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Journal of Business Research

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--Manuscript Draft--

Manuscript Number:	JOBR-D-22-01711R3
Article Type:	Full length article
Keywords:	Foreign direct investment; Social trust; Informal institutions; Home country institutions; Business group
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Manuscript Region of Origin:	CHINA
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Abstract: This study examines how informal institutions at the home country subnational level drive the foreign direct investment (FDI) of firms from emerging markets, where informal institutions play a salient role because of the underdevelopment of formal institutions. Integrating the institutional escape view and institutional support view, we argue that social trust, as a critical dimension of informal institutions, affects firms' FDI decisions. Using a sample of publicly listed firms in China, our empirical analysis finds an inverted U-shaped relationship between subnational social trust and the likelihood of firms' international expansions. Furthermore, this relationship is contingent on firms' affiliations with business groups.

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1. Introduction

As outward foreign direct investment (FDI) by emerging market firms (EMFs) is becoming an important contributor to the global business, international business (IB) scholars are increasingly interested in understanding how home country institutions drive EMFs' internationalization (Estrin et al., 2018; Ma et al., 2016; Meyer & Peng, 2016). A growing number of recent studies have begun acknowledging the importance of subnational institutions in emerging market contexts and have analyzed how within-country variation affects EMFs' internationalization strategies (Chan et al., 2008; Chen et al., 2015; Qi et al., 2020).

Scholars have differentiated between a country's formal and informal institutions; formal institutions typically constitute written and codified rules (e.g., laws and regulations), whereas informal institutions comprise unwritten rules, including common beliefs, values and norms of behavior (Brandl et al., 2021; North, 1990; Zhang, 2020). However, the majority of IB studies have focused on the role of formal institutions in EMF's international expansion, while considerably less attention has been paid to informal institutions (Boddewyn & Peng, 2021; Sartor & Beamish, 2014; Li et al., 2021a). Accordingly, this study focuses on informal institutions at the subnational level in emerging markets where formal institutions are often underdeveloped and where informal institutions "play a larger role in driving firm strategies and performance" (Chen et al., 2021a; Peng et al., 2008).

Social trust – considered an important dimension of informal institutions – refers to an individual's confidence about the trustworthiness of others and represents the general level of mutual trust among the members of a society (Kim & Li, 2014; Li et al., 2017). Social trust is a crucial element in a firm's strategic decisions because high-level trust in a society reduces transaction costs, facilitates information and

resource sharing, and increases business opportunities (Robson et al., 2008). However, previous studies have predominantly focused on variations in social trust across countries (Bjørnskov, 2012; Herreros & Criado, 2009; Knack & Keefer, 1997). Nevertheless, we lack a good understanding of whether within-country differences in social trust affect firms' internationalization decisions, and why some EMFs are more or less influenced by informal institutions (Chen et al., 2021a; Dong et al., 2018; Gundelach & Manatschal, 2017). This study aims to fill the knowledge gaps by addressing the following research question: *How does home country subnational social trust affect a firm's international expansion*?

There have been competing perspectives on the impact of home country institutions on EMF's international expansion, which can be summarized as institutional support view and institutional escapism view (He & Cui, 2012; Sun et al., 2015; Witt & Lewin, 2007). On the one hand, the institutional support mechanism suggests that social trust in a region has a positive effect on EMF's international expansion because well-developed home country informal institutions can be a source of competitive advantage that enables EMF's foreign operations (Chen et al., 2018). On the other hand, the institutional escapism mechanism argues that EMFs in low-trust environments are more motivated to internationalize to avoid weak institutional environments at home (Boisot & Meyer, 2008; Luiz et al., 2017). We explain how the two latent mechanisms combine to influence EMF's willingness to internationalize and form an inverted U-shaped relationship between social trust at the subnational level and the likelihood of a firm's FDI; that is, firms in regions with moderate levels of social trust are most likely to conduct FDI because they have both the motivation to escape and the ability to internationalize.

Furthermore, we argue that a firm's affiliation with business groups works as a substitute for external institutional environments (Choi et al., 2014; Kim & Song, 2017; Purkayastha et al., 2017). We posit that business group acts as a significant contingency that alters the relationship between social trust and a firm's international expansion by weakening both the institutional support and escapism mechanisms of social trust. Business groups have become a predominant organizational form in many emerging markets to compensate for institutional voids in inefficient external markets (Elango et al., 2016; Khanna & Palepu, 2000; Khanna & Yafeh, 2007). Belonging to a business group provides a source of competitive advantages such as economies of scale and scope, increased information flows, and preferential access to resources (Aggarwal et al., 2019; Keister, 1998). However, the role of business groups in replacing informal institutions has been largely ignored. Recognizing the need for a better understanding of business groups and informal institutions, this study argues that the driving effect of social trust does not apply homogenously to all EMFs but is contingent on a firm's group affiliation. In particular, firms affiliated with business groups are less sensitive to the effects of informal institutions compared with independent firms.

This study seeks to contribute to international business literature in several ways. First, building on research on home country institutions, we speak to the importance of exploring informal institutions in the emerging market context. Further, we contribute to the call for more research on subnational institutional conditions by elucidating how subnational informal institutions at home matter in driving firm's FDI strategy (Ma et al., 2016; Yang et al., 2021). Second, by integrating the institutional escapism and institutional support views, we present a conceptual framework for combining the contradictory effects of home country institutions on

EMF's international expansion (Gaur et al., 2018; Luo & Tung, 2007) and theorize an inverted U-shaped relationship. Third, with emphasis on social trust at the subnational level, we examine how a region's social trust, a salient but relatively understudied dimension of informal institutions in IB research, affects the international expansion of EMFs. Finally, we explore how the impact of social trust varies across different firms by introducing business group affiliation as an important contingency. In this, we add to the literature on how micro-level organizational factors and macro-level institutions interplay to affect FDI (Leonidou et al., 2017; Qian et al., 2017). We also extend the previous literature by suggesting that a substitution effect exists between a firm's group affiliation and informal institutions, such that the effects of social trust will be weaker in group-affiliated firms.

2. Theoretical background

2.1 Home country institutions and the foreign direct investment of EMFs

Institutions determine transaction costs and reduce uncertainties by establishing a stable structure for exchange, thereby affecting firm performance and economic activities (Cui & Jiang, 2012; North, 1990). Home country institutions represent a critical element in shaping a firm's international expansion by creating advantages and disadvantages for local firms (Wei & Nguyen, 2017). Despite a growing number of studies on EMFs' internationalization behavior, relatively limited consideration has been given to the salience of home country institutional environments (Cuervo-Cazurra et al., 2018; Li et al., 2018). In some recent developments, two competing theoretical frameworks have emerged to explain how home country environments can promote or impede EMF's global expansion, namely the institutional support view and institutional escapism view (Sun et al., 2015).

The institutional support view argues that home country institutions can be a source of competitive advantage for EMF's internationalization (He & Cui, 2012; Peng et al., 2008; Xie & Li, 2018). Better-developed institutions reduce the transaction costs and uncertainties, as well as provide resources and support (Wan & Hoskisson, 2003). Thus, firms can proactively exploit home institutional conditions to develop resources, capabilities and knowledge that are beneficial to their global expansion (Ma et al., 2016).

The institutional escapism view posits that home country institutional constraints are driving factors for firms to internationalize. A firm's FDI activity can be an escape response to avoid institutional constraints at home, such that less-developed institutional environments motivate firms to internationalize (Deng & Zhang, 2018). In particular, the institutional voids in emerging markets increase the costs of doing business locally (Boisot & Meyer, 2008). Consequently, EMFs can use FDI as an effective way to mitigate their exposure to domestic institutional imperfections (Luo & Tung, 2007; Shi et al., 2017).

While these perspectives have opened up promising research avenues for home country environments, much of the related evidence implies the independence between these two mechanisms (Nuruzzaman et al., 2020; Tang, 2021). However, in practice, the effect of home country institutions is often the result of a complex mixture of two mechanisms (Gaur et al., 2018). Therefore, this study attempts to bridge the existing gaps by integrating two insightful but seemingly contrasting mechanisms to understand how informal institutions affect EMF's internationalization strategy (Deng & Zhang, 2018; Wu & Chen, 2014).

2.2 Subnational informal institutions in emerging markets

The importance of subnational institutions in firms' strategic choice has been acknowledged in recent IB research, which allows for a more fine-grained analysis of within-country differences (Ma et al., 2016; Yang et al., 2021). The heterogeneity in the subnational institutional environments is particularly relevant in emerging markets in general, considering uneven economic development, natural resource endowments, and socio-cultural diversity (Chan et al., 2010; Monaghan et al., 2014).

Informal institutions, which refer to the "constraints that people impose upon themselves to structure their relations with others" (Orcos et al., 2018), coexist with formal institutions to shape a firm's strategy and performance (Li et al., 2021a; North, 1990). Nevertheless, subnational formal institutions have attracted substantially greater attention than informal institutions (e.g., Deng et al., 2018; Qian et al., 2017), thus leading to the latter being overlooked (Boddewyn & Peng, 2021; Yao et al., 2020). Both formal and informal institutions play critical roles in supporting the functioning of market mechanisms such that firms can engage in business activities with lower uncertainties and costs (Meyer et al., 2009; Meyer & Peng, 2016). In particular, firms' reliance on informal institutions is widespread in emerging markets characterized by relatively weak formal institutions, such as the lack of market intermediaries, regulatory infrastructure and legal protection (Adomako et al., 2021; Khanna & Palepu, 2000; Orcos et al., 2018). Regions with well- functioning informal institutions may reduce transaction costs by fostering information sharing and collaboration (Zhang, 2020), whereas regions with malfunctioning informal institutions can result in challenges and hazards for local firms (Chan et al., 2010). Therefore, subnational informal institutions are essential in explaining the internationalization strategies of EMFs (Onuklu et al., 2021).

In response to recent call to address the imbalance in studies of home country institutions, this study focuses on subnational social trust, which serves as an important informal institution in the emerging market context (Lu et al., 2018). Past literature documenting the effect of trust generally focuses on social trust embedded at the national level (Bjørnskov, 2011; Kim & Li, 2014), overlooking the heterogeneity in social trust across subnational regions. An exception is Li et al. (2017), who find that firms located in regions with high social trust tend to have lower stock price crash risks. Lu et al. (2018) suggest that social trust at the subnational level exerts a positive effect on foreign subsidiary performance. Nevertheless, subnational institutions concerning trust have been infrequently examined in IB studies addressing EMFs' internationalization strategies. By combining institutional escapism and institutional support views, we argue that within- country variations in social trust may shape the variations in EMFs' international expansions.

3. Hypothesis development

3.1 Social trust and outward foreign direct investment

We expect that two main and countervailing forces drive the impact of home country social trust, namely the institutional escapism mechanism and institutional support mechanism. The literature on institutional support predicts that social trust provides support and resources that facilitate firm's internationalization, whereas the institutional escapism view contends that insufficient social trust pushes firms to escape through foreign investments. Our framework reconciles these two latent mechanisms and proposes an inverted U-shaped relationship between social trust and the likelihood of EMF's international expansion.

Social trust is defined as "the confidence people have that strangers i.e. fellow citizens on whom they have no specific information, will not take advantage of them"

(Bjørnskov, 2008; Uslaner, 2002). Regional social trust affects a firm's business operations from at least three perspectives, thereby driving its global expansion. First, social trust offers advantages to firms by reducing transaction costs and uncertainty (Bjørnskov & Méon, 2015; Robson et al., 2008). Under conditions of low social trust, opportunism is likely to occur in economic exchanges, leading to additional negotiations and contractual safeguards (Zaheer et al., 1998). By contrast, a high level of trust facilitates the exchange and sharing of high-quality and reliable information, which mitigates information asymmetries, thereby lowering the risk of opportunism during interfirm transactions (Brockman et al., 2018; Bjørnskov & Méon, 2015). Thus, in regions with high social trust, firms incur lower transaction costs as they are less dependent on elaborate and lengthy legal safeguards to monitor partners, enforce agreements, and protect investments (Bjørnskov, 2012; Robson et al., 2008).

Second, social trust helps sustain a trustworthy and cooperative business climate, which provides firms with greater growth opportunities. On the one hand, social trust is a critical factor in the success of information and resource sharing. In regions with intensive social trust, firms have greater confidence in interacting with other participants and sharing information because they are provided with more assurance and mutual understanding (Kim & Li, 2014; Porras et al., 2004). On the other hand, social trust makes collaboration more possible because firms tend to be more willing to interact and collaborate with others to achieve shared goals (Porras et al., 2004; Welch et al., 2005). Additionally, considering firms' divergent objectives and goals, social trust enables firms to reduce conflicts in inter-organizational collaboration by offering each other greater leeway (Zaheer et al., 1998). Last, social trust helps firms overcome financing constraints, given that firms are more likely to trust each other and have fewer overdue payments of payables, thus resulting in them

receiving and offering more credit (Wu et al., 2014). This favorable social climate creates the possibility for firms to identify and implement a wider range of business opportunities (Kim & Li, 2014).

Third, social trust is a precondition for organizational innovation because trust enables to enhance creativity, collaboration and learning (Kondo et al., 2021). Innovation is a social process that consists of a wide range of social factors and involves a high level of uncertainty (Sartor & Beamish, 2014; Yao et al., 2020). Trust lessens the need for strict rules, rigid monitoring, and control systems (Molina-Morales & Martínez- Fernández, 2009). An open environment enables firms to engage in more creative thinking and generate new ideas (Williams & Du, 2014). Moreover, social trust provides an essential source of learning through network linkages (Brockman et al., 2018; Williams & Du, 2014). Therefore, EMFs can rely on this social mechanism to improve their learning and innovative capabilities when facing limited technological opportunities in emerging markets (Sartor & Beamish, 2014).

Drawing on the institutional support view, we label the first force as the supporting effect of social trust. As explained above, trust in a region serves as a catalyst for reducing transactions costs, facilitating collaboration, and sustaining a favorable business climate for firms (Bjørnskov, 2008; Jiang et al., 2022). Well-developed home country social trust provides strong support for firms to accumulate resources and competitive advantages that accelerate their internationalization (Chen et al., 2018; Kang & Jiang, 2012). Consequently, a higher level of social trust tends to encourage firm's OFDI activity.

The institutional escapism view highlights the second opposing channel through which social trust affects firm's FDI. Underdeveloped institutions at home

may impede EMFs' growth opportunities of, thereby pushing them to expand abroad (Luo & Tung, 2007). This is also consistent with recent empirical findings that the weaker the institutional environment, the higher the probability of firm's engagement in FDI (Gaur et al., 2018; Luiz et al., 2017; Qi et al., 2020). For instance, Kottaridi et al. (2019) focus on institutional factors, such as regulatory quality and taxation, that drive firms to escape home country constraints by investing abroad. Using a sample of Chinese firms over a 10-year period, Shi et al. (2017) contend that institutional fragility in a region is positively correlated with a firm's global expansion. Given the inverse relationship between home country institutions and firm internationalization, we expect that a higher level of social trust reduces EMF's willingness to internationalize.

In conjunction, the two coexisting yet opposing mechanisms produce an inverted U-shaped relationship between subnational social trust and the likelihood of a firm's FDI. Following the example of Haans et al. (2016), Fig. 1 presents the emergence of an inverted U-shaped pattern. In a society with low-level social trust, firms have to deal with additional transaction costs as well as shortages of business opportunities, making it difficult for EMFs to operate and upgrade domestically. Consequently, firms have greater desire to adopt internationalization strategies not only to avoid unfavorable institutional conditions at home but also to pursue business opportunities overseas. However, FDI can be a risky strategy given that information asymmetry and liability of foreignness abound as EMFs expand, compete, and manage activities in unknown foreign markets (Luo & Bu, 2018). Firms located in regions with low-level trust are unable to obtain sufficient resources to support international expansion (Kim & Song, 2017; Wu et al., 2014). As a result, firms are relatively incapable of escaping because of the limited international resources

incurred by weak informal institutions (Luiz et al., 2017; Wu & Chen, 2014). In a region with high-level social trust, strengthening informal institutional environments lower costs and provide more resources for firms to conduct FDI. Hence, EMFs have stronger capability to engage in international investment. However, the benefits of conducting business locally can reduce a firm's incentive to exit the domestic market and decrease its willingness to escape. In turn, firms in regions with moderate levels of social trust are most likely to conduct FDI because they have both the motivation to escape and the ability to internationalize.

Insert Figure 1 about here

In summary, we theorize that the driving effect of regional social trust on a firm's FDI is more pronounced at a moderate level of social trust. Conversely, the effects are less pronounced at lower and higher levels of social trust. Therefore, we expect the relationship between social trust and FDI to follow an inverted U-shaped pattern. Based on this logic, we propose the following hypothesis:

Hypothesis 1. *In emerging markets, the relationship between subnational social trust and the probability that a firm will make overseas investment displays an inverted U-shaped pattern.*

3.2 The moderating role of business group affiliation

We further argue that firms can accumulate support not only from external institutional environments but also from internal markets (Leonidou et al., 2017; Qian et al., 2017). Business groups are an important organizational form in emerging markets where external markets lack efficient institutions to support economic activities (Khanna & Rivkin, 2006; Elango et al., 2016). Below, we analyze how business groups can substitute for incomplete external markets by reducing

transaction costs and providing resources to their affiliated firms through internal market mechanisms (Khanna & Palepu, 2000; Khanna & Yafeh, 2007; Wang et al., 2015). This discussion elucidates how a firm's affiliation with business group weakens both institutional escapism and institutional support mechanisms of social trust, thus altering the relationship between subnational trust and a firm's internationalization.

Business groups generate a number of group-specific advantages and serve as an alternative mechanism to informal institutions. First, business groups add value to their affiliated firms by overcoming transaction costs (Borda et al., 2017; Khanna & Rivkin, 2006). The structure of business groups built on horizontal and vertical linkages serves as the basis for establishing contact with potential partners and clients across a wide range of industries (Elango et al., 2016; Purkayastha et al., 2018). Therefore, group-affiliated firms can benefit from the economies of scope of the entire group, thereby allowing group members to attain complementary resources and achieve cost efficiencies that are unavailable to unaffiliated firms in a low-trust environment (Kumar et al., 2020).

A second implication of business groups is that groups help smooth information asymmetries. The network structure of a group provides linkages that strengthen information transfer (Purkayastha et al., 2018). Goto (1982) views business groups as an "information club" that facilitates the flow of information among group members, including new investment opportunities, innovative practices, and information regarding competitors. Through interactions with trustworthy members within the group network, group affiliates are in a better position to obtain information than independent firms, thus obviating the information asymmetries caused by insufficient social trust (Douma et al., 2006; Purkayastha et al., 2018).

Third, group-affiliated firms can obtain favorable financing support that non-group member firms cannot. Business groups establish internal capital markets to offset financing constraints in external capital markets associated with low-level social trust (Leff, 1978). Specifically, groups can source capital either from their affiliated members or from external resources; they can mobilize capital and reallocate it among member firms (Kumar et al., 2020). Moreover, business groups can provide investment guarantees among affiliates and secure finances through intracompany loans (Choi et al., 2014). For example, Keister (1998) highlights the "insider lending" function of business groups, where informal financing arrangements give affiliates access to otherwise scarce capital in low-trust markets. Thus, the interorganizational trust within a group alleviates financing distress and member firms' dependence on social trust.

As discussed above, institutional support and institutional escape are key mechanisms for understanding how social trust affects EMF's internationalization decision. On the one hand, the positive supporting effect of social trust becomes weaker when firms are affiliated with business groups. The benefits of social trust are particularly valuable for independent firms because they are constrained in their access to resources for internationalization (Castellacci, 2015; Mukherjee et al., 2018). As such, these standalone firms are more reliant on external institutions to compensate for their limited business opportunities and to support their global expansion. By contrast, compared with independent firms, member firms have exclusive access to group internal markets that provide them with support to achieve internationalization (Borda et al., 2017). This suggests that social trust would provide relatively smaller benefits for firms affiliated with groups. The support mechanism of

social trust is thus flattened as group affiliation reduces the relative importance of trust.

On the other hand, business group affiliation can mitigate the escapism mechanism because the advantages generated by business groups help compensate for the disadvantages arising from the lack of social trust in a region (Ma et al., 2014). With adequate resources and support, group members are in a better position to navigate the costs and risks associated with the institutional environments and are thus less necessary to escape (Aggarwal et al., 2019; Carney et al., 2011). By contrast, unaffiliated firms are less able to overcome informal institutional constraints and tend to be more sensitive to the social trust effect. Hence, the escaping effect of social trust on EMF's global expansion will be flattened in the presence of group affiliation.

Taken together, both institutional support and institutional escape mechanisms can be weakened, thereby causing the inverted-U relation between social trust and FDI to be more salient for independent firms than for group-affiliated firms, as illustrated in Fig. 2. Formally, we hypothesize:

Hypothesis 2. *Business group affiliation flattens the inverted U-shaped relationship between subnational social trust and the probability that a firm will make overseas investment.*

Insert Figure 2 about here

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4. Data and methodology

4.1 Data and sample

To test how subnational social trust affects a firm's FDI, we constructed a dataset with rich information reflecting the varied nuances in subnational informal institutions. We chose China as the empirical context to test our hypotheses. First,

China has been the largest supplier of FDI globally, which allows us to obtain relatively comprehensive outward FDI data. Second, as a large emerging market, China has been recognized as lacking efficient formal institutions, where social trust is more likely to play a greater role (Wu et al., 2014). Third, as a representative emerging economy, China has a relatively large number of heterogeneous provinces whose regions vary greatly in economic and institutional developments (Ma et al., 2016). Last, Chinese business groups are major players in the national economy and major contributors to outward FDI flows (Jean et al., 2011). Thus, China provides a particularly suitable empirical setting for this research.

The firm-level FDI data was derived from the China Stock Market & Accounting Research (CSMAR), which contains detailed information on firms listed on the Shanghai and Shenzhen Stock Exchange and is widely used in IB research. This study focuses on publicly listed firms during the 2001-2019 period. The year 2001 is an appropriate starting point for explaining the FDI activities of Chinese firms because FDI from China surged after 2001 when the Chinese government initiated the "Go Global" strategy to encourage outward FDI and China became a formal member of the WTO. We excluded FDI projects in tax havens. We also excluded investments in Hong Kong and Macau because investments in these regions reflect the phenomenon of "round-tripping", which may represent the establishment of subsidiaries elsewhere (Kolstad & Wiig, 2012). In addition, we dropped financial services firms as they have different structures and disclosure requirements from other firms. After the exclusion of firms with incomplete information, the final sample comprises 3,584 Chinese listed firms from 31 provinces during 2001-2019.

4.2. Variables and measurements

4.2.1. Dependent variable

Following prior literature (Shi et al., 2017; Mingo et al., 2018), our dependent variable is a firm-level dummy variable to measure whether the sample firms decided to conduct FDI. The dependent variable is equal to one if sample firm *i* from province j established one or more subsidiaries in the overseas market in year *t* and zero otherwise. The dummy variable approach is important because it captures a firm's international expansion decision-making, that is, whether to go global, in the first step (Shi et al., 2017).

4.2.2. Independent variables

Social trust. The measure of province-level social trust was obtained from the China General Social Survey (henceforth the CGSS), launched jointly by Hong Kong University of Science and Technology and Renmin University. The CGSS conducts a regular cross-sectional survey, aiming to systematically monitor the changing relationship between social structure and quality of life in urban and rural China (Bian & Li, 2012). The CGSS conducted its first survey in 2003, in which questionnaires were sent to residents in 28 provinces, and 5,894 useful responses were received. To date, ten surveys have been conducted in 2003, 2005, 2006, 2008, 2010, 2011, 2012, 2013, 2015 and 2017.

We measured social trust based on the responses to the following question: "Generally speaking, would you say that most people can be trusted?" Response options consisted of the following: "1 = strongly disagree, 2 = disagree, 3 = neither agree nor disagree, 4 = agree, 5 = strongly agree". The answers capture the extent to which respondents think that people can be trusted to abide by a common set of norms of morality, which is considered as a reliable proxy for actual trust (Bjørnskov, 2011; Bjørnskov, 2012).

Following this line of research, we averaged the scores of the respondents' choices by the province where they were located and used the average scores at the province level as a proxy for subnational social trust. Since regional social trust does not have much time series variation, in our analysis, it is reasonable to replace missing values of social trust (for years not covered by the CGSS) with non-missing values from adjacent year points (Li et al., 2017). For example, the survey data in 2004 were missing, so we extended the 2003 value of to social trust to 2004.

Business group affiliation. Consistent with prior research (He et al., 2013), we identified a firm's group affiliation in year t if its ultimate controlling entity had more than one firm in that year. We constructed a dummy variable to capture a firm's affiliation with a business group, with a value of "1" assigned to a group-affiliated firm and "0" assigned to an independent firm (Hu et al., 2019).

4.2.3. Control variable

We included a series of firm and home subnational variables that could potentially affect a firm's FDI decision. First, we controlled for firm age (the natural logarithm of the difference between the FDI year and the founding year of a firm) and firm size (the natural logarithm of a firm's total assets) to reflect a firm's resources and inertia (Li et al., 2018). We added a firm's return on assets (ROA) as an indicator of firm profitability and debt ratio (ratio of total debt to equity). We also included a firm's government and foreign ownership share, defined as equity shares owned by government agencies and foreign investors as percentages of total shares, respectively. Firm's international experience allows firm to develop overseas knowledge, we thus controlled for a firm's international experience, calculated as the ratio of foreign sales to firm's total sales. Firm-level information was obtained from the CSMAR database.

At the subnational level, we controlled for a province's market size by taking the natural logarithm of the total population of a province and GDP growth as the annual growth rate of a province's GDP. We added regional economic development (Xie & Li, 2018), which captures the degree of economic development and policy incentive by counting the number of economic and technological development zones in every province of China. Finally, we included regional legal environments as proxy for formal institution that might affect firm's FDI activity. We operationalized this institutional dimension as the number of suits per million residents in a province because this indicator reflects people's confidence in legal system to solve their disputes (Li et al., 2021b).

4.3 Estimation methods

We modelled our dependent variable as a limited dependent variable (LDV); a binomial decision of whether or not to undertake FDI. To perform the statistical analyses, we used a logit model to investigate the effect of social trust on a firm's FDI (Wiersema & Bowen, 2009). To reduce potential endogeneity concerns, we lagged all time-varying explanatory variables by one year. We added industry and year dummies to control for industry and temporal effects, respectively. The basic estimation equation was as follows:

$$\begin{aligned}\mathrm{FDI}_{i,j,t} = {} & \beta_0 + \beta_1 \mathrm{Social\ trust}_{j,t-1} + \beta_2 \mathrm{Social\ trust}_{j,t-1}^2 + \beta_3 \mathrm{Group\ affliation}_{i,t-1} \\ & + \beta_4 \mathrm{Social\ trust}_{j,t-1} \times \mathrm{Group\ affliation}_{i,t-1} + \beta_5 \mathrm{Social\ trust}_{j,t-1}^2 \\ & \times \mathrm{Group\ affliation}_{i,t-1} + \beta_6 Controls_{\,t-1} + \varepsilon\end{aligned}$$

To further validate the inverted U-shaped relationship, we followed a three-steps procedure suggested by Lind and Mehlum (2010). A curvilinear relationship will be confirmed if it meets three conditions: (1) the squared-term coefficient needs to be significant with the expected sign; (2) the slope should be sufficiently steep at

both ends of the data range of predicting variable; and (3) the turning point needs to be located within the data range (Haans et al., 2016).

5. Results

Table 1 presents the descriptive statistics and correlation matrix for the variables. Further, we calculated the variance inflation factors (VIFs). The results suggest that multicollinearity is not an issue given that each VIF value is well below the acceptable level of 10. Table 2 presents the results of the logit regression used to test the direct effect of social trust (Hypothesis 1) on a firm's FDI likelihood, and the moderating effect of business group affiliation (Hypothesis 2). Model 1 includes the control variables. Model 2 represents the direct effect of the key independent variable by adding the linear and square terms of social trust. Model 3 comprises the interaction effects.

Insert Tables 1 and 2 about here

Hypothesis 1 tests the prediction of an inverted U-shaped relationship between subnational social trust and a firm's international expansion. Model 2 shows that social trust has a positive linear term (b=1.949, p=0.002), and a negative and significant squared term (b=-0.362, p=0.001). Next, we computed the slope of the curvature and found statistically significant slopes at both the low (b=0.912, p=0.004) and high (b=-0.973, p=0.000) ends of the X-range with opposing signs. Finally, the inflection point of the inverted-U shaped curve is 2.67, which is located within the range of data and close to the mean of social trust. Moreover, we computed the confidence interval based on Fieller method. The 95 percent confidence interval of the turning point also falls within the data range.

To further interpret the results, we estimated and plotted the marginal effects of social trust on internationalization, while setting the values of all other variables at their means (Fig. 3). Fig. 3 depicts that the predicted likelihood of outward FDI increases from 2.30% with trust value of 1 to 6.15% with trust value of 2.91, after which it declines to 3.47% with trust value of 4. Therefore, a formal test of an inverted U-shaped curve between a region's trust and a firm's FDI supports Hypothesis 1 (Haans et al., 2016; Wiersema & Bowen, 2009).

Hypothesis 2 suggests the moderating effect of a firm's affiliation with business groups on the relationship between social trust and FDI activity. The results show a statistically significant and negative interaction effect of the linear term of social trust and group affiliation (b=-2.613, p=0.017) and a positive interaction with the quadratic term (b=0.463, p=0.021). Furthermore, we estimated and plotted the marginal effects of social trust on independent firms and group-affiliated firms, respectively. As shown in Fig. 4, when regional social trust increases from a low to moderate level, the predicted probability of a group member firm's engagement in FDI increases from 2.05% to 5.42%. However, when regional social trust continues to increase from a moderate to a high level, the probability of FDI decreases to 3.29%. For non-affiliated firms, the likelihood of FDI ranges from 3.24% at low-level social trust, to 8.38% at moderate-level social trust, and 5.15% at high-level social trust. The results indicate that affiliation with a business group flattens the positive slope of the social trust curve and decreases the steepness of the negative slope of the social trust curve. Therefore, Hypothesis 2 is supported, indicating that for member firms with access to group resources, the effect of social trust on the likelihood of conducting FDI is smoothed.

Insert Figures 3 and 4 about here

5.1. Robustness checks

We conducted several analyses to check the robustness of our results. First, we tested whether the results remain robust after controlling for other formal institutional dimensions. A region's financial development is measured as the domestic credit provided by the financial sector as a percentage of GDP (Munemo, 2017). We also included subnational intellectual property rights (IPR) protection, which is defined as the average number of patent applications and granted patents weighted by the number of research and development personnel in a province (Huang et al., 2017). We obtained results consistent with our original findings.

Second, numerous studies have suggested that informal institutions can substitute for formal institutions; in subnational regions with weak formal institutions, informal institutions rise to play a larger role in determining firm strategy (Chan & Du, 2022; Kafouros et al., 2022). Accordingly, we further conducted subsample analyses to examine the interactions between formal and informal institutions. We first used the marketization index published by National Economic Research Institution (NERI) (Fan et al., 2011) to measure the subnational formal institutional development across provinces in China. This comprehensive index has been widely used in prior literature (Deng et al., 2018; Tang, 2019; Xie & Li, 2018) and includes five dimensions: (1) relationship between the government and market, (2) development of non-state economy, (3) development of product market, (4) development of factor markets, and (5) development of market and legal intermediaries. We split the sample based on the median of marketization index and run regressions for the two subsamples. The results indicate that the inverted U-shaped relationship between social trust and FDI holds only in the low marketization level subsample and disappears in the high marketization subsample. Additionally, we

split the sample into two subsamples according to the region's financial development and legal protection. Consistently, the inverted U-shaped relationships only exist in the subgroups with high levels of formal institutions. These findings indicate the substitutive role of informal institutions and that social trust is less influential in regions with strong formal institutions.

Third, firm strategy may be affected by other informal institutional factors. The Chinese government's endeavors of building "socialism with Chinese characteristics" strengthen the guiding role of patriotism, collectivism, and harmony. In addition, scholars have pointed out that the core values of socialism with Chinese characteristics are consistent with those of traditional Chinese culture, especially Confucianism (Lo & Pan, 2021). Hence, we included two control variables to capture a region's collectivism and Confucianism. The subnational collectivism variable was adopted from the research by Zhao et al. (2015), who measure the cultural dimensions of 31 provinces in China based on the GLOBE research (Gu et al., 2019). Confucianism is a dummy variable that is equal to one if a firm is headquartered in a province with a Confucian center, and zero otherwise (Chen et al., 2021b). The results remain robust to the inclusion of these variables.

Fourth, due to the high correlation between some control variables, we re-estimated the models without the firm age and provincial market size variables. Last, we used the mean value of individuals' responses in a province as a proxy of province-level social trust instead of the average score (Cao et al., 2016). Similarly, a higher index value suggests that the residents in the province have a greater level of trust in others. These results are consistent with the main results, and the interpretation does not change.

6. Discussion and conclusion

Integrating the institutional escapism view and institutional support view, this study explores a more comprehensive explanation of how subnational informal institutions influence a firm's FDI strategy in emerging markets. Using FDI project information from Chinese listed firms, we found empirical support for an inverted U-shaped relationship between subnational social trust and a firm's FDI decision: engagement in internationalization activity increases with regional social trust up to a certain point, and past this point, participation in FDI reduces. In addition, we suggest that the theoretical model to explain EMF's internationalization should take a contingency perspective and pay attention to how business group affiliation moderates the relationship between informal institutions and firm's FDI. Firms affiliated with business groups will be less sensitive to the effects of informal institutions than non-affiliated firms.

6.1. Contributions

This study makes several important contributions to the literature. First, we incorporate the considerations of informal institutions into home country institutions research by focusing on an emerging market context where informal institutions play a salient role. Despite the emerging consensus that both formal and informal institutions are crucial determinants of firm's strategy, informal institutions have not received adequate attention (Li et al., 2021a; Yao et al., 2020; Zhang, 2020). In doing so, we also add to the growing body of research that theoretically and empirically zooms in on institutional analysis at subnational level (Chan et al., 2008; Yang et al., 2021). Contributing to the emerging studies on within-country heterogeneity, the findings reveal that the subnational regions in a country vary not only in terms of formal institutions, such as economic and legal developments, but also with respect to informal institutions.

Second, we enrich the existing literature on home country institutions and the internationalization of emerging market firms by establishing a framework that reconciles institutional escapism and institutional support views. While previous research grounded in the institutional support view has suggested that better-developed home country institutions provide support for firms to undertake overseas investments, recent work on institutional escapism view has posited that less-developed institutions stimulate EMFs to seek business abroad (Witt & Lewin, 2007; Wu & Chen, 2014). Echoing recent calls for the integration of institutional escapism and support mechanisms in IB research (Deng & Zhang, 2018; Gaur et al., 2018; Nuruzzaman et al., 2020; Tang, 2021), this study provides a deeper understanding of the role of home country institutions and reveals that the effect of social trust institutions is nonlinear when a firm's motivation and capability to escape are considered simultaneously.

Third, we contribute to social trust research in the IB field by investigating the importance of subnational social trust. Although social trust is a pivotal dimension of informal institutions, very few IB studies have addressed how social trust affects EMF's international expansion (Lu et al., 2018). More importantly, while existing evidence predominantly focuses on the macroeconomic consequences of trust (Mikucka et al., 2017), this study extends prior research by emphasizing social trust at the subnational level (Dong et al., 2018; Li et al., 2018; Ma et al., 2016). Integrating the institutional escapism and support perspectives, we propose that a region's social trust has an inverted U-shaped relationship with a firm's FDI.

Fourth, we identify a firm's group affiliation as an important boundary condition, weakening (group-affiliated) or intensifying (non-group firms) the effect of informal institutions. On the one hand, we advance research on how micro-level

characteristics and macro-level institutional environments interact to influence firm's internationalization, enabling a more nuanced understanding of the sources of heterogeneity in EMFs' FDI activities (Ma et al., 2016; Qian et al., 2017). On the other hand, prior research has primarily focused on how business groups serve as a substitute for imperfect formal institutions, including underdeveloped capital markets (Choi et al., 2014; Kim & Song, 2017; Leff, 1978), inefficient labor markets (Chittoor et al., 2015; Mukherjee et al., 2018), and poor regulatory systems (Borda et al., 2017), and does not clearly illustrate the substitution effect between group affiliation and informal institutions. We thus extend business group literature by demonstrating that affiliated firms and independent firms are not equally affected by social trust given that they face different levels of business resources and investment opportunities.

6.2. Managerial implications

This study also provides important implications for managers in emerging markets. First, practitioners should consider informal institutions when making decisions on international expansion. For firms located in institutional environments with well-developed social trust, managers should take advantage of the local resources to support their development. Second, our findings imply that EMFs affiliated with business groups can overcome challenges posed by underdeveloped external institutions. Therefore, managers should effectively utilize the group resources. Independent firms with limited competitive advantages can also consider joining business groups to achieve internationalization.

6.3. Limitations and further research

Our study has several limitations that suggest directions for future research. First, scholars have increasingly recognized that informal and formal institutions jointly influence firm's strategy and performance. For instances, using firm-level data

from 16 emerging markets of Central and Eastern Europe during 2003 to 2011, Kafouros et al. (2022) document that informal and formal institutions have different effects on firm performance and that informal and formal institutions partly substitute each other. Using the World Bank Enterprise Survey data on Chinese private firms in 2012, Weng et al. (2021) find that informal financial institutions, namely, commercial bribery and lack of informal finance moderate the relationships between formal institutions and firm innovation. Future research could explore the joint effect of formal institutional factors and social trust.

Second, we examined the impact of social trust as it represents an important type of informal institutions. However, other dimensions of informal institutions may also exert significant effects on firms' global expansion. For example, some studies have evaluated the impact of transnational communities (Zhang, 2020) and Guanxi (Li et al., 2021a) as informal institutions. Studying the effects of other informal institutions is an interesting avenue for future IB research.

Third, this study is restricted to a sample of firms from a single home country. Nevertheless, China is often considered a society with high level of social trust. For example, improving social stability is a key priority for Chinese governments, where social trust and harmony are attached high importance (Wang & Luo, 2019). To examine the generalizability of our findings, future research could extend this study by assessing the robustness of our findings in other emerging markets.

Fourth, due to data constraints, we cannot control for business group-level indicators. Group characteristics may lead to variations in their affiliates' strategies. For example, Purkayastha et al. (2017) demonstrate that business groups with different ownership types (namely, family, domestic financial institution and foreign corporation) have differential impacts on the internationalization-performance

relation. Future research could investigate how heterogeneity among business groups could alter the relationship between home country institutions and firms' FDI strategies.

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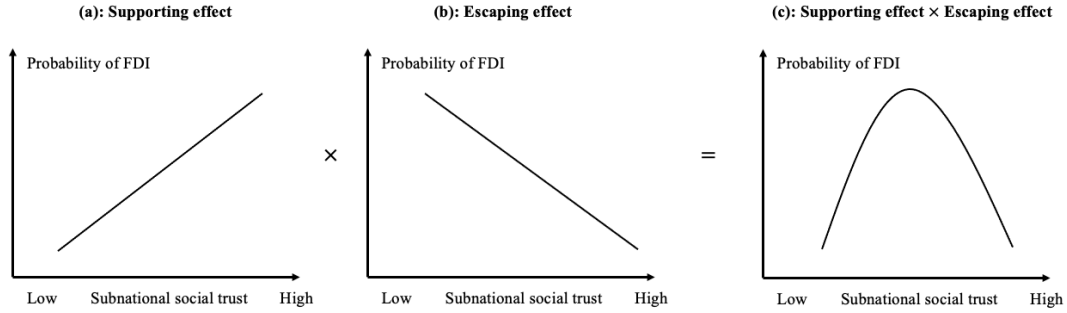

Fig. 1. Combinations of latent mechanisms resulting in an inverted U-shaped relationship.

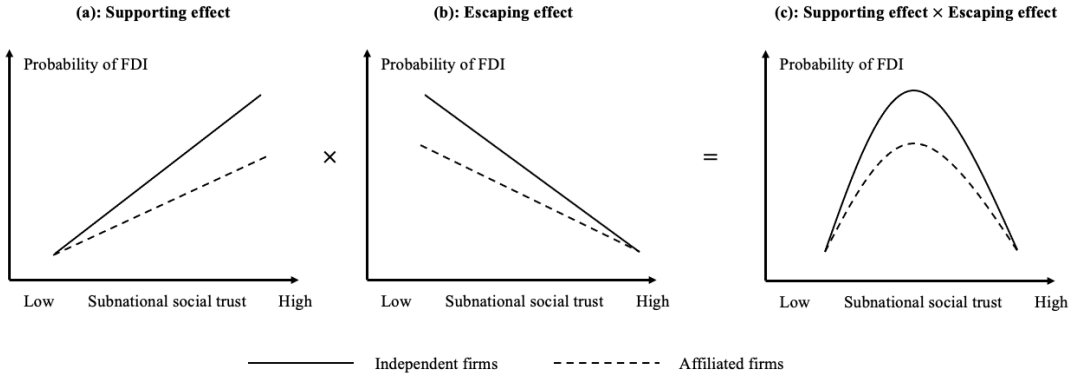

Fig. 2. The moderating effect of business group affiliation on the inverted U-shaped relationship.

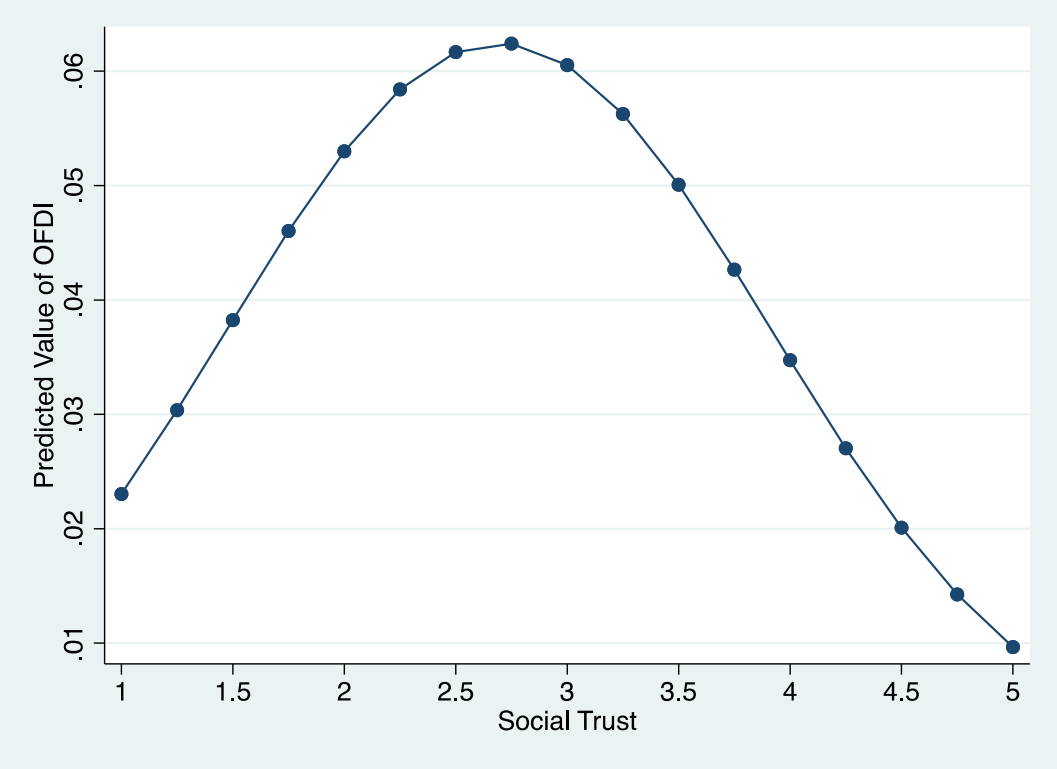

Fig. 3. The marginal effect of social trust on firm's FDI.

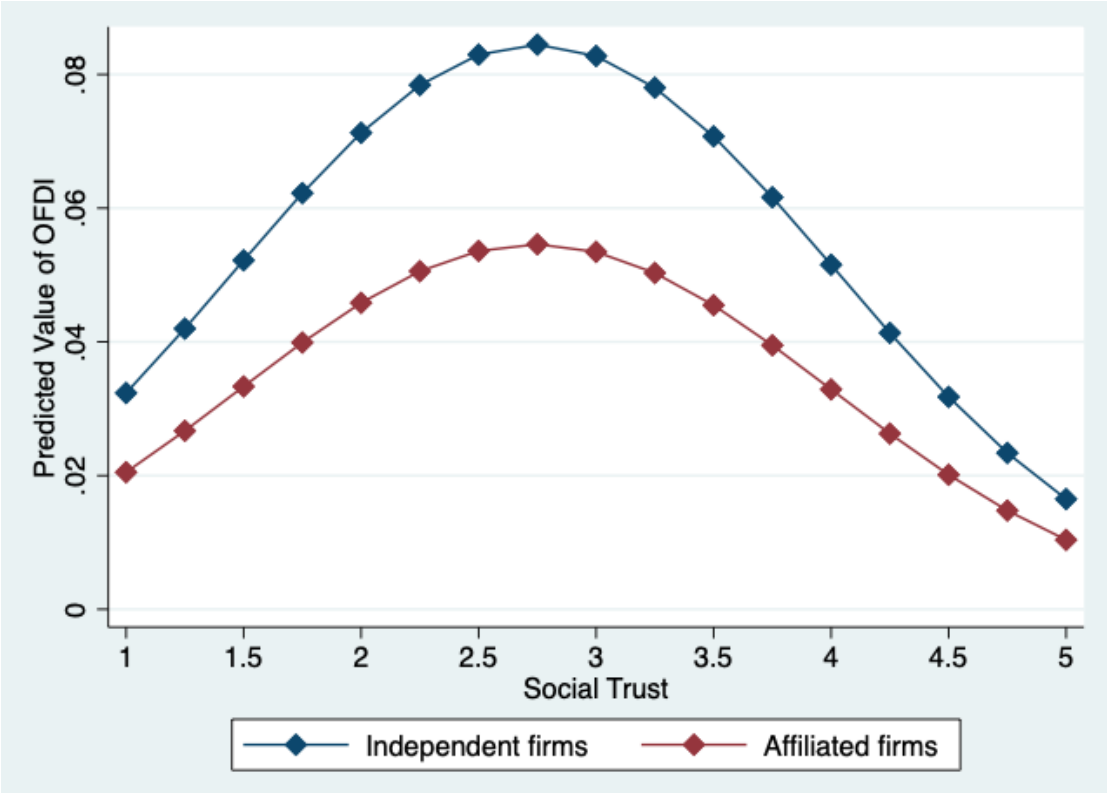

Fig. 4. The inverted-U shaped relationship between social trust and firm's FDI moderated by business group affiliation.

Table 1

Descriptive statistics and correlation matrix.

	Variables	**Mean**	**S.D.**	**1**	**2**	**3**	**4**	**5**	**6**	**7**
1	FDI	0.087	0.282	1.000						
2	Social trust	2.910	0.692	0.127	1.000					
3	Group affiliation	0.769	0.422	-0.079	-0.242	1.000				
4	Age	2.752	0.417	0.059	0.458	-0.063	1.000			
5	Size	21.592	1.213	0.166	0.191	0.184	0.169	1.000		
6	ROA	0.459	0.233	-0.019	-0.144	0.270	0.097	0.196	1.000	
7	Debt ratio	0.050	0.074	0.071	0.049	-0.047	-0.037	0.130	-0.342	1.000
8	Government ownership	0.101	0.198	-0.075	-0.379	0.252	-0.240	0.080	0.094	0.007
9	Foreign ownership	0.011	0.065	0.030	-0.006	-0.037	-0.017	-0.028	-0.071	0.050
10	International experience	9.971	19.304	0.170	0.056	-0.096	0.017	-0.010	-0.070	0.005
11	Market size	8.453	0.689	0.034	0.087	-0.133	0.124	-0.014	-0.064	0.049
12	GDP growth	0.124	0.062	-0.076	-0.331	0.121	-0.244	-0.105	0.092	0.016
13	Economic development	9.748	7.328	0.038	0.078	-0.067	0.023	-0.046	-0.059	0.056
14	Legal environment	0.322	0.493	0.094	0.473	-0.200	0.380	0.178	-0.103	0.009
	Variables	**Mean**	**S.D.**	**8**	**9**	**10**	**11**	**12**	**13**	**14**
8	Government ownership	0.101	0.198	1.000						
9	Foreign ownership	0.011	0.065	-0.042	1.000					
10	International experience	9.971	19.304	-0.066	0.089	1.000				
11	Market size	8.453	0.689	-0.101	0.044	0.099	1.000			
12	GDP growth	0.124	0.062	0.283	0.016	-0.027	-0.064	1.000		
13	Economic development	9.748	7.328	-0.096	0.033	0.119	0.451	-0.035	1.000	
14	Legal environment	0.322	0.493	-0.219	-0.009	0.056	-0.060	-0.281	0.061	1.000

Table 2

Regression results of social trust on firm's FDI.

Variable	Model 1	Model 2	Model 3
Age	-0.415***	-0.419***	-0.311***
	(0.068)	(0.068)	(0.069)
Size	0.519***	0.520***	0.561***
	(0.019)	(0.019)	(0.019)
ROA	-0.065	-0.059	0.111
	(0.116)	(0.116)	(0.118)
Debt ratio	3.863***	3.866***	3.928***
	(0.365)	(0.365)	(0.367)
Government ownership	-1.089***	-1.077***	-0.928***
	(0.151)	(0.151)	(0.154)
Foreign ownership	0.433*	0.401	0.471*
	(0.248)	(0.248)	(0.247)
International experience	0.022***	0.021***	0.021***
	(0.001)	(0.001)	(0.001)
Market size	0.036	0.026	-0.010
	(0.037)	(0.037)	(0.037)
GDP growth	0.613	0.544	0.456
	(0.499)	(0.499)	(0.502)
Economic development	0.006**	0.007**	0.009***
	(0.003)	(0.003)	(0.003)
Legal environment	0.207***	0.213***	0.206***
	(0.069)	(0.068)	(0.068)
Social trust		1.949***	4.001***
		(0.636)	(1.112)
Social trust^2		-0.362***	-0.710***
		(0.106)	(0.194)
Group affiliation			3.047**
			(1.443)
Affiliation×Social trust			-2.613**
			(1.097)
Affiliation×Social trust^2			0.463**
			(0.200)
Constant	-14.903***	-17.380***	-20.541***
	(0.572)	(1.064)	(1.612)
Year and Industry Dummy	Yes	Yes	Yes
Observations	37547	37547	37547
Chi^2	3394.457	3408.749	3506.822
Log likelihood	-9383.968	-9376.822	-9327.786

Note: Numbers in brackets are standard errors. *p<0.1; **p<0.05; ***p<0.01.