.47) |
| Firm age | -0.84** (0.37) | -0.85** (0.37) | -0.28 (0.33) | -0.36 (0.53) | -1.09 (0.98) | -1.47 (1.02) |
| Coastal region | 0.49*** (0.09) | 0.63** (0.33) | 0.68*** (0.25) | | | |
| Western region | -0.80** (0.41) | -0.78** (0.36) | -0.77* (0.48) | | | |
| Governance and Institution | | | | | | |
| Outside director ratio | | 0.023* (0.014) | 0.026* (0.014) | | 0.029** (0.012) | 0.034*** (0.012) |
| CEO shareholding | | 0.19* (0.10) | 0.25* (0.14) | | 2.52*** (0.59) | 2.63*** (0.58) |
| Ownership concentration | | 3.05* (1.82) | 2.33* (1.31) | | 8.63* (4.28) | 8.65* (4.42) |
| Ownership concentration (squared) | | -3.65* (2.05) | -2.52** (1.23) | | -8.42** (3.90) | -8.05** (3.98) |
| Institutional environment index | | 0.54*** (0.17) | 0.58** (0.26) | | 0.85*** (0.25) | 0.81*** (0.31) |
| Interactions | | | | | | |
| Outside director ratio × Institutional environment index | | | 0.19* (0.11) | | | 0.10 (0.11) |
| CEO shareholding × Institutional environment index | | | 4.16* (2.22) | | | 11.70** (5.30) |
| Ownership concentration | | | -3.04*** | | | -2.16** |

Table 2: (continued)

| | Random effect logit model | | | Fixed effect logit model | | |
|-----------------------------------|---------------------------|----------|----------|--------------------------|--------|---------|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| × Institutional environment index | | | (0.90) | | | (1.10) |
| Ownership concentration (squared) | | | 3.46*** | | | 3.47** |
| × Institutional environment index | | | (1.17) | | | (1.57) |
| Year dummies | Yes | Yes | Yes | Yes | Yes | Yes |
| Industry dummies | Yes | Yes | Yes | No | No | No |
| Observations | 2637 | 2630 | 2630 | 567 | 562 | 562 |
| χ^2 | 153.85 | 171.30 | 177.62 | 56.40 | 62.50 | 71.46 |
| Log likelihood | -1075.45 | -1048.48 | -1020.08 | -109.96 | -179.4 | -174.92 |
| Hausman test | 19.34 | 29.61 | 62.55 | | | |

Notes: Columns (1)–(3) are estimated with a logit model of firm random effects; (4)–(6) are estimated with a logit model of firm fixed effects. Standard errors are reported in parentheses; *** $p < 0.01$; ** $p < 0.05$; * $p < 0.1$.

have the opposite effect, with the latter statistically insignificant. Consistent with trade theories, firms with lower capital-labour ratio, higher return on sales, and larger firm size are found to have higher export propensity. The estimated effect of firm age is negative and significant. This result is consistent with recent studies on international new ventures or born-globals which indicate that young firms tend to be internationalized more rapidly in the new era of globalisation (Knight/Cavusgil 2004). Estimated coefficients of regional dummies indicate that China's coastal region has location advantages in exporting, while China's western region has location disadvantages in exporting.

A Hausman test is used to identify whether there is a significant correlation between the unobserved firm-specific random effects and the regressors (Greene 2008). Results from the Hausman test support the use of fixed-effect models for hypothesis testing. The results of Columns (5) and (6) indicate that the estimated coefficients on outside director ratio are positive and statistically significant. This evidence supports Hypothesis 1. The results also show that the estimated coefficients on CEO shareholding are positive and statistically significant. Thus, Hypothesis 2 is supported.

Columns (5) and (6) show a positive and significant coefficient on ownership concentration and a negative and significant coefficient on the squared term of ownership concentration, which supports an inverted-U relationship between export propensity and ownership concentration, as predicted by Hypothesis 3. Non-monotonic relationships related to ownership concentration have been found in the literature. In a study of Chinese listed firms, Su et al. (2008) found a curvilinear relationship with decreasing agency costs at low to medium levels of ownership concentration, but increasing agency costs at higher levels of ownership concentration. In estimating the determinants of export propensity of privatised manufacturing firms in Russia, Ukraine and Belarus, Buck et al. (2001) identified a non-monotonic, curvilinear relationship between export propensity and managerial equity holding. Our study contributes to the literature by providing evidence of such a

non-monotonic relationship derived from the principal-principal conflicts in the internationalisation strategies of firms in emerging economies.

The results in Table 2 show positive and significant coefficients on the institutional environment variable and support Hypothesis 4. Column (6) of Table 2 reports the moderating effects of institutional environments. We find that the estimated coefficient of the interaction between outside director ratio and institutional environment index is positive but statistically insignificant. There is no evidence that better institutional environments enhance the positive role of outside directors in raising the probability of a firm becoming an exporter; thus Hypothesis 5a is not supported. However, we find that the estimated coefficient of the interaction between CEO shareholding and the institutional environment index is positive and statistically significant, indicating that better institutional environments enhance the positive role of CEO shareholding in raising the probability of a firm becoming an exporter; thus Hypothesis 5b is supported. Column (6) reveals a negative and significant coefficient on the interaction between ownership concentration and the institutional environment index, and a positive and significant estimated coefficient on the interaction between the squared term of ownership concentration and the institutional environment index. This result supports Hypothesis 5c.

The results of export intensity analysis are presented in Table 3. Columns (1)–(3) are estimated with a random effect Tobit model. Columns (4)–(6) are estimated with a system-GMM model in which unobserved firm characteristics are controlled for.⁸ As discussed in the methodology section, the GMM estimator has the advantage of eliminating unobserved, time-invariant, firm-specific effects and providing consistent estimates, so we rely mainly on results from (5)–(6) for hypothesis testing. The results show that the estimated coefficients on outside director ratio and CEO shareholding are both positive and statistically significant, which support Hypothesis 1 and Hypothesis 2. We find that the estimated coefficients on ownership concentration and its squared term have the expected signs but are statistically insignificant. Thus the inverted-U relationship of Hypothesis 3 is not supported in the case of export intensity.

Table 3 shows that the direct effect of the institutional environment index on export intensity is positive but statistically insignificant; hence Hypothesis 4 does not apply to export intensity. However, the interaction between outside director ratio and the institutional environment index, and between CEO shareholding ratio and institutional environment index, are both positive and statistically significant; hence Hypothesis 5a and Hypothesis 5b are supported. The interactions of ownership and its squared term with the institutional environment index show the expected signs but are statistically insignificant. Thus, the results are not in line with Hypothesis 5c in the case of export intensity.

Taken together, we have obtained some consistent results that support the hypothesized role of corporate governance, institutional environments, and the interaction between them in the export decisions of firms in emerging economies. In particular, the outside director ratio and CEO shareholding, and their interactions with the institutional environment, affect positively both export propensity and intensity, with the only exception of the interaction between the outside director ratio and the institutional environment in the case of export propensity. With regard to the effects of ownership concentration and institutional environments, we find stronger evidence for export propensity than for export intensity. This suggests that ownership concentration and institutional environments play

Table 3: Determinants of Export Intensity

| | Random effect Tobit model | | | Sys-GMM regressions | | |
|---|---------------------------|----------------------|----------------------|---------------------|---------------------|---------------------|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| Controls | | | | | | |
| Private shareholding | -0.022 (0.029) | -0.005 (0.031) | -0.008 (0.031) | -0.074 (0.052) | -0.081** (0.034) | -0.038 (0.030) |
| Foreign shareholding | 0.018** (0.008) | 0.017** (0.008) | 0.017** (0.008) | 0.027 (0.120) | 0.059 (0.100) | 0.068 (0.098) |
| State shareholding | 0.034 (0.030) | 0.013 (0.031) | 0.016 (0.031) | 0.210 (0.170) | 0.088 (0.065) | 0.023 (0.066) |
| Capital labor ratio | -0.190 (0.120) | -0.190 (0.120) | -0.190 (0.120) | -0.009 (0.019) | -0.008 (0.012) | -0.002 (0.013) |
| Return on sales | 0.069* (0.041) | 0.068 (0.041) | 0.068* (0.041) | 0.180*** (0.058) | 0.110*** (0.040) | 0.059* (0.034) |
| Firm size | 0.007 (0.008) | 0.009 (0.008) | 0.009 (0.008) | 0.016** (0.007) | 0.015*** (0.005) | 0.014*** (0.005) |
| Firm age | -0.074*** (0.019) | -0.077*** (0.019) | -0.081*** (0.019) | -0.110 (0.240) | -0.220 (0.170) | -0.220 (0.160) |
| Coastal region | 0.073*** (0.022) | 0.048* (0.028) | 0.044 (0.028) | | | |
| Western region | -0.057** (0.028) | -0.051* (0.028) | -0.050* (0.028) | | | |
| Governance and Institution | | | | | | |
| Outside director ratio | | 0.010*** (0.004) | 0.009** (0.004) | | 0.002* (0.001) | 0.002** (0.001) |
| CEO shareholding | | 0.003* (0.002) | 0.003 (0.003) | | 0.004* (0.003) | 0.007** (0.003) |
| Ownership concentration | | 0.040** (0.023) | 0.035* (0.020) | | 0.099 (0.160) | 0.160 (0.150) |
| Ownership concentration (squared) | | -0.140 (0.100) | -0.130 (0.110) | | -0.120 (0.130) | -0.170 (0.120) |
| Institutional environment index | | 0.008 (0.007) | 0.010 (0.015) | | 0.0022 (0.009) | 0.019 (0.016) |
| Interactions | | | | | | |
| Outside director ratio × Institutional environ- ment index | | | 0.002* (0.001) | | | 0.040*** (0.001) |
| CEO shareholding × Institutional environ- ment index | | | 0.006* (0.003) | | | 0.004* (0.002) |
| Ownership concentration × Institutional environ- ment index | | | -0.048 (0.036) | | | -0.048 (0.033) |

Table 3: (continued)

| | Random effect Tobit model | | | Sys-GMM regressions | | |
|-----------------------------------|---------------------------|--------|---------|---------------------|-------|---------|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| Ownership concentration (squared) | | | 0.065 | | | 0.057 |
| × Institutional environment index | | | (0.047) | | | (0.044) |
| Year dummies | Yes | Yes | Yes | Yes | Yes | Yes |
| Industry dummies | Yes | Yes | Yes | No | No | No |
| Observations | 2637 | 2630 | 2630 | 1891 | 1880 | 1880 |
| χ^2 | 179.03 | 195.71 | 200.59 | | | |
| Log likelihood | 219.00 | 224.45 | 226.71 | | | |
| Sargan Test ($Pr > \chi^2$) | | | | 0.278 | 0.592 | 0.741 |
| AR(1) ($Pr > z$) | | | | 0.015 | 0.024 | 0.004 |
| AR(2) ($Pr > z$) | | | | 0.177 | 0.254 | 0.258 |

Note: Columns (1)–(3) are estimated with a Tobit model of firm random effects; (4)–(6) are estimated with a system-GMM model. The number of observations in (4)–(6) drops to around 1880 because of the use of lagged independent variables as instruments (thus losing one-year observations). Standard errors are reported in parentheses; ***p < 0.01; **p < 0.05; *p < 0.1.

a more pronounced role in a firm’s decision to become an exporter than in the firm’s decision of how much to export; the latter also depends significantly on external factors such as foreign demand.

Discussion

This paper examines the impact of corporate governance and institutional environments upon the export decisions of firms in emerging markets using a sample of Chinese listed firms. Recognizing the similarities and differences in corporate governance mechanisms between emerging and developed economies, we study the effects of corporate governance on internationalisation strategies from both a principal-agent perspective and a principal-principal perspective. Exploring a unique dataset that features differences in institutional environments across Chinese provinces, we study the direct effects of institutional environments on the export decisions of Chinese listed firms, and the moderating effects of institutional environments on corporate governance with regard to export decisions.

This paper makes a number of contributions to the literature. First, our study extends the literature by developing and testing how principal-principal conflicts affect the internationalisation strategies of firms in emerging economies. We obtain new evidence from both the principal-agent perspective and the principal-principal perspective of the roles played by corporate governance factors in the export decisions of firms in emerging economies. From the principal-agent perspective, we develop and test hypotheses on the effects of outside directors and CEO shareholding on export decisions. Some previous studies argue that corporate governance mechanisms borrowed from Western countries may have limited impact on strategic decisions of firms in emerging economies (Lau et al.

2007, Peng 2004, Peng et al. 2003). Our finding supports the hypotheses that a rising ratio of outside directors and a rising share of CEO ownership help to mitigate principal-agent conflicts in export decisions. We argue that outside directors are likely to have favourable views on internationalisation strategies perhaps due to their education and career background, hence positively influence export decisions. The evidence on CEO ownership may reflect the fact that market-oriented CEO shareholding has induced CEOs' loyalty, and hence their willingness to make risky and longer-term decisions such as exporting (Kato/Long 2006). Our results on these two corporate governance variables, which are quite similar to those in developed countries, provide evidence of the extent to which corporate governance convergence between an emerging economy and the West has taken place (Buck et al. 2008).

Principal-principal conflicts have been identified as a major concern of corporate governance in emerging economies (Young et al. 2008). We develop and test a hypothesis that principal-principal conflicts between controlling shareholders and minority shareholders lead to an inverted-U relationship between ownership concentration and export orientation. We find that a moderately concentrated ownership structure which represents low principal-principal conflicts helps the firm to adopt exporting strategies, but a highly concentrated ownership structure that implies high principal-principal conflicts hinders the firm's export decisions. This finding contributes to the literature by showing the organizational consequences of principal-principal conflicts on internationalisation decisions. It adds a new dimension to the literature by highlighting the importance of considering the distinctive features of emerging economies in studying the effects of corporate governance on internationalisation.

Our study also contributes to the literature by showing that better institutional environments not only directly affect the export propensity of firms, but also have a moderating effect as better institutional environments enhance the role of corporate governance in mitigating both principal-agent conflicts and principal-principal conflicts, thereby facilitating export decisions. This adds supporting evidence that emphasises the role played by institutions in shaping corporate governance in emerging economies (Peng/Heath 1996). To our best knowledge, the paper is among the first to investigate both the direct and indirect effects of institutional environments on export strategies. Our findings support the hypothesis that better institutional environments encourage firms to adopt export strategies. Better institutional environments also induce positive actions by outside directors and CEOs towards export performance. We have also found evidence that better institutional environments reduce the impact of ownership concentration on the export propensity of firms, as revealed by a flattened inverted-U relationship between ownership concentration and export orientation. Hence, our findings shed light on the interrelationship between corporate governance, institutional environments and exporting in the context of emerging economies, and contribute to a better understanding of how corporate governance interacts with institutional development in influencing the internationalisation decisions of firms in emerging markets (Henisz/Swaminathan 2008, Peng et al. 2008).

Policy and Managerial Implications

A number of policy and managerial implications can be derived from our study. First, the corporate governance mechanisms of Western origin, such as outside directors and CEO shareholding, can play a positive role in the export decisions of firms in emerging economies. Existing studies find mixed results on the effectiveness of Western corporate governance mechanisms in emerging economies (Lau et al. 2007, Peng 2004, Young et al. 2008). Evidence from this study suggests that a rising ratio of outside directors and a rising share of CEO ownership mitigate the principal-agent conflicts in Chinese listed firms and facilitate their export decision-making. Thus, it is useful for governments of emerging economies to encourage the introduction of corporate governance practices. In particular, firms pursuing an internalisation strategy are likely to benefit from adopting such practices.

More importantly, our study reveals that the characteristics of emerging economies make the effect of corporate governance on export decisions different from that of the West. Ownership is much more concentrated in emerging economies than in the West, which makes principal-principal conflicts a serious problem in export decision-making. Moreover, emerging economies lack various institutional supports needed for effective corporate governance. The encouraging finding of our study is that better institutional environments not only create better external conditions for firms' export decisions, but also improve firms' internal corporate governance, which facilitates export decision-making. Thus, for emerging economies, while it is useful to introduce the best practice of Western corporate governance, it is critically important to create better institutional environments so that corporate governance can be effective. Since establishing supportive institutions is an enduring process, China's gradualism approach of institutional development (e.g., from coastal provinces to inner provinces) may be a useful reference for other emerging economies.

Limitations and Future Research

Our study has several limitations. First, our sample only contains Chinese listed firms which prevents us from investigating some interesting and important new developments related to corporate governance issues in a wider context. Due to data availability, we only considered ownership-related factors, but not management team characteristics which may also be important in the internationalisation decisions (Roth/Morrison 1992). For example, we examined the impact of outside director ratio, but did not have variables characterizing other aspects of the board structure. Further research is needed to examine more detailed characteristics of corporate governance using firm-level survey data (Filatotchev et al. 2008).

Second, we characterized institutional environments with an institutional index and examined the direct and indirect institutional effects based on the variations of the institutional index across Chinese provinces. While this approach is useful, a single-country study is nevertheless limited by its scope compared with comparative international analysis. Further research should be extended to multiple-country studies that include other emerging economies (Filatotchev et al. 2008, La Porta et al. 1999).

Conclusions

Using a unique dataset of Chinese listed firms, we study the effects of corporate governance on export decisions in the context of emerging economies. Our study extends the literature by considering the co-existence of principal-agent conflicts and principal-principal conflicts in emerging economies (Young et al. 2008). Further, our analysis integrates institutional environments with corporate governance and export decisions. In our analytical framework, corporate governance factors interact with the institutional environment within which the firm operates to affect firms' export strategies. Our results show that better institutional environments create favourable external conditions for export decision-making and also moderate positively the effects of corporate governance on export strategies. These results highlight the need to develop an international business theory of corporate governance that takes into account dynamic institutional environments as the unique features of emerging economies (Aguilera et al. 2008, Filatotchev et al. 2008, Henisz/Swaminathan 2008).

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Endnotes

- 1 These two databases are the primary data sources for studying corporate governance of Chinese listed firms, which have been widely used in previous studies (e.g., Kato/Long 2006).
- 2 The CGAC database covers all export transactions conducted by Chinese exporting firms. This dataset allows us to construct measures of export propensity and export intensity of Chinese firms.
- 3 This follows the common practice of recent trade research that links firm-level data with transaction-level trade data. Bernard et al. (2007) used similar linked data to study the export behaviour of U.S. firms.
- 4 The number of listed firms in China's two stock exchanges (Shanghai and Shenzhen) was 1,124 in 2002 and 1,381 in 2005. The number of firms that have the data needed for our study ranges from 592 in 2002 to 779 in 2005. To check the robustness of results, we also do analyses of a balanced sample which includes 590 firms that appeared in the sample for all four years. Results of the balanced sample are largely robust to that of the unbalanced sample. The results are available from the authors upon request.
- 5 For example, Lau et al. (2007) and Peng (2004) study the role of outside directors; Eisenmann (2002) and Sanders and Hambrick (2007) study the role of management shareholding.
- 6 Outside director ratios are from SinoFin Database. The Database follows China Securities Regulatory Commission (CSRC) to define board directors unaffiliated with management as independent directors, which we find more appropriate to call outside directors. It is worth noting that CSRC issued in August 2001 its *Guidance Opinion on the Establishment of an Independent Director System in Listed Companies*, which was viewed as 'the most comprehensive measure taken to date by the CSRC or any Chinese governmental authority to regulate internal corporate governance through the institution of the independent directors' (Clarke 2006, p. 129).

- 7 The number of observations in (4)–(6) in Table 2 drops to around 560 because the large majority of firms did not change export status during the sample period 2002–2005, and hence will not be included in logit models with firm-specific fixed effects.
- 8 The consistency of the GMM estimator depends on the validity of the instruments used in the regression. To address this issue we apply the Sargan Test for over-identifying restrictions, which tests the overall validity of the instruments by analyzing the moment conditions in the estimation process. For our regressions, the Sargan Test does not reject the null hypothesis that the instruments are uncorrelated with the error term. Therefore, the instruments used in the system GMM are valid.

Appendix: The Structure of the NERI Index of Institutional Development

| Title of the indices | Sequence number of basic indices |
|--|----------------------------------|
| The overall index of institutional development | |
| I Government-market relations | |
| I-1 Government allocation of resources in GDP | 1 |
| I-2 Tax and non-tax burden of farmers | 2 |
| I-3 Government intervention in enterprises | 3 |
| I-4 Non-tax burden on enterprises | 4 |
| I-5 size of government | 5 |
| II Development of the non-state enterprise sector | |
| II-1 Non-state share in industrial output | 6 |
| II-2 Non-state share in total investment in fixed assets | 7 |
| II-3 Non-state share in total urban employment | 8 |
| III Development of the commodity market | |
| III-1 Market pricing | |
| III-1-1 Market pricing in retail sales of consumer goods | 9 |
| III-1-2 Market pricing in capital goods | 10 |
| III-1-3 Market pricing in farm products | 11 |
| III-2 Local trade protection | 12 |
| IV Development of factor markets | |
| IV-1 Marketisation of the financial sector | |
| IV-1-1 Share of non-state financial institutions in total deposits | 13 |
| IV-1-2 Share of bank loans credited to non-state enterprises | 14 |
| IV-2 Foreign investment | 15 |
| IV-3 Labour mobility | 16 |
| IV-4 Development of the technology market | 17 |
| V Intermediate/legal framework | |
| V-1 Development of market intermediaries | |
| V-1-1 Share of lawyers in local population | 18 |
| V-1-2 Share of independent accountants in local population | 19 |
| V-2 Legal environment for businesses | 20 |
| V-3 Protection of intellectual property rights | |
| V-3-1 Patent applications per research and development personnel | 21 |
| V-3-2 Patents granted per research and development personnel | 22 |
| V-4 Protection of consumers' rights | 23 |

Notes: The data used in the construction of the NERI index come from the statistical yearbooks of the National Statistics Bureau of China, and from the statistical information collected from banks' surveys, entrepreneurs' surveys, and surveys of rural households. Source: Wang et al. (2007), Table A3.2.

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