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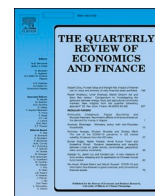
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# Family ties and firm performance empirical evidence from East Asia<sup>☆</sup>

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## ABSTRACT

We investigate the impact of family ties on the performance of family firms in East Asia. To measure family ties, we used both objective and subjective indicators from the World Value Survey. Our findings indicate that family firms that are nurtured in a society with strong family ties tend to have better performance compared to family firms that operate in a culture with weak family ties. Furthermore, family firms that have strong familial relationships are more likely to gain a competitive advantage over nonfamily firms. Conversely, family firms with weak ties tend to underperform nonfamily firms. Our results are robust across various measures of firm performance, classifications of family firm, considerations of heteroskedasticity and endogeneity, and different econometric methods.

## 1. Introduction

The research on the impact of family involvement on firm performance has been growing rapidly for the last three decades (Daspit et al., 2018; Pindado & Requejo, 2015), yet the empirical evidence remains puzzling (Amit & Villalonga, 2014). Mixed performance results have been reported across countries (Anderson & Reeb, 2003a; Barontini & Caprio, 2006; Bennedsen et al., 2007; Driffield et al., 2007; Gómez-Mejía et al., 2007; Hillier & Mccolgan, 2009; Huang et al., 2015). Indeed, the literature has shown that family firms are divergent and heterogeneous (Chrisman et al., 2005; Dyer, 2018; Nordqvist et al., 2014). Therefore, it is crucial for researchers to explain the variations among family businesses when studying the impact of family involvement (Chrisman et al., 2012).

One of the reasons for the varied performance of family businesses worldwide is the influence of strong familial culture and shared values, which may differ across cultures (Jaskiewicz et al., 2021; Thornton et al., 2012). Jaskiewicz et al. (2021) show that institutional trust and trust in family as part of a country's culture provides a context to which extent influences family firms' behaviors. Similarly, Hofstede et al. (2002) studied family norms worldwide and find that "the unique traditions of each country have been maintained in their institutions like families." (p.800). Regardless of the cultural diversity around the world, yet a few studies analyze cultural aspects across countries (Duran et al., 2019; Jaskiewicz et al., 2021). Therefore, the question regarding which

features of family firms contribute to firm performance remains unanswered.

In this study, we specifically focus on how family ties, as part of a country's culture, impact family firm performance. Strong family ties extend to all areas of life, including business, with family values serving as a benchmark for appropriate behavior (Alesina & Giuliano, 2014). In addition, family ties are unique to only family firms as they cannot be imitated or acquired in the strategic factor markets (Barney, 1986). Studying family ties, therefore, help to distinguish family effect from concentrated ownership or managerial ownership effect, which also exists in other businesses. Our main research question is: "Do family ties play an important role in determining firm performance?"

Agency theory argues that family firms should perform more effectively than nonfamily firms since the principals (owners) are also the agents (managers), agency costs are naturally mitigated (Jensen & Meckling, 1976). Founding families are also able to effectively interact and monitor managers from outside due to gaining superior knowledge of family affairs from direct involvement in the firm's activities (Anderson & Reeb, 2003a). In addition, founding families with long-term management approach and undiversified investments have a lower preference for risky high-growth investment (Carney, 2005), which reduces agency costs between firms and creditors (Anderson et al., 2012).

According to the resource-based view (RBV), family firms generate unique resources/assets in various forms such as human resources (i.e.,

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**Table 1**  
Results of variance decomposition analysis.

|  | Parameter estimate |
|--|--------------------|
| Variance (residual)                                    | 0.9700559          |
| Variance (between countries)                           | 0.3923137          |
| Variance (between waves)                               | 0.0052071          |
| Variance (between male and female)                     | 0.0000000          |
| Variance (among different education level)             | 0.0270853          |
| Variance (among scale of income)                       | 0.0000000          |
| Variance (between religious and non-religious persons) | 0.0255506          |
| Variance (among different group of age)                | 0.0884874          |
| % of total residual variance                           | 64.30              |
| % of total explained variance by country effects       | 26.00              |
| % of total explained variance by wave effects          | 0.30               |
| % of total explained variance by gender effects        | 0.00               |
| % of total explained variance by education effects     | 1.80               |
| % of total explained variance by income effects        | 0.00               |
| % of total explained variance by religion effects      | 1.69               |
| % of total explained variance by age effects           | 5.87               |
| Among explained variance, % explained by:              |                    |
| Country effects  | 72.83              |
| Time effects   | 1.00               |
| Gender effects   | 0.00               |
| Education effects                                      | 5.03               |
| Income effects   | 0.00               |
| Religion effects                                       | 4.74               |
| Age effects  | 16.43              |

family members are highly motivated, loyal, and well trained), social capital (i.e., family members use their inside/outside social connections and contribute to a firm's business), and physical/financial capital (i.e., family members use personal assets to support the business) (Carney, 2005; Chua et al., 1999; Dyer, 2006). These resources provide family firms with a competitive advantage over nonfamily firms.

Both agency theory and RBV provide useful frameworks to explain the performance of family firms (Dinh & Calabrò, 2019; Dyer, 2018; Pindado & Requejo, 2015). However, we argue that family values and family norms, as part of a country's culture, shape family members' behaviors and then influence family business outcomes. In more detail, family values, e.g. strong family ties, provide motivations for family members to prioritize collective family goals over individual goals; thus, creating the strength of cohesion, a viable source of competitive advantage (Michalisin et al., 2004). Therefore, we integrate family capital theory with agency theory and RBV to shed light under which conditions family contributes positively to firm performance, and under which conditions family has negative effects on performance.

According to family capital theory, "*Family businesses with high levels of family capital possibly do hold a sustained competitive advantage over family businesses with low levels of family capital and/or nonfamily businesses*" (Hoffman et al., 2006, p. 142). This advantage is nurtured in an environment where family ties are strong, but absent when family ties are weak. Therefore, we expect that family firms in societies with strong family ties can create a competitive advantage over those in societies with weak family ties and nonfamily firms. The central argument is that individuals nurtured in a strong family ties' culture share common goals and core value in their family; hence, they may not struggle to converge individual goals to collective goals, generating lower agency costs and cohesion strength (Miller & Le Breton-Miller, 2005; Nahapiet & Ghoshal, 1998). In addition, with strong family ties, they can produce more unique sources for creating a competitive advantage such as reputation and long-standing relationships with other stakeholders (Burt, 2009; Gomez-Mejia et al., 2001).

In contrast, family firms in which family members are raised in a weak family ties' culture do not have a competitive advantage over nonfamily firms. Indeed, family members with weak connections are likely to have competing goals and a lack of family values as a benchmark (Lansberg, 1999). As a result, the conflict among family members is high, which creates high agency costs. In addition, an environment of weak family ties does not foster the high level of trust or family

language, which is distinct to family firms, making information transformation less effective.

The study of family ties' impact on firm performance in East Asia provides a rich contextual environment. This region differs significantly from the U.S., where the majority of family studies are conducted, in terms of institutions and cultural values (Ang et al., 2013; Barkema et al., 2015). Particularly, informal institutions play significant role in shaping individuals' behaviors where formal system is still constructed (Helmke & Levitsky, 2004). Scholars have long-portrayed East Asia as distinct from Europe and North America based on extended family co-residence and family ties (Goode, 1963; Reher, 2004). In addition, the Asian business landscape is also characterized by the informal nature of stakeholder relations, which is different from Western business view. Hence, the impact of family on family business is expected to be significant in this region.

We investigate how family ties influence firm performance in East Asian countries including South Korea, Taiwan, Indonesia, Malaysia, Singapore, the Philippines, Thailand, and Hong Kong.<sup>1</sup> Our data spans from 2000 to 2017 and covers 872 of the largest publicly traded firms. Our main findings indicate that family ties play an important role in determining firm performance. In more details, family firms in which family members are fostered in a strong family ties' society exhibit superior performance relative to nonfamily firms or family firms in which family members are from a weak family ties' community. In contrast, family firms with family members from a weak family ties' culture generate the lowest performance among firms. The results suggest that only family firms in which family members shaped by a strong familial relationship culture can generate a better performance over nonfamily firms, whereas the involvement of family in which family members shaped by a weak family ties' culture negatively influences firm performance. Our results are robust in terms of heteroskedasticity, alternative performance measures and proxies for a family firm, and different econometric methods.

Our paper contributes to family business and finance literature in several ways. First, it enriches family business literature by focusing on the unique feature of family firms, that is family ties. Previous empirical studies comparing family firms with nonfamily firms have not explicitly identified the effect of *family* on performance<sup>2</sup> (Dyer, 2018). To our knowledge, this is the first study that investigates the impact of family ties as part of a country's culture on firm performance.

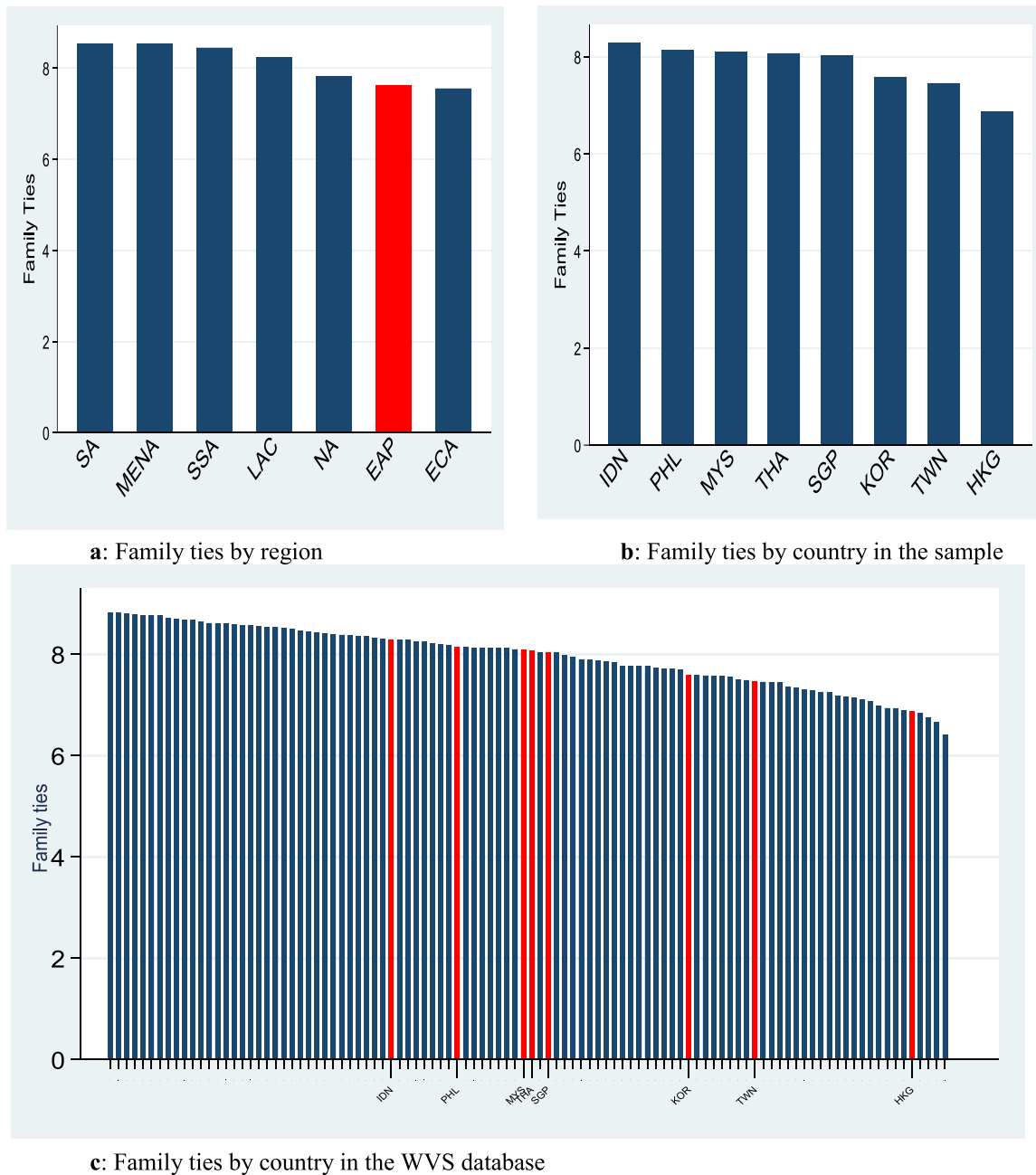
Second, this paper contributes to the growing area of finance literature which suggests that culture plays a significant role in financial outcomes.<sup>3</sup> We add a new dimension to the linkage between culture and financial outcomes by focusing on one of the most primitive relationships in society: family ties. In line with findings in the literature on the effect of culture on performance (De Jong & Van Houten, 2014; Jaskiewicz et al., 2021), our findings suggest that family ties as part of a country's culture affect the firms' performance. The findings shed light on the inconclusive results of previous studies on family firm performance across countries.

Third, there has been a greater surge in family business research on 'Western' family firms rather than on 'Asian' family firms, with 73% of family business research focusing on North American and European family enterprises (De Massis et al., 2012). Given that the number of studies on 'Asian' family firms is still limited (De Massis et al., 2012),

<sup>1</sup> We acknowledge that Hong Kong is a special administrative region rather than a country, but to preserve the continuity of the discussion, we refer to it as a country (Carney & Child, 2013).

<sup>2</sup> A notable exception is Gomez-Mejia et al. (2001).

<sup>3</sup> Among these is Aherm et al. (2012) who focus on the impact cultural distance has on the outcome of international takeover decisions. Hutzschenreuter and Voll (2008) and De Jong and van Houten (2014) explore the role of cultural diversity in the context of multinational organizations and how cultural diversity within these organizations affects their performance.



**Fig. 1.** Family ties. a. shows the average family ties variable (*FT\_Continuous*) by world region (EAP = East Asia & Pacific; ECA = Europe & Central Asia; LAC = Latin America & Caribbean; MENA = Middle East & North Africa; NA = North America; SA = South Asia; SSA = Sub-Saharan Africa). b. shows the average family ties variable (*FT\_Continuous*) by country from our sample (HGK = Hong Kong, IDN = Indonesia, KOR = South Korea, MYS = Malaysia, PHL = Philippines, SGP = Singapore, THA = Thailand, TWN = Taiwan). c. shows the average family ties variable (*FT\_Continuous*) by country in the WVS database.

this paper fills this gap by offering further insights into the effect of family ties on firm performance within Asia. This is important as family firms are not only dominant but also a long-lasting organizational form in this region (Carney & Child, 2013; Claessens et al., 2000).

The rest of the paper is structured as follows. Section 2 reviews the literature and proposes hypotheses. Section 3 presents the data and methodology. Section 4 discusses the results. Section 5 provides the conclusion.

## 2. Literature review and hypothesis development

### 2.1. Agency theory

According to classic agency theory, family firms have lower agency costs than nonfamily firms, making family governance more efficient in creating firm value. Jensen and Meckling (1976) argue that agency costs are less severe in family firms since the familial relationships between owners and managers reduce the opportunistic behaviors of managers and increase the propensity to carefully conserve resources. Even with outside CEOs, family firms still have lower agency costs since founding families, as large block-holders and undiversified investors, spend more time on and put more effort into monitoring managers (Anderson &

**Table 2**  
Family ties and formal institutions in East Asia countries.

| Country                             | Family ties | Trust in people | Country follows primarily a given Religion | Law origin | Anti-director rights |
|-------------------------------------|-------------|-----------------|--|------------|----------------------|
| <i>Weak family ties countries</i>   |             |                 |  |            |                      |
| Hong Kong                           | 6.87        | 0.45            | No   | English    | 4                    |
| South Korea                         | 7.59        | 0.29            | No   | German     | 2                    |
| Taiwan                              | 7.28        | 0.31            | Yes  | France     | 3                    |
| Singapore                           | 8.03        | 0.27            | Yes  | English    | 3                    |
| <i>Strong family ties countries</i> |             |                 |  |            |                      |
| Malaysia                            | 8.09        | 0.09            | Yes  | English    | 3                    |
| Philippines                         | 8.14        | 0.06            | Yes  | France     | 4                    |
| Indonesia                           | 8.29        | 0.48            | Yes  | France     | 2                    |
| Thailand                            | 8.07        | 0.38            | Yes  | English    | 3                    |

Reeb, 2003a). As a result, family firms are likely to outperform nonfamily firms. In addition, family owners with survivorship concerns are less likely to pursue risky investments, which is in line with creditors' interest, reducing agency cost between family firms and creditors (Carney, 2005).

However, the agency costs between controlling family owners and minority shareholders introduce potential issues. By having superior information and management position, founding families have high opportunities to expropriate wealth from minority shareholders (Demsetz & Lehn, 1985). In addition, the separation of control from cash flows rights in most family firms provides greater incentives and ability for controlling families to exploit minority shareholders. Managers of family firms may act not towards the entire business but towards the family itself (Bertrand & Schoar, 2006). Founding families who own a group of publicly traded and private firms may divert resources from public firms to private firms (Block, 2012; Chrisman & Patel, 2012). In addition, family members with different views of distribution ownership, compensation, risk, and responsibility may resort to arguments (Faccio et al., 2001; Schulze et al., 2003). Family members whose ownership is minor can free ride on the controlling owners' equity. Therefore, family firms are likely to underperform nonfamily firms.

2.2. Resourced-based view

Under the RBV framework of Habbershon and Williams (1999), the strong integration of family and business can generate distinctive features that build competitive advantage for family firms (Carney, 2005; Chua et al., 1999; Hoffman et al., 2006).

Family firms may possess several advantages through various forms of social, human, and financial capital. Family firms have more advantages in building social connections due to their ability to foster and nurture long-standing relationships across generations (Carney, 2005; Dyer, 2006). Stakeholders prefer to develop personal relationships with family since commitments are more enduring and trusted than commitments by nonfamily and myopic managers of nonfamily firms. Family firms have lower transaction costs and more effective information flows, especially in terms of private information, due to the close relationships and the high level of trust in family firms (Daily & Dolinger, 1992; Lin, 2002; Tagiuri & Davis, 1996).

In addition, a family-oriented workplace results in more inspired and loyal employees (Ward, 1988, 1997). As the family name is "on the building," family members are more flexible about working long hours in order to help the firm succeed (De Rosenblatt et al., 1985). Finally, concerned with the longevity of the business through the generations and long-term financial security protection, family members provide low cost and 'patient' capital (Aronoff & Ward, 1995). Sirmon and Hitt (2003) assert that 'survivability capital' can provide a competitive advantage to a family firm during adverse economic times, especially after an unsuccessful extension or new market venture.

However, close family bonds may also introduce disadvantages.

**Table 3**  
Correlations matrix.

|                     | ROA        | ROE        | SIZE       | LEV        | GROWTH OPP | RISK       | AGE        | RealGDPgrowthrate | Legal_origin | Anti_Director_Index | Trust_in_people |
|---------------------|------------|------------|------------|------------|------------|------------|------------|-------------------|--------------|---------------------|-----------------|
| ROA                 | 1          |            |            |            |            |            |            |                   |              |                     |                 |
| ROE                 | 0.584 ***  | 1          |            |            |            |            |            |                   |              |                     |                 |
| SIZE                | 0.053 ***  | 0.154 ***  | 1          |            |            |            |            |                   |              |                     |                 |
| LEV                 | -0.175 *** | 0.048 ***  | 0.297 ***  | 1          |            |            |            |                   |              |                     |                 |
| GROWTH OPP          | -0.007     | -0.069 *** | 0.073      | -0.099 *** | 1          |            |            |                   |              |                     |                 |
| RISK                | -0.143 *** | -0.029 *** | -0.243 *** | 0.099 ***  | -0.033 *** | 1          |            |                   |              |                     |                 |
| AGE                 | -0.109 *** | -0.056 *** | 0.111 ***  | 0.015      | -0.117 *** | -0.036 *** | 1          |                   |              |                     |                 |
| RealGDPgrowthrate   | 0.094 ***  | 0.087 ***  | -0.103 *** | -0.020 *   | -0.105 *** | 0.126 ***  | -0.047 *** | 1                 |              |                     |                 |
| Legal_origin        | -0.054 *** | -0.084 *** | -0.170 *** | -0.042 *** | -0.253 *** | -0.172 *** | -0.065 *** | 0.026 ***         | 1            |                     |                 |
| Anti_Director_Index | -0.124 *** | -0.159 *** | -0.179 *** | -0.041 *** | -0.090 *** | -0.117 *** | 0.105 ***  | -0.026 ***        | 0.466 ***    | 1                   |                 |
| Trust_in_people     | 0.000      | -0.004     | 0.054 ***  | 0.034 ***  | -0.014     | 0.132 ***  | 0.058 ***  | -0.111 ***        | -0.038 ***   | -0.223 *            | 1               |

**Table 4**  
Descriptive statistics of firm characteristics.

| Variable   | N      | Mean   | SD      | Q1     | Q2     | Q3     |
|------------|--------|--------|---------|--------|--------|--------|
| ROA        | 15,501 | 11.087 | 10.846  | 5.799  | 10.468 | 16.353 |
| ROE        | 15,501 | 25.821 | 31.654  | 12.285 | 22.803 | 35.242 |
| SIZE       | 15,746 | 13.331 | 1.772   | 12.126 | 13.251 | 14.511 |
| LEV        | 15,194 | 12.442 | 14.219  | 0.213  | 7.537  | 20.039 |
| GROWTH_OPP | 15,501 | 6.036  | 54.1926 | 1.413  | 3.6810 | 7.541  |
| RISK       | 15,117 | 16.713 | 11.295  | 9.669  | 13.758 | 20.359 |
| AGE        | 15,501 | 3.282  | 0.782   | 2.890  | 3.401  | 3.784  |

Family firms may face unqualified human resources if family members are assigned to management positions due to nepotism, kinship, or distrust of members rather than recognition of employee ability. “Unfair” human resource management can lead to employees’ lack of incentive to invest specific knowledge in firms (Miller et al., 2008). Indeed, nonfamily employees’ sense of being “second-class citizens” may result in low employee morale and productivity. Families can also take assets out of businesses for family needs (Haynes et al., 1999), therefore putting the firm at risk. The integration of family and business financial resources may make accountability difficult, generating more opportunism on the part of the family members.

2.3. Family capital theory

Both agency theory and resource-based view are useful in explaining the relationship between family ownership and firm performance. Though, they provide competing expectations and empirical evidence seems challenging theoretical expectations. To further elucidate the underlying mechanisms, Hoffman et al. (2006) introduce the concept of family capital as an important factor in creating core competency of family business. Family capital is a special form of social capital since social capital is a resource embedded in relationships among people, while family capital is a resource derived from relationships among family members. However, ties created in the structure of families are stronger, more intense, and more enduring than those created in organizations and communities. Hence, family capital is unique and stronger relative to social capital which may exist in other types of business. Family capital theory suggests that family businesses with high level of family capital are likely to hold sustained competitive advantage over family business with low family capital and/or nonfamily businesses.

In more details, family ties foster connections between family members, creating information channels and family norms which are important factors creating core competency of family business. In other words, these family relationships shape all aspects of family business including the structure, governance, management and even transferring to next generations. In family businesses with strong relational ties, the interaction between family members are more frequent and the history of relationship in families is trustable and durable; therefore, family

members can quickly and effectively communicate and are more willing to converge individual goals toward a collective goal within family businesses. In turn, these leads to effective information channels and family norms which are important in creating sustained competitive advantages. In contrast, resources steaming from social capital in nonfamily businesses are more vulnerable and can be mitigated or acquired in strategic factors markets (Barney, 1986). Therefore, family capital may be a strategic resource of family firms which can lead to sustained competitive advantage in family businesses and improved family business performance.

In contrast, lacking strong family ties, those rooted in family relationships, may generate liabilities rather than capital for family firms. With weak ties, family members may act at the expense of other family members, generating competing goals and interactions among family members occur with lower level of trust.

2.4. Hypotheses development

Prior literature has found that individuals with similar value systems tend to perceive and interpret environmental events in analogous ways. This impacts their interpersonal interactions. Specifically, Meglino and Ravlin (1998) showed similarity in values leads to similarity in how people classify external stimuli and influences communication between them. Shared values also mean individuals often behave in comparable manners. Furthermore, people commonly justify their actions based on societal norms rather than just personal desires (Nord et al., 1988). In other words, a person’s behaviors tend to correlate more strongly with their surrounding society’s expectations than purely self-motivated drives (Kluckhohn, 1951; Rokeach, 1973).

Based on this prior research, we argue that individuals socialized in a culture with strong family ties will likely develop strong interpersonal connections within their own family network. Indeed, Bertrand and Schoar (2006) empirically demonstrated this phenomenon, finding cultural factors (e.g. country of origin) explained around 80% of the variation in individual-level strength of family ties, compared to only 20% explained by personal attributes like age, gender or education. In addition, Hofstede et al. (2002) observed unique country-level traditions such as familial norms tend to persist across generations within family units. Therefore, a family firm comprising members shaped by a culture emphasizing strong family ties can be expected to exhibit robust familial relationships. Conversely, a family firm containing individuals acculturated in a context promoting weaker family ties would likely demonstrate more frail intra-family bonds. Our main postulation is aligned with Davis and Williamson (2020) who find that variation in strength of family ties at both the societal and individual dimension has root causes tied to cultural influences.

Under the framework of family capital theory proposed by Hoffman et al. (2006), only family firms with high levels of family capital can achieve sustained competitive advantage. Specifically, Hoffman et al.

**Table 5**  
Univariate results of firm performance and firm characteristics.

|  | ROA         | ROE        | SIZE        | LEV        | AGE         | GROWTH_OPP | RISK        | Obs.   |
|--|-------------|------------|-------------|------------|-------------|------------|-------------|--------|
| <i>Panel A: Family firms located in strong family ties society (STFF) versus family firms located in weak family ties society (WTFF)</i> |             |            |             |            |             |            |             |        |
| STFF   | 11.78       | 28.46      | 12.59       | 13.52      | 3.32        | 7.07       | 18.92       | 4073   |
| WTFF   | 8.52        | 21.51      | 13.6        | 12.78      | 3.45        | 5.14       | 16.69       | 3300   |
| T-test   | (11.80)* ** | (8.05)* ** | (24.04)* ** | (1.94)     | (7.09)* **  | (0.94)     | (7.16)* **  | 7373   |
| <i>Panel B: Family firms located in strong family ties society (STFF) versus nonfamily firms(NFF)</i>                                    |             |            |             |            |             |            |             |        |
| STFF   | 11.78       | 28.46      | 12.59       | 13.52      | 3.32        | 7.07       | 18.92       | 4073   |
| NFF  | 11.66       | 26.19      | 13.55       | 11.9       | 3.21        | 5.91       | 15.84       | 10,088 |
| T-test   | (0.57)      | (3.66)* ** | (28.87)* ** | (5.69)* ** | (8.05)* **  | (0.98)     | (13.50)* ** | 14,161 |
| <i>Panel C: Family firms located in weak family ties society (WTFF) versus nonfamily firms (NFF)</i>                                     |             |            |             |            |             |            |             |        |
| WTFF   | 8.52        | 21.51      | 13.6        | 12.78      | 3.45        | 5.14       | 16.69       | 3300   |
| NFF  | 11.66       | 26.19      | 13.55       | 11.9       | 3.21        | 5.91       | 15.84       | 10,088 |
| T-test   | (14.06)* ** | (7.36)* ** | (1.34)      | (3.04)* *  | (15.10)* ** | (5.53)* ** | (3.84)* **  | 13,388 |

This table reports T-test results of performance and firm characteristics in family firms with strong family ties, family firms with weak family ties, and firms. \* \*\*, \* \*\*, \* \*\*, \* denote statistical significance at the 1%, 5%, and 10% levels, respectively.

**Table 6**  
Firm performance and family firm status and family ties.

|                               | Dependent variable: ROA |                         | Dependent variable: ROE |                         |
|-------------------------------|-------------------------|-------------------------|-------------------------|-------------------------|
|                               | (1)                     | (2)                     | (3)                     | (4)                     |
| <i>FF_General</i>             | -0.390<br>(0.171)       |                         | 0.713<br>(0.725)        |                         |
| <i>FF_Continuous</i>          |                         | 4.271 * **<br>(0.603)   |                         | 9.910 * **<br>(1.337)   |
| <i>SIZE</i>                   | 0.248<br>(0.251)        | 0.836<br>(0.460)        | 2.096 * *<br>(0.668)    | 3.790 * *<br>(1.423)    |
| <i>LEV</i>                    | -0.161 * **<br>(0.019)  | -0.155 * **<br>(0.020)  | -0.038<br>(0.036)       | -0.082<br>(0.054)       |
| <i>GROWTH_OPP</i>             | 0.378 * **<br>(0.026)   | 0.353 * **<br>(0.050)   | 0.688 * **<br>(0.051)   | 0.646 * **<br>(0.128)   |
| <i>RISK</i>                   | -0.150 * **<br>(0.019)  | -0.157 * **<br>(0.013)  | -0.103<br>(0.065)       | -0.122<br>(0.080)       |
| <i>AGE</i>                    | -0.972<br>(0.557)       | 0.213<br>(0.333)        | -0.632<br>(0.686)       | 0.882<br>(1.020)        |
| <i>Legal_origin</i>           | -1.052<br>(1.163)       | -1.406<br>(0.833)       | -1.239<br>(3.149)       | -5.112 * *<br>(1.740)   |
| <i>Anti_Director_Index</i>    | -1.580<br>(1.095)       | -0.593<br>(0.664)       | -5.917 *<br>(2.569)     | -2.200<br>(1.649)       |
| <i>RealGDPgrowthrate</i>      | 0.412 * *<br>(0.165)    | 0.322 * *<br>(0.116)    | 0.916 * *<br>(0.364)    | 0.195<br>(0.349)        |
| <i>Trust_in_people</i>        | 3.049<br>(4.490)        | 7.894 * *<br>(2.442)    | -4.359<br>(9.795)       | 6.009<br>(4.264)        |
| <i>Intercept</i>              | 15.915 * *<br>(4.911)   | -34.858 * *<br>(12.509) | 9.454<br>(15.964)       | -98.304 * *<br>(35.493) |
| <i>Industry fixed effect</i>  | Yes                     | Yes                     | Yes                     | Yes                     |
| <i>Year fixed effect</i>      | Yes                     | Yes                     | Yes                     | Yes                     |
| <i>Obs.</i>                   | 12,737                  | 5193                    | 12,737                  | 5193                    |
| <i>Adjusted_R<sup>2</sup></i> | 0.190                   | 0.200                   | 0.100                   | 0.120                   |

This table reports results of ordinary least square (OLS) regressions. The dependent variable is Return on Assets (ROA) in columns 1–2, and Return on Equity (ROE) in columns 3–4. The cut-off level of ownership is 20%. Family firm is defined as a firm in which the largest shareholder who holds at least 20% of ownership is a family or individual. The main explanatory variables are: (1) *FF\_General*, a dummy variable that equals 1 if a firm is a family firm, otherwise 0; (2) *FF\_Continuous*, family ties of a firm; (2). Other variables are described in Appendix. Dummy variables for industry fixed effect and year fixed effect are but not reported. Robust standard errors adjusted for clustering by country are reported in parentheses. \* \*\*, \* \*, \* denote statistical significance at the 1%, 5%, and 10% levels, respectively.

(2006) and Putnam (1993) suggest that strong family ties enable family firms to develop family capital, whereas weak family ties may impede the creation of family capital. There are a few reasons for this. Family firms characterized by strong family ties can build a robust reputation in the market, conferring benefits like lower monitoring and transaction costs, more efficient resource procurement, lower costs of capital, and loyal customers (Burt, 2009). Additionally, close-knit family ties facilitate high levels of trust between members and reduce opportunistic behaviors, improving information exchange and cooperation efficiency within the firm (Lewicki & Bunker, 1996).

In contrast, family firms with weak family ties lack these advantages. They are unable to attain a strong reputation due to low levels of intra-family trust and an absence of united family values. As a result, weak-tied family firms may struggle to create distinctive resources and capabilities needed to gain competitive parity versus rivals. Therefore, only those family firms endowed with robust family capital derived from strong familial interconnections can realize sustained performance benefits according to family capital theory.

Family firms characterized by strong family ties also benefit from reduced agency costs. This is because closely-knit family members typically share common goals and core values (Nahapiet & Ghoshal, 1998). Ensley and Pearson (2005) found top management teams within family firms exhibit greater cohesion when they possess aligned objectives, trusted relationships, and unified value sets. Additionally, family members often use the established values of their familial unit as a benchmark to guide their own actions (Tajfel, 1982). This coalescence of goals and values engendered by strong family ties makes free-riding behaviors that damage business performance less probable among family members. In contrast, weak family ties are linked to higher agency costs for firms. Specifically, families with frail intra-connections face the challenge of diverging aims and priorities among members (Lansberg, 1999). When family members pursue discordant

self-interests at each other's expense, it undermines firm function and output (Kaye, 1991).

We argue that family firms with strong family ties can achieve higher performance relative to family firms with weak family ties since they are able to create a competitive advantage and face lower agency costs. Therefore, we hypothesize that:

**H1.** : Family firms located in a strong family ties' society generate higher performance relative to family firms located in a weak family ties' society.

Compared to nonfamily firms, family firms with strong family ties face less agency costs. Family members with strong family ties usually share common goals, core values, and have an elevated level of trust, which helps firms to avoid cumbersome and costly monitoring mechanisms. In addition, family firms with strong family ties can generate distinctive features which build a competitive advantage over nonfamily firms (Chua et al., 1999; Habbershon & Williams, 1999; Hoffman et al., 2006). With the advantage of being able to foster and nurture long-standing relationships across generations, family firms with strong family ties are better equipped to build social connections (Carney, 2005; Dyer, 2006). Stakeholders prefer to establish personal relationships with firms that have strong family ties since commitments by family are enduring and more trusted than those by myopic managers of nonfamily firms. With strong connections, family firms transfer information more effectively than nonfamily firms, especially private information (Daily & Dollinger, 1992; Lin, 2002; Tagiuri & Davis, 1996). Strong connections among family members also help to lower transaction costs as ties among family are more enduring, intense, and stronger than ties in nonfamily firms and communities (Hoffman et al., 2006). We expect that family firms with strong family ties have reduced agency costs and are able to generate unique resources over nonfamily firms. Therefore, we hypothesize that:

**Table 7**  
Firm performance and family ties – Threshold 20%.

|                               | Dependent variable: ROA |                       |                       | Dependent variable: ROE |                       |                      |
|-------------------------------|-------------------------|-----------------------|-----------------------|-------------------------|-----------------------|----------------------|
|                               | (1)                     | (2)                   | (3)                   | (4)                     | (5)                   | (6)                  |
| <i>STFFvsWTFF</i>             | 4.665 ***<br>(0.648)    |                       |                       | 9.768 ***<br>(1.627)    |                       |                      |
| <i>STFFvsNFF</i>              |                         | 1.347 **<br>(0.642)   |                       |                         | 4.907 **<br>(1.699)   |                      |
| <i>WTFFvsNFF</i>              |                         |                       | -2.436 **<br>(0.819)  |                         |                       | -3.806 **<br>(1.710) |
| <i>SIZE</i>                   | 0.915 **<br>(0.383)     | 0.347 *<br>(0.190)    | 0.482 *<br>(0.239)    | 3.415 **<br>(1.109)     | 1.989 **<br>(0.670)   | 2.822 ***<br>(0.744) |
| <i>LEV</i>                    | -0.148 ***<br>(0.018)   | -0.177 ***<br>(0.015) | -0.169 ***<br>(0.021) | -0.045<br>(0.037)       | -0.045<br>(0.039)     | -0.071 **<br>(0.024) |
| <i>GROWTH OPP</i>             | 0.346 ***<br>(0.037)    | 0.370 ***<br>(0.039)  | 0.371 ***<br>(0.033)  | 0.731 ***<br>(0.129)    | 0.709 ***<br>(0.056)  | 0.665 ***<br>(0.077) |
| <i>RISK</i>                   | -0.148 ***<br>(0.012)   | -0.155 ***<br>(0.023) | -0.144 ***<br>(0.029) | -0.096<br>(0.081)       | -0.154 ***<br>(0.040) | -0.072<br>(0.096)    |
| <i>AGE</i>                    | -0.084<br>(0.349)       | -1.076 ***<br>(0.367) | -1.107 *<br>(0.565)   | 0.627<br>(1.279)        | -0.361<br>(0.968)     | -0.887 *<br>(0.427)  |
| <i>Legal origin</i>           | -0.411<br>(0.498)       | -0.847<br>(0.532)     | -0.511<br>(1.254)     | -2.650<br>(1.744)       | -0.852<br>(2.049)     | 2.345<br>(3.531)     |
| <i>Anti_Director_Index</i>    | -1.314 ***<br>(0.206)   | -1.486 ***<br>(0.437) | -1.691<br>(1.125)     | -4.676 ***<br>(1.083)   | -5.602 **<br>(2.034)  | -7.893 **<br>(2.671) |
| <i>RealGDPgrowthrate</i>      | 0.412 ***<br>(0.064)    | 0.371 ***<br>(0.076)  | 0.320 **<br>(0.120)   | 0.410<br>(0.273)        | 0.862 **<br>(0.261)   | 0.888 **<br>(0.291)  |
| <i>Trust_in_people</i>        | 4.049 **<br>(1.545)     | 5.521 **<br>(2.121)   | 5.776<br>(5.254)      | -1.289<br>(4.714)       | 4.611<br>(7.351)      | 5.900<br>(12.129)    |
| <i>Intercept</i>              | -2.711<br>(5.596)       | 13.671 ***<br>(3.243) | 13.824 ***<br>(3.849) | -21.152<br>(18.804)     | 7.433<br>(14.566)     | 2.256<br>(14.723)    |
| <i>Industry fixed effect</i>  | Yes                     | Yes                   | Yes                   | Yes                     | Yes                   | Yes                  |
| <i>Year fixed effect</i>      | Yes                     | Yes                   | Yes                   | Yes                     | Yes                   | Yes                  |
| <i>Obs.</i>                   | 5693                    | 10,679                | 10,102                | 5693                    | 10,679                | 10,102               |
| <i>Adjusted_R<sup>2</sup></i> | 0.19                    | 0.19                  | 0.21                  | 0.11                    | 0.10                  | 0.13                 |

This table reports results of ordinary least square (OLS) regressions. The dependent variable is Return on Assets (ROA) in columns 1 – 3, and Return on Equity (ROE) in columns 4 – 6. The cut-off level of ownership is 20%. Family firm is defined as a firm in which the largest shareholder who holds at least 20% of ownership is a family or individual. The main explanatory variables are: (1) *STFFvsWTFF*, a dummy variable that equals 1 if a firm is a family firm with strong family ties, and 0 if a firm is a family firm with weak family ties; (2) *STFFvsNFF*, a dummy variable that equals 1 if a firm is a family firm with strong family ties, and 0 if a firm is a nonfamily firm; (3) *WTFFvsNFF*, a dummy variable that equals 1 if a firm is a family firm with weak family ties, and 0 if a firm is a nonfamily firm. Other variables are described in Appendix. Dummy variables for industry fixed effect and year fixed effect are included but not reported. Robust standard errors adjusted for clustering by country are reported in parentheses. \*\*\*, \*\*, \* denote statistical significance at the 1%, 5%, and 10% levels, respectively.

## H2. : Family firms located in a strong family ties' society generate higher performance relative to nonfamily firms.

In contrast, family firms with weak family ties may undermine the development of family capital (Hoffman et al., 2006). The lack of cohesion between family members can create significant barriers to sharing information and creating knowledge. Diverging perspectives on issues like ownership distribution, compensation structure, risk tolerance, and responsibility allocation are also more likely to incite conflicts between family stakeholders. As a result, such family firms tend to be rife with strife, deception, and quarreling (Schulze et al., 2003). This type of family firm probably incurs greater agency costs as well, given family members are prone to pursue discrepant objectives. Minor family owners may also engage in free-riding behaviors that exploit the wealth of controlling family parties (Lansberg, 1999; Schulze et al., 2003). Collectively, weak family ties can breed afflictive family-level issues like competing priorities, opportunism, shirking, and adverse selection phenomena (Dyer, 2018). External investors may likewise be reticent to put capital into family firms plagued by inner-faction conflict. Therefore, we expect the diminished cohesion stemming from fragile family bonds will detrimentally color a family firm's performance. Hence, we hypothesize that:

## H3. : Family firms located in a weak family ties' society generate lower performance relative to nonfamily firms.

### 3. Data and methodology

In this section, we describe data collection, the main variables, and

model specification.

#### 3.1. Data collection

We obtain ultimate beneficial ownership data from Carney and Child (2013), which covers 1387 large publicly traded firms in nine East Asian countries: Japan, South Korea, Taiwan, Hong Kong, Singapore, Malaysia, Indonesia, the Philippines, and Thailand. We exclude all Japanese corporations to avoid outlier effects as Japanese firms are distinctive from the rest of the firms in East Asia<sup>4</sup>. We also exclude all financial institutions (Ampenberger et al., 2013; Anderson & Reeb, 2003b; Driffield et al., 2006). After including available data on firm characteristics extracted from Thomson Reuters Datastream Advance, we end up with a sample of 872 non-financial firms. We obtain merger and acquisitions (M&As) data transactions from Bloomberg for the period 2000 to 2017 to control for the change in the type of ownership structure. After excluding firm-year observations of those firms that were targets of M&A transactions and for which we could not determine ultimate ownership after M&A, we end up with 12,837 firm-year observations.

<sup>4</sup> Having widely dispersed ownership structures, the separation of ownership and management is more important in Japanese firms than in East Asian economies (Claessens et al., 2000). The largest shareholdings in Japanese firms are widely held by financial institutions, which is very different from many economies in the region. More importantly, financial institutions and their affiliated firms often cooperate to influence the governance of corporations, which is difficult to capture using formal ownership data.



**Table 8**  
Firm performance and family ties – Threshold 10%.

|                               | Dependent variable: ROA |                        |                        | Dependent variable: ROE |                        |                        |
|-------------------------------|-------------------------|------------------------|------------------------|-------------------------|------------------------|------------------------|
|                               | (1)                     | (2)                    | (3)                    | (4)                     | (5)                    | (6)                    |
| <i>STFFvsWTFF</i>             | 4.710 * **<br>(0.694)   |                        |                        | 10.379 * **<br>(1.927)  |                        |                        |
| <i>STFFvsNFF</i>              |                         | 1.003 *<br>(0.658)     |                        |                         | 3.983 * *<br>(1.682)   |                        |
| <i>WTFFvsNFF</i>              |                         |                        | -2.919 * **<br>(0.826) |                         |                        | -4.309 * *<br>(1.788)  |
| <i>SIZE</i>                   | 0.882 *<br>(0.397)      | 0.412 * *<br>(0.210)   | 0.567 * *<br>(0.239)   | 3.778 * **<br>(0.983)   | 1.836 * *<br>(0.663)   | 2.924 * **<br>(0.808)  |
| <i>LEV</i>                    | -0.144 * **<br>(0.016)  | -0.181 * **<br>(0.015) | -0.176 * **<br>(0.025) | -0.026<br>(0.033)       | -0.044<br>(0.039)      | -0.091 * **<br>(0.024) |
| <i>GROWTH_OPP</i>             | 0.339 * **<br>(0.033)   | 0.359 * **<br>(0.040)  | 0.372 * **<br>(0.028)  | 0.751 * **<br>(0.110)   | 0.683 * **<br>(0.066)  | 0.684 * **<br>(0.078)  |
| <i>RISK</i>                   | -0.147 * **<br>(0.011)  | -0.154 * **<br>(0.025) | -0.145 * **<br>(0.029) | -0.047<br>(0.096)       | -0.184 * **<br>(0.044) | -0.088<br>(0.098)      |
| <i>AGE</i>                    | -0.097<br>(0.322)       | -1.044 * **<br>(0.390) | -1.091 *<br>(0.563)    | 0.867<br>(1.257)        | -0.272<br>(1.095)      | -0.838 *<br>(0.388)    |
| <i>Legal_origin</i>           | -0.362<br>(0.534)       | -0.970 *<br>(0.560)    | -0.465<br>(1.176)      | -2.098<br>(2.053)       | -1.254<br>(1.939)      | 2.336<br>(3.566)       |
| <i>Anti_Director_Index</i>    | -1.315 * **<br>(0.259)  | -1.535 * **<br>(0.472) | -1.805<br>(1.104)      | -4.589 * **<br>(1.151)  | -4.993 *<br>(2.244)    | -8.144 * *<br>(2.803)  |
| <i>RealGDPgrowthrate</i>      | 0.418 * **<br>(0.065)   | 0.363 * **<br>(0.081)  | 0.318 * *<br>(0.128)   | 0.384<br>(0.216)        | 0.948 * **<br>(0.254)  | 0.876 * *<br>(0.308)   |
| <i>Trust_in_people</i>        | 4.270 * *<br>(1.559)    | 5.840 * **<br>(2.232)  | 5.774<br>(5.516)       | -0.794<br>(5.550)       | 7.241<br>(8.210)       | 6.711<br>(13.505)      |
| <i>Intercept</i>              | -3.781<br>(6.672)       | 13.124 * **<br>(3.607) | 13.371 * *<br>(3.997)  | -25.080<br>(20.116)     | 8.526<br>(14.979)      | 2.649<br>(15.195)      |
| <i>Industry fixed effect</i>  | Yes                     | Yes                    | Yes                    | Yes                     | Yes                    | Yes                    |
| <i>Year fixed effect</i>      | Yes                     | Yes                    | Yes                    | Yes                     | Yes                    | Yes                    |
| <i>Obs.</i>                   | 6651                    | 9793                   | 9560                   | 6651                    | 9793                   | 9560                   |
| <i>Adjusted_R<sup>2</sup></i> | 0.18                    | 0.19                   | 0.22                   | 0.12                    | 0.10                   | 0.13                   |

This table reports results of ordinary least square (OLS) regressions. The dependent variable is Return on Assets (ROA) in columns 1–3, and Return on Equity (ROE) in columns 4–6. The cut-off level of ownership is 10%. Family firm is defined as a firm in which the largest shareholder who holds at least 10% of ownership is a family or individual. The main explanatory variables are: (1) *STFFvsWTFF*, a dummy variable that equals 1 if a firm is a family firm with strong family ties, and 0 if a firm is a family firm with weak family ties; (2) *STFFvsNFF*, a dummy variable that equals 1 if a firm is a family firm with strong family ties, and 0 if a firm is a nonfamily firm; (3) *WTFFvsNFF*, a dummy variable that equals 1 if a firm is a family firm with weak family ties, and 0 if a firm is a nonfamily firm. Other variables are described in Appendix. Dummy variables for industry fixed effect and year fixed effect are included but not reported. Robust standard errors adjusted for clustering by country are reported in parentheses. \* \*\* , \* \* , \* denote statistical significance at the 1%, 5%, and 10% levels, respectively.

We use the World Values Survey (WVS) to measure the strength of family ties, following Bertrand and Schoar (2006) and Alesina et al. (2015). The WVS is an international social survey of seven waves, each wave covering the periods 1981–1984, 1990–1994, 1995–1998, 1999–2004, 2005–2009, 2010–2014 and 2017–2021, respectively. The coverage has varied depending on the wave, starting with 22 countries in the first wave (1981–1984) and reaching 80 countries in the seventh wave (2017–2021). This survey provides a wide range of subjective indicators on the relationship between parents and children, and an objective measure of family attachment, including whether young adults live with their parents. The WVS has been widely used to investigate the impact of culture on economic outcomes (Alesina et al., 2015; Alesina & Giuliano, 2010, 2014; Bertrand & Schoar, 2006; Inglehart & Baker, 2000; Jaskiewicz et al., 2021).

### 3.2. Variables

#### 3.2.1. Firm performance

We employ two measures of firm financial performance as dependent variables: return on assets (ROA) and return on equity (ROE). ROA is defined as earnings before interest, taxes, depreciation, and amortization (EBITDA) divided by total assets. It is the most commonly used measure in prior studies examining the relationship between family involvement and firm performance (O'Boyle et al., 2012). ROE is defined as EBITDA divided by common equity. It provides an alternative perspective on how effectively the firm generates profits from its equity capital base. Together, ROA and ROE allow us to evaluate firm performance from both an asset and shareholder return standpoint. ROA

assesses how productively the firm utilizes its total assets, while ROE examines the returns earned on shareholders' equity investments.

#### 3.2.2. Family firms with strong vs. weak family ties

Our main explanatory variable of interest is the strength of family ties within family firms. To measure this, we use data from the World Values Survey (WVS). Specifically, we focus on responses to four questions from the WVS that Alesina et al. (2015), previously utilized to assess family ties. Two other questions from their study could not be included since they were dropped from the WVS after the fifth wave. The four questions we analyze capture aspects of the relationship between parents and children, and attitudes toward family. Specifically, they gauge:

1. Living with parents: A binary variable where respondents receive a 1 if they currently live with their parents, and 0 otherwise. Prior research associates co-residence with stronger family ties, for instance Reher (1998) claims that "the strength and weakness refers to cultural patterns of family loyalties, allegiances, and authorities which are reflected in demographic patterns of co-residence with adult, children and older family members."
2. Making parents proud: Responses range from 1 to 4, with higher scores denoting stronger agreement that making one's parents proud is a major life goal.
3. Obeying parents: A binary variable of 1 if respondents deem childhood obedience as an important quality in their parent-child relationship, and 0 if not.

**Table 9**  
Firm performance and family ties after financial crisis.

|                               | Dependent variable: ROA |                        |                        | Dependent variable: ROE |                        |                        |
|-------------------------------|-------------------------|------------------------|------------------------|-------------------------|------------------------|------------------------|
|                               | (1)                     | (2)                    | (3)                    | (4)                     | (5)                    | (6)                    |
| <i>STFFvsWTFF</i>             | 4.121 * **<br>(0.742)   |                        |                        | 10.542 * **<br>(2.508)  |                        |                        |
| <i>STFFvsNFF</i>              |                         | 1.346 *<br>(0.729)     |                        |                         | 3.858 *<br>(1.972)     |                        |
| <i>WTFFvsNFF</i>              |                         |                        | -2.258 *<br>(0.966)    |                         |                        | -4.760 *<br>(2.298)    |
| <i>SIZE</i>                   | 0.769 *<br>(0.359)      | 0.267<br>(0.210)       | 0.459<br>(0.258)       | 2.925 * **<br>(1.146)   | 1.733 * **<br>(0.480)  | 2.465 * **<br>(0.556)  |
| <i>LEV</i>                    | -0.168 * **<br>(0.034)  | -0.211 * **<br>(0.019) | -0.187 * **<br>(0.029) | -0.092<br>(0.075)       | -0.091<br>(0.061)      | -0.096 * **<br>(0.026) |
| <i>GROWTH_OPP</i>             | 0.368 * **<br>(0.068)   | 0.413 * **<br>(0.053)  | 0.420 * **<br>(0.046)  | 0.918 * **<br>(0.274)   | 0.821 * **<br>(0.142)  | 0.859 * **<br>(0.154)  |
| <i>RISK</i>                   | -0.235 * **<br>(0.043)  | -0.286 * **<br>(0.045) | -0.270 * **<br>(0.074) | -0.159<br>(0.186)       | -0.387 * **<br>(0.094) | -0.236<br>(0.133)      |
| <i>AGE</i>                    | -0.057<br>(0.593)       | -0.531<br>(0.419)      | -0.832<br>(0.536)      | 0.925<br>(1.666)        | 0.079<br>(1.133)       | -1.124<br>(0.774)      |
| <i>Legal_origin</i>           | -1.765 * *<br>(0.702)   | -1.659 * **<br>(0.585) | -0.292<br>(1.154)      | -2.912<br>(2.629)       | -1.695<br>(1.625)      | 1.666<br>(3.161)       |
| <i>Anti_Director_Index</i>    | -0.566<br>(0.324)       | -0.888 * *<br>(0.445)  | -1.469<br>(1.171)      | -2.738 * **<br>(1.102)  | -2.776 * **<br>(1.224) | -4.700<br>(2.830)      |
| <i>RealGDPgrowthrate</i>      | 0.410 * **<br>(0.079)   | 0.467 * **<br>(0.095)  | 0.396<br>(0.224)       | 0.332 *<br>(0.168)      | 1.093 * **<br>(0.251)  | 0.962<br>(0.556)       |
| <i>Trust_in_people</i>        | 5.687 * *<br>(2.104)    | 7.499 * **<br>(2.352)  | 8.065<br>(6.814)       | 0.978<br>(6.488)        | 9.481<br>(6.916)       | 5.362<br>(14.524)      |
| <i>Intercept</i>              | 2.475<br>(4.119)        | 14.839 * **<br>(3.624) | 11.431 * *<br>(4.787)  | -17.885<br>(16.709)     | 5.744<br>(8.496)       | -3.704<br>(10.448)     |
| <i>Industry fixed effect</i>  | Yes                     | Yes                    | Yes                    | Yes                     | Yes                    | Yes                    |
| <i>Year fixed effect</i>      | Yes                     | Yes                    | Yes                    | Yes                     | Yes                    | Yes                    |
| <i>Obs.</i>                   | 2922                    | 5555                   | 5299                   | 2922                    | 5555                   | 5299                   |
| <i>Adjusted_R<sup>2</sup></i> | 0.22                    | 0.24                   | 0.23                   | 0.12                    | 0.12                   | 0.14                   |

This table reports result of ordinary least square (OLS) regressions after financial crisis (from the period 2010 to 2017). The dependent variable is Return on Assets (ROA) in columns 1–3, and Return On Equity (ROE) in columns 4–6. The cut-off level of ownership is 20%. A family firm is defined as a firm in which the largest shareholder who holds at least 20% of ownership is a family or individual. The main explanatory variables are: (1) *STFFvsWTFF*, a dummy variable that equals 1 if a firm is a family firm with strong family ties, and 0 if a firm is a family firm with weak family ties; (2) *STFFvsNFF*, a dummy variable that equals 1 if a firm is a family firm with strong family ties, and 0 if a firm is a nonfamily firm; (3) *WTFFvsNFF*, a dummy variable that equals 1 if a firm is a family firm with weak family ties, and 0 if a firm is a nonfamily firm. Other variables are described in Appendix. Dummy variables for industry fixed effect and year fixed effect are included but not reported. Robust standard errors adjusted for clustering by country are reported in parentheses. \* \*\*, \* \*, \* denote statistical significance at the 1%, 5%, and 10% levels, respectively.

#### 4. Family is important: Responses range from 1 to 4 on the importance of family in one's life, from "not at all important" to "very important".

To measure family ties, we first calculate individual-level scores using responses to the four questions. Scores are summed, with higher totals indicating stronger family attachment. Next, we average these individual scores to generate a country-level measure of family ties strength for each wave of survey data. Countries represent the aggregation of all respondents within their borders. While survey coverage varies by country and wave, our sample includes data from waves 4 through 6 for South Korea and Singapore (1999–2018). Reliance on country means is supported as family ties reflect deeply embedded cultural values shown to persist across generations (Alesina & Giuliano, 2011). Additionally, various studies demonstrate the stability of family ties over time (Alesina & Giuliano, 2010; Bertrand & Schoar, 2006; Reher, 1998).

We classify the countries in our sample as having either strong or weak family ties based on each country's aggregated family ties score. Countries with scores above the median value are categorized as strong family ties societies. Those at or below the median are classified as weak family ties societies. We then designate family firms accordingly. Firms located in countries with strong (weak) family ties scores are considered strong (weak) family firms in terms of the surrounding cultural environment supporting family bonds.

To identify family firms, we utilize one of the most widely-used approaches based on ownership concentration (Carney & Child, 2013; Claessens et al., 2000; Faccio & Lang, 2000; La Porta et al., 1999; O'Boyle et al., 2012). Specifically, a firm is designated as a family firm if a family group holds the largest number of voting shares and maintains

at least a 20% ownership stake. For robustness, we also examine an alternative cutoff of 10% family ownership.

We take an approach similar to prior research examining how cultural contexts shape firm behaviors and outcomes. Hilary and Hui (2009) measure country-level religiosity to proxy for a firm's religious orientation. Likewise, Jaskiewicz et al. (2021) consider national-level trust in family as an indicator for trust within family firms. While intra-societal variation exists, these studies recognize substantial cross-country differences that likely influence firm decisions (Jaskiewicz et al., 2021). Similarly, we do not argue family firms are homogeneous within nations. However, following the precedent set in previous work, we operationalize strength of a family firm's family ties using the cultural measure from the country where it operates.

Focusing on country-level family ties raises the question of whether individual characteristics better explain variance in these values. To address this, we conduct a variance decomposition analysis at the individual level using the full WVS sample (105 countries, 6 waves, 244,160 respondents).<sup>5</sup> Variance decomposition allows partitioning the

<sup>5</sup> Variance decomposition techniques have been widely utilized in social science disciplines, including strategic management and international business (Guo, 2017). Demystifying variance in performance: A longitudinal multilevel perspective. *Strategic Management Journal*, 38, 1327–1342. McGahan & Victor, 2010. How much does home country matter to corporate profitability? *Journal of International Business Studies*, 41, 142–165, MA, X., TONG, T. W. & FITZA, M. 2013. How much does subnational region matter to foreign subsidiary performance? Evidence from Fortune Global 500 Corporations' investment in China. *Ibid.* 44, 66–87.)

**Table 10**  
Firm performance and family ties – SEM method.

|                               | Dependent variable: ROA |                       |                       | Dependent variable: ROE |                       |                       |
|-------------------------------|-------------------------|-----------------------|-----------------------|-------------------------|-----------------------|-----------------------|
|                               | (1)                     | (2)                   | (3)                   | (4)                     | (5)                   | (6)                   |
| <i>STFFvsWTFF</i>             | 4.665 ***<br>(0.322)    |                       |                       | 9.768 ***<br>(1.033)    |                       |                       |
| <i>STFFvsNFF</i>              |                         | 1.347 ***<br>(0.249)  |                       |                         | 4.907 ***<br>(0.740)  |                       |
| <i>WTFFvsNFF</i>              |                         |                       | -2.436 ***<br>(0.224) |                         |                       | -3.806 ***<br>(0.699) |
| <i>SIZE</i>                   | 0.915 ***<br>(0.119)    | 0.347 ***<br>(0.076)  | 0.482 ***<br>(0.076)  | 3.415 ***<br>(0.385)    | 1.989 ***<br>(0.214)  | 2.822 ***<br>(0.224)  |
| <i>LEV</i>                    | -0.148 ***<br>(0.010)   | -0.177 ***<br>(0.008) | -0.169 ***<br>(0.008) | (0.045)<br>(0.040)      | (0.045)<br>(0.029)    | -0.071 * *<br>(0.028) |
| <i>GROWTH_OPP</i>             | 0.346 ***<br>(0.038)    | 0.370 ***<br>(0.024)  | 0.371 ***<br>(0.022)  | 0.731 ***<br>(0.088)    | 0.709 ***<br>(0.052)  | 0.665 ***<br>(0.053)  |
| <i>RISK</i>                   | -0.148 ***<br>(0.016)   | -0.155 ***<br>(0.013) | -0.144 ***<br>(0.015) | -0.096 * *<br>(0.048)   | -0.154 ***<br>(0.034) | -0.072 *<br>(0.038)   |
| <i>AGE</i>                    | -0.084<br>(0.218)       | -1.076 ***<br>(0.152) | -1.107 ***<br>(0.150) | 0.627<br>(0.654)        | -0.361<br>(0.425)     | -0.887 * *<br>(0.412) |
| <i>Legal_origin</i>           | -0.411<br>(0.327)       | -0.847 ***<br>(0.218) | -0.511 *<br>(0.278)   | -2.650 ***<br>(0.987)   | -0.852<br>(0.617)     | 2.345 ***<br>(0.706)  |
| <i>Anti_Director_Index</i>    | -1.314 ***<br>(0.223)   | -1.486 ***<br>(0.176) | -1.691 ***<br>(0.216) | -4.676 ***<br>(0.686)   | -5.602 ***<br>(0.531) | -7.893 ***<br>(0.574) |
| <i>RealGDPgrowthrate</i>      | 0.412 ***<br>(0.080)    | 0.371 ***<br>(0.060)  | 0.320 ***<br>(0.063)  | 0.410 *<br>(0.234)      | 0.862 ***<br>(0.176)  | 0.888 ***<br>(0.184)  |
| <i>Trust_in_people</i>        | 4.049 ***<br>(1.061)    | 5.521 ***<br>(0.804)  | 5.776 ***<br>(1.085)  | -1.289<br>(3.298)       | 4.611 * *<br>(2.330)  | 5.900 * *<br>(2.775)  |
| <i>Intercept</i>              | -7.711 ***<br>(2.324)   | 10.273 ***<br>(1.425) | 10.178 ***<br>(1.335) | -28.391 ***<br>(7.147)  | 0.042<br>(3.876)      | -5.725<br>(3.680)     |
| <i>Industry fixed effect</i>  | Yes                     | Yes                   | Yes                   | Yes                     | Yes                   | Yes                   |
| <i>Year fixed effect</i>      | Yes                     | Yes                   | Yes                   | Yes                     | Yes                   | Yes                   |
| <i>Obs.</i>                   | 5715                    | 10,722                | 10,145                | 5715                    | 10,722                | 10,145                |
| <i>Adjusted_R<sup>2</sup></i> | 0.15                    | 0.14                  | 0.16                  | 0.10                    | 0.08                  | 0.11                  |

This table reports results of structural equation modeling (SEM) regressions. The dependent variable is Return on Assets (ROA) in columns 1–3, and Return on Equity (ROE) in columns 4–6. The cut-off level of ownership is 20%. Family firm is defined as a firm in which the largest shareholder who holds at least 20% of ownership is a family or individual. The main explanatory variables are: (1) *STFFvsWTFF*, a dummy variable that equals 1 if a firm is a family firm with strong family ties, and 0 if a firm is a family firm with weak family ties; (2) *STFFvsNFF*, a dummy variable that equals 1 if a firm is a family firm with strong family ties, and 0 if a firm is a nonfamily firm; (3) *WTFFvsNFF*, a dummy variable that equals 1 if a firm is a family firm with weak family ties, and 0 if a firm is a nonfamily firm. Other variables are described in Appendix. Dummy variables for industry fixed effect and year fixed effect are included but not reported. Robust standard errors adjusted for clustering by country are reported in parentheses. \* \* \*, \* \*, \* denote statistical significance at the 1%, 5%, and 10% levels, respectively.

total variance in family ties into components attributed to individual traits versus contextual effects. Specifically, we examine the impact of personal demographics like age, gender, education level, relative income, and religiosity, as well as survey wave and country of response.

The analysis shows family ties have a substantial country-level component that is not fully explained by standard individual demographic factors. Specifically, of the 36% total variance explained in the model, country fixed effects alone account for approximately 73% of the explained variance (see Table 1). In comparison, education, and gender each explain around 5%, while age explains 16%. These results indicate cultural and institutional forces shape individuals' family values more strongly than characteristics like education or gender. Our findings echo those of Bertrand and Schoar (2006) in highlighting the dominance of country effects.

### 3.2.3. Control variables

We control for an array of firm characteristics that have been shown to affect firm performance.<sup>6</sup> We control for firm size (natural logarithm of total assets), leverage (ratio of long-term debt to the market value of a firm), growth opportunity (the ratio of capital expenditures to total assets), risk (standard deviation of monthly stock return in 60 previous months), and firm age (logarithm of firm age).

<sup>6</sup> In terms of the influence of family involvement on firm performance, Anderson and Reeb (2003a) found that larger, more leveraged, and higher growth firms are positively associated with performance, whereas stock return volatility and firm age are negatively associated with performance.

To control for country-level factors, we include the legal origin, the anti-director rights index, and the real GDP growth rate. We control for legal origin as agency problems across a broad variety of organizational forms are attenuated in the context of common-law institutions (Carney et al., 2015; La Porta et al., 1998). In addition, Gilson (2007) argues that family firms may gain more advantages in regimes with weak commercial law by leveraging reputation to create social capital (Sirmon & Hitt, 2003) and setting relational contracting (Gomez-Mejia et al., 2001), which functions by filling institutional voids. We control for anti-director index as it reflects how strongly the legal system protects minority shareholders against expropriation by managers and dominant shareholders (La Porta et al., 1998). We also control for real GDP growth rate as economic development influences firm performance (Goldszmidt et al., 2011).

Finally, informal institutions play an important role along with formal institutions in shaping the behaviors of individuals and organizations (Berrone et al., 2020), especially in Eastern regions where formal institutions are still underdeveloped (Helmke & Levitsky, 2004). Particularly, trust is a crucial element in economic transactions and functioning of markets, organizations and societies (Knack & Keefer, 1999; Porta et al., 1996). Indeed, literature has shown that trust plays a significant role in promoting cooperation (Porta et al., 1996), strengthening economic performance (Knack & Keefer, 1997), increasing investment (Bottazzi et al., 2016) and enhancing firm performance (Goergen et al., 2013). Like specific trust, generalized trust has been shown to link to improvements in the performance of governance modes (Bloom et al., 2012; Cingano & Pinotti, 2016; Knack & Keefer, 1997; Van Hoorn, 2017). Following previous studies, we measure

**Table 11**  
Firm performance and family ties index.

|                               | Dependent variable: ROA | Dependent variable: ROE |
|-------------------------------|-------------------------|-------------------------|
|                               | (1)                     | (2)                     |
| <i>FamilyTies_Index</i>       | 6.632 * **<br>(0.907)   | 16.456 * **<br>(1.924)  |
| <i>SIZE</i>                   | 0.890 * *<br>(0.332)    | 3.436 * **<br>(0.803)   |
| <i>LEV</i>                    | -0.180 * **<br>(0.018)  | -0.077 * *<br>(0.026)   |
| <i>GROWTH_OPP</i>             | 0.353 * **<br>(0.027)   | 0.663 * **<br>(0.060)   |
| <i>RISK</i>                   | -0.165 * **<br>(0.015)  | -0.129 *<br>(0.064)     |
| <i>AGE</i>                    | -0.811<br>(0.484)       | -0.043<br>(0.648)       |
| <i>Legal_origin</i>           | -2.013 * *<br>(0.845)   | -3.581 * **<br>(0.628)  |
| <i>Anti_Director_Index</i>    | 0.195<br>(0.605)        | -1.710 *<br>(0.781)     |
| <i>RealGDPgrowthrate</i>      | 0.206 *<br>(0.087)      | 0.423 *<br>(0.202)      |
| <i>Trust_in_people</i>        | 10.187 * **<br>(2.826)  | 14.246 * **<br>(3.294)  |
| <i>Intercept</i>              | 0.555<br>(6.807)        | -23.735<br>(14.545)     |
| <i>Industry fixed effect</i>  | Yes                     | Yes                     |
| <i>Year fixed effect</i>      | Yes                     | Yes                     |
| <i>Obs.</i>                   | 13,237                  | 13,237                  |
| <i>Adjusted_R<sup>2</sup></i> | 0.21                    | 0.12                    |

This table reports results of ordinary least square (OLS) regressions. The dependent variable is Return on Assets (ROA) in columns 1, and Return on Equity (ROE) in columns 2. The cut-off level of ownership is 20%. Family firm is defined as a firm in which the largest shareholder who holds at least 20% of ownership is a family or individual. The main explanatory variable is family ties index (*FamilyTies\_Index*) resulting from a principal component analysis summarizing the family ties variables into a single index. Other variables are described in Appendix. Dummy variables for industry fixed effect and year fixed effect are included but not reported. Robust standard errors adjusted for clustering by country are reported in parentheses. \*\*\*, \*\*, \* denote statistical significance at the 1%, 5%, and 10% levels, respectively.

generalized trust using WVS with the following question: “Generally speaking, would you say that most people can be trusted or that you can’t be too careful in dealing with people?” (Goergen et al., 2013; Huang et al., 2021; Porta et al., 1996; Vanneste & Gulati, 2022). The percentage of people answering yes is used as proxy for the level of generalized trust in a country.

### 3.3. Model

We use ordinary least squares (OLS) regressions to investigate the effect of family ties as part of a country’s culture on firm performance. Initially, we run a regression of family firm on performance to investigate whether family involvement alone influences performance. Then, to preliminarily observe whether family ties play a role in explaining performance among family firms, we run regressions of different family firms with varying strengths of family ties. Specifically, in this model we use the country’s continuous family ties score as a proxy for the strength of family ties of a family firm. Finally, for the main analysis, we run regressions of a family firm with strong/weak family ties.

Our baseline model is:

$$Performance_{it} = \beta_0 + \beta_1 FF_{it} + \beta_2 Controls_{it} + \varepsilon_i$$

where  $Performance_{it}$  is the measure of financial performance of firm  $i$  in year  $t$ , defined as (1) return on assets (ROA) and (2) return on equity (ROE). Our main explanatory variable  $FF_{it}$  is defined as: (1)  $STFFvsWTFF$ , a dummy variable equal to 1 if a firm is a family firm located in a strong family ties’ society and to 0 if a firm is a family firm

located in a weak family ties’ society; (2)  $STFFvsNFF$ , a dummy variable equal to 1 if a firm is a family firm located in a strong family ties’ society and to 0 if a firm is a nonfamily firm; (3)  $WTFFvsNFF$ , a dummy variable equal to 1 if a firm is a family firm located in a weak family ties’ society and to 0 if a firm is a nonfamily firm. We also control for industry and year fixed effects. We cluster standard errors at the country level. To reduce the effect of outliers, we symmetrically winsorize all firm characteristics at 1% level.

## 4. Results

This section presents the main descriptive statistics and univariate results, as well as the multivariate regression results and sensitivity analysis.

### 4.1. Descriptive statistics and univariate results

Our sample consists of eight East Asian countries. One potential concern is that a country classified as having “weak family ties” may still exhibit strong familism relative to the global context. To address this, we measure family tie orientations across nearly all world nations over seven waves from 1980 to 2020 (see Fig. 1). We show the average family ties score by region (cf. Fig. 1a), by country in our sample (cf. Fig. 1b), and by country in the WVS database, for context purpose (cf. Fig. 1c). Global family tie scores range from 6.41 to 8.82 on our scale. Within our eight-country sample, scores vary more narrowly from 6.82 to 8.29. This confirms that societies considered “weak” in our study are indeed weak when benchmarked against international norms. Hong Kong has the lowest level of familism among the sampled countries, while Indonesia exhibits the strongest emphasis on family ties.

Table 2 categorizes the countries in our sample by strength of family ties and presents their associated formal/informal institutions. Thailand, Indonesia, Malaysia, and the Philippines comprise the “strong family ties” group. Hong Kong, South Korea, Taiwan, and Singapore comprise the “weak family ties” group. Anti-director rights measures vary across both strong and weak country samples, ranging from high (score of 4) to low (score of 2). English common law tradition exists in nations of both cultural orientations. Generalized trust also differs within the strong and weak country subgroups.

Table 3 presents the correlation matrix of the variables. Regarding the explanatory variables, no correlation exceeds 0.6, indicating little risk of multicollinearity across these explanatory factors.

Table 4 provides descriptive statistics for firm characteristics. On average, sampled firms are profitable, with 11.09% ROA and 25.82% ROE. Average firm age is 33 years. Mean size is \$2.8 billion in assets. Long-term debt averages 12% of assets, ranging from zero to over 60%. Risk, as the stock return standard deviation, also substantially varies from 1.86% to 74%.

Table 5 reports univariate results for firm performance and characteristics. Panel A compares family firms in strong vs weak family ties countries. Firms in strong ties nations have significantly higher ROA (11.78% vs 8.52%) and ROE (28.48% vs 21.51%). They are smaller, more leveraged, younger, and riskier on average. Panel B contrasts family vs non-family firms in strong ties nations. ROA is similar but family firms have significantly higher ROE (28.46% vs 26.19%). They are smaller, more leveraged, and riskier, though older than non-family peers. Panel C analyzes family vs non-family firms in weak ties nations. Here, family firms underperform on both ROA (8.52% vs 11.66%) and ROE (21.51% vs 26.19%), with differences statistically significant. They are larger in size but older and riskier than non-family firms. Further, family firms have lower capital expenditures and higher leverage.

### 4.2. Regression results

Table 6 presents initial regression results with firm performance as

**Table 12**  
Firm performance and family ties – PSM method.

|                               | Dependent variable: ROA |                       |                       | Dependent variable: ROE |                       |                        |
|-------------------------------|-------------------------|-----------------------|-----------------------|-------------------------|-----------------------|------------------------|
|                               | (1)                     | (2)                   | (3)                   | (4)                     | (5)                   | (6)                    |
| <i>STFFvsWTFF</i>             | 4.375 ***<br>(0.320)    |                       |                       | 9.302 ***<br>(1.029)    |                       |                        |
| <i>STFFvsNFF</i>              |                         | 2.403 ***<br>(0.785)  |                       |                         | 9.093 ***<br>(2.496)  |                        |
| <i>WTFFvsNFF</i>              |                         |                       | -1.889 ***<br>(0.625) |                         |                       | -1.046<br>(1.890)      |
| <i>SIZE</i>                   | 0.786 ***<br>(0.108)    | 0.695 ***<br>(0.143)  | 1.265 ***<br>(0.130)  | 3.390 ***<br>(0.346)    | 2.471 ***<br>(0.456)  | 5.069 ***<br>(0.394)   |
| <i>LEV</i>                    | -0.149 ***<br>(0.011)   | -0.164 ***<br>(0.013) | -0.132 ***<br>(0.014) | -0.033<br>(0.035)       | -0.030<br>(0.042)     | -0.121 ***<br>(0.043)  |
| <i>GROWTH_OPP</i>             | 0.405 ***<br>(0.026)    | 0.330 ***<br>(0.031)  | 0.315 ***<br>(0.031)  | 0.762 ***<br>(0.084)    | 0.741 ***<br>(0.100)  | 0.560 ***<br>(0.094)   |
| <i>RISK</i>                   | -0.142 ***<br>(0.014)   | -0.150 ***<br>(0.017) | -0.120 ***<br>(0.019) | -0.054<br>(0.046)       | -0.195 ***<br>(0.054) | 0.093<br>(0.058)       |
| <i>AGE</i>                    | 0.156<br>(0.223)        | -0.110<br>(0.313)     | -0.198<br>(0.255)     | 0.766<br>(0.717)        | 1.740 *<br>(0.996)    | -0.467<br>(0.771)      |
| <i>Legal_origin</i>           | -1.237 ***<br>(0.349)   | 0.070<br>(0.422)      | 1.652 **<br>(0.756)   | -3.298 ***<br>(1.124)   | (2.204)<br>(1.342)    | 7.889 ***<br>(2.287)   |
| <i>Anti_Director_Index</i>    | -1.018 ***<br>(0.236)   | -0.296<br>(0.451)     | -1.760 ***<br>(0.585) | -4.221 ***<br>(0.758)   | -2.213<br>(1.435)     | -8.686 ***<br>(1.769)  |
| <i>RealGDPgrowthrate</i>      | 0.358 ***<br>(0.080)    | 0.598 ***<br>(0.132)  | 0.224 *<br>(0.115)    | 0.393<br>(0.258)        | 0.319<br>(0.421)      | 0.276<br>(0.347)       |
| <i>Trust_in_people</i>        | 2.273 **<br>(1.066)     | 9.804 ***<br>(1.791)  | 0.923<br>(3.372)      | -6.145 *<br>(3.430)     | 13.499 **<br>(5.697)  | 1.457<br>(10.197)      |
| <i>Intercept</i>              | 2.585<br>(7.081)        | -4.874<br>(3.558)     | -1.344<br>(4.536)     | -16.908-<br>(22.776)    | -18.677 *<br>(11.318) | -34.279 **<br>(13.719) |
| <i>Industry fixed effect</i>  | Yes                     | Yes                   | Yes                   | Yes                     | Yes                   | Yes                    |
| <i>Year fixed effect</i>      | Yes                     | Yes                   | Yes                   | Yes                     | Yes                   | Yes                    |
| <i>Obs.</i>                   | 5055                    | 3383                  | 2930                  | 5055                    | 3383                  | 2930                   |
| <i>Adjusted_R<sup>2</sup></i> | 0.20                    | 0.17                  | 0.22                  | 0.12                    | 0.08                  | 0.17                   |

This table reports results of propensity score matching (PSM). The dependent variable is Return on Assets (ROA) in columns 1–3, and Return on Equity (ROE) in columns 4–6. The cut-off level of ownership is 20%. Family firm is defined as a firm in which the largest shareholder who holds at least 20% of ownership is a family or individual. The main explanatory variables are: (1) *STFFvsWTFF*, a dummy variable that equals 1 if a firm is a family firm with strong family ties, and 0 if a firm is a family firm with weak family ties; (2) *STFFvsNFF*, a dummy variable that equals 1 if a firm is a family firm with strong family ties, and 0 if a firm is a nonfamily firm; (3) *WTFFvsNFF*, a dummy variable that equals 1 if a firm is a family firm with weak family ties, and 0 if a firm is a nonfamily firm. Other variables are described in Appendix. Dummy variables for industry fixed effect and year fixed effect are included but not reported. Robust standard errors adjusted for clustering by country are reported in parentheses. \*\*\*, \*\*, \* denote statistical significance at the 1%, 5%, and 10% levels, respectively.

the dependent variable. Columns 1 and 3 examine the impact of general family firm ownership (*FF\_General*), regardless of cultural context, on ROA and ROE respectively. The coefficients are insignificant, suggesting family involvement alone does not affect performance. Columns 2 and 4 regress performance on the continuous family ties score (*FT\_Continuous*) among family firms from differing cultural contexts. The coefficients are positive and highly significant for both ROA and ROE. This indicates higher levels of familism within a country's culture associate with improved family firm performance. General family ownership itself does not significantly impact outcomes while more familial cultural environments correlate with stronger performance among family businesses. This provides initial evidence that cultural forces tied to family may condition the performance implications of being a family firm over non-familial factors alone.

Table 7 reports the main regression results. Columns 1–3 and 4–6 examine the effect of family ties strength on ROA and ROE, respectively. Column 1 shows family firms in strong ties nations (*STFFvsWTFF*) have significantly higher ROA than weak ties nations. Column 4 finds the same for ROE. This supports the view that cultural familism impacts economic outcomes (Alesina & Giuliano, 2014, 2010; Alesina et al., 2015; Banfield, 1967). Columns 2 and 5 compare *STFF* to non-family firms (*STFFvsNFF*). *STFF* exhibit significantly higher performance, implying strong intra-family ties benefit firms. This aligns with literature finding family governance advantages (Anderson & Reeb, 2003a; Dyer, 2006; McConaughy et al., 1998). Columns 3 and 6 contrast weak ties family firms to *NFF* (*WTFFvsNFF*), finding *WTFF* underperform significantly. Therefore, merely having family involvement does not suffice - stronger cultural ties are needed to realize performance gains vis-a-vis

*NFF*, consistent with Villalonga and Amit (2006). In summary, cultural familism conditions the relationship between family control and firm outcomes, providing insight into mixed prior findings in this area. Stronger intra-family bonds associate with performance benefits.

#### 4.3. Robustness checks

So far, we have documented that the strength of family ties as part of a country's culture influences firm performance. In this section, we present the findings of a range of tests that assess the robustness of our results.

##### 4.3.1. Family firm classification

There exists no consensus in the literature regarding how to classify family firms (Hernández-Linares et al., 2017; O'Boyle et al., 2012; Prencipe et al., 2014). Wagner et al. (2015) find that the variety of results across studies depend on the way a family firm is defined. To examine whether our results are robust to family firm classifications, all firms in our sample are reclassified at the 10% threshold of ownership. We report the results of these regressions in Table 8. The results are quantitatively and qualitatively similar.

##### 4.3.2. Subsample

The literature suggests that the 2008 Global Financial Crisis exposed firms to significant external shocks, such as low financial liquidity and downturn in revenues (Grillitsch & Tavassoli, 2018; Kim et al., 2015). This state of disequilibrium assessed the ability of firms to assemble resources to respond to the external shocks for their survival. Prior

**Table 13**  
Firm performance and family ties – IV method.

|                                    | First – stage IV                            |                        | Second – stage IV       |                         |
|------------------------------------|---|------------------------|-------------------------|-------------------------|
|                                    | Dependent variable: <i>FamilyTies_Index</i> |                        | Dependent variable: ROA | Dependent variable: ROE |
|                                    | (1)   | (2)                    | (3)                     |                         |
| <i>FamilyTies_Index</i>            |   | 8.265 * **<br>(0.516)  | 15.401 * **<br>(1.612)  |                         |
| <i>Religion</i>                    | 0.186 * **<br>(0.002)                       |                        |                         |                         |
| <i>SIZE</i>                        | -0.048 * **<br>(0.001)                      | 1.023 * **<br>(0.081)  | 3.351 * **<br>(0.233)   |                         |
| <i>LEV</i>                         | 0.002 * **<br>(0.000)                       | -0.184 * **<br>(0.007) | -0.073 * **<br>(0.026)  |                         |
| <i>GROWTH_OPP</i>                  | 0.002 * **<br>(0.000)                       | 0.348 * **<br>(0.021)  | 0.666 * **<br>(0.048)   |                         |
| <i>RISK</i>                        | 0.002 * **<br>(0.000)                       | -0.169 * **<br>(0.012) | -0.126 * **<br>(0.032)  |                         |
| <i>AGE</i>                         | 0.003<br>(0.003)                            | -0.768 * **<br>(0.132) | (0.071)<br>(0.369)      |                         |
| <i>Legal_origin</i>                | 0.129 * **<br>(0.004)                       | -2.261 * **<br>(0.226) | -3.420 * **<br>(0.643)  |                         |
| <i>Anti_Director_Index</i>         | -0.187 * **<br>(0.003)                      | 0.625 * **<br>(0.188)  | -1.988 * **<br>(0.602)  |                         |
| <i>RealGDPgrowthrate</i>           | 0.006 * **<br>(0.001)                       | 0.158 * **<br>(0.054)  | 0.454 * **<br>(0.162)   |                         |
| <i>Trust_in_people</i>             | -0.582 * **<br>(0.015)                      | 12.010 * **<br>(0.957) | 13.068 * **<br>(2.897)  |                         |
| <i>Intercept</i>                   | 0.872 * **<br>(0.030)                       | -5.950 * **<br>(1.651) | -28.790 * **<br>(4.592) |                         |
| <i>Industry fixed effect</i>       | Yes   | Yes                    | Yes                     |                         |
| <i>Year fixed effect</i>           | Yes   | Yes                    | Yes                     |                         |
| <i>Obs.</i>                        | 12,938                                      | 13,237                 | 13,237                  |                         |
| <i>Adj.R2</i>                      | 0.71  | 0.210                  | 0.12                    |                         |
| <i>Durbin-Wu-Hausman (p-value)</i> | 0.000                                       |                        |                         |                         |
| <i>Cragg-Donald</i>                | 9126.56                                     |                        |                         |                         |

This table reports results of the first stage of instrumental variable two-stage least square (IV 2SLS) in column 1 and the second stage in columns 2 and 3. The dependent variable is Return on Assets (ROA) in columns 2, and Return on Equity (ROE) in columns 3. The cut-off level of ownership is 20%. Family firm is defined as a firm in which the largest shareholder who holds at least 20% of ownership is a family or individual. The main explanatory variable is family ties index (*FamilyTies\_Index*) resulting from a principal component analysis summarizing the family ties variables into a single index. Other variables are described in Appendix. Dummy variables for industry fixed effect and year fixed effect are included but not reported. Robust standard errors adjusted for clustering by country are reported in parentheses. \* \*\* , \* \* , \* denote statistical significance at the 1%, 5%, and 10% levels, respectively.

studies have shown that family firms have a competitive advantage over nonfamily firms during adverse economic times due to family firms' unique long-term orientation and governance (Aronoff & Ward, 1995; Sirmon & Hitt, 2003). In essence, family members who focus on the longevity of the family business with a desire to pass it to next generations tend to provide low cost and 'patient' capital, especially in a low financial liquidity situation (Aronoff & Ward, 1995). Grillitsch and Tavassoli (2018) find that the effect of cultural factors on economic outcomes is more pronounced during/after a financial crisis. Therefore, we investigate whether the effect of family ties on firm performance changed after the 2008 Global Financial Crisis. We conduct our regression analysis on a subsample from 2010 to 2017 (see Table 9). Our findings suggest that the impact of the strength of family ties on firm performance remains significant.

#### 4.3.3. Mediating effect of capital expenditure investment and level of debt of the family firm-performance relationship

Prior literature has suggested that family firms can be characterized somewhat differently from nonfamily firms in terms of strategy, structure, and human-resource systems (Anderson & Reeb, 2003b; Carney et al., 2015; Choi et al., 2015; Chrisman & Patel, 2012; Daily & Dolinger, 1992; Michiels & Molly, 2017; Molly et al., 2012). This could be attributed to the involvement of the family (Carney et al., 2015). This raise issues on whether family involvement influences firm strategies such as level of debt or capital expenditure investment, which, in turn, affect firm performance (Miller et al., 2008; Mosakowski, 1993). To address this issue, we employ structural equation modeling (SEM) to examine both the direct and indirect effects of family ties on firm

performance. Capital expenditure investment and leverage are used as mediating factors in the relationship between family ties and firm performance. The results of these regressions are presented in Table 10.<sup>7</sup> The results from the alternative econometric technique are quantitatively and qualitatively similar to the prior results.

#### 4.3.4. Alternative measure of family ties

Initially, we use a binary dummy variable for family firm fostered in a strong family ties' society to proxy for a family firm with strong ties versus a family firm fostered in a weak family ties' society or a nonfamily firm rather than continuous family ties score of a country. This approach protects us from a bias of making any assumption that "weak ties" of a family firm located in a weak family ties' society is more or less valued than "no ties" of a nonfamily firm.

In details, if we run a regression on family ties as a sum of the scores, "no family ties" in a nonfamily firm is assumed to be less valued than "weak family ties" in a family firm (zero value of "no family ties" versus low but positive value of weak family ties). In contrast, if we run a regression on family ties score index, "no family ties" in a nonfamily firm is assumed to be more valued than weak ties in a family firm ("zero value" of a nonfamily firm versus "negative value index" of a weak ties family firm). Therefore, employing a binary strong/weak ties family firm dummy variable provides an open-minded lens on the influence of

<sup>7</sup> In Table 8, we present the main results of regressing performance on family ties. Although not reported in the table, the effect of family ties on leverage and R&D were statistically significant at the 1% level.

family ties on firm performance, particularly weak family ties versus “no family ties” in a nonfamily firm.

However, one may argue that classifying countries in our study into two groups (strong versus weak family ties’ societies) based on the median of family ties score of the sample may result in a loss of information since it does not capture the variation of family ties across countries. This compels us to use the family ties index for three reasons. First, our initial findings show that family firms with weak ties have an inferior performance versus nonfamily firms. The results show that “no family ties” in a nonfamily firm have even more value than having family ties but “weak” in a family firm. Using family ties index is safe from subjectively making assumptions on the values of weak ties versus “no family ties”. Second, the weight of the four measures of family ties is not uniform: whereas the first and the third ones are dummy variables (i.e., equal 0 or 1), the other two measures range from 1 to 4. Third, family ties index presents the variation in the strength of family ties across countries.

We undertake a principal component analysis to summarize these four variables into a single index, following previous studies (Alesina & Giuliano, 2014; Bertrand & Schoar, 2006). Principal component analysis (PCA) captures the variance in the dataset by creating a linear combination of the original variables.<sup>8</sup> For our analysis, family ties index for each individual is the first component from a principal component analysis of the four family values variables described above. After calculating family ties index of all individuals in six waves, we take the median of family ties index of all individual respondents in each country as a proxy for family ties of the country. The WVS is an unbalanced panel data in which country participation differs for different waves. Since the survey result, regardless of different waves, reflects the ‘absolute value’ of each survey question, applying PCA over an unbalanced panel at once is valid. We report the results in Table 11. The coefficients of *Family-Ties Index* are significantly positive, indicating that if family ties of a family firm are strong (positive index), family ownership contributes positively to firm performance. In contrast, if family ties of a family firm are weak (negative index), family ownership harms firm performance. The results show that the strength of family ties as part of a country’s culture is positively associated with firm performance; and only family firms fostered in a strong family ties’ culture generate superior performance over nonfamily firms. Family firms fostered in a weak family ties’ society result in inferior performance compared to nonfamily firms.

#### 4.3.5. Endogeneity issues

**4.3.5.1. Propensity score matching (PSM) approach.** There may be potential endogeneity problems in our study, arising from three different sources: (i) measurement error, (ii) potential “reverse causality”, and (iii) omitted variables. Family ties are considered stable across generations (Alesina & Giuliano, 2014) while firm performance reflects financial outcomes of a firm in a certain time. Therefore, our study is safe from reserve causality issue. However, our study is potentially subject to the issues of omitted variables that may lead the variable of interest to correlate with the error term, yielding incorrect inferences. Family firms and nonfamily firms may systematically differ in firm-level characteristics. These differences may create a bias of observable self-selection associated with family firm status (Chen et al., 2014). Therefore, we use propensity score matching (PSM) to address endogeneity arising from observable self-selection bias (Chen et al., 2014; Lee & Bose, 2021). We construct a matched sample of family firms and nonfamily firms by

<sup>8</sup> More specifically, PCA is a technique that can be used to recap the information contained in an initial set of variables into fewer variables. PCA generates new variables (the principal components) that are linearly associated with the original variables. The first principal component is the linear combination of the original variables that captures the largest variance in the initial dataset.

using the one-to-one “nearest neighbors” propensity score matching (PSM) technique. In the first stage, we run a logistic regression with a dummy dependent variable which equals to 1 for a family firm and 0 for a nonfamily firm to estimate PSM. Then we match, without replacement, a firm-year observation with *FF\_General* equal to 1 (a treatment observation) with another firm-year observation with *FF\_General* equal to 0 (a control observation). We employ the same set of control variables for firm characteristics such as firm size, leverage, growth opportunity, risk, firm age, industry and year in the first- and second-stage regressions to ensure balance between the treatment and control groups in the matched sample (Shipman et al., 2017). We use the caliper matching method with a caliper of 1% (Dehejia & Wahba, 2002).<sup>9</sup> Then we use matched sample size for PSM’s second-stage model, in which we run an ordinary least squares (OLS) regression with the matched observations. The results firmly confirm our previous findings of the impact of family ties on firm performance (Table 12).

#### 4.3.6. Instrumental variable approach

We also use another approach which is the instrumental-variable two-stage least square (IV 2SLS) method for our regression analysis. In the IV 2SLS model, we model family ties index as an endogenous regressor. To meet the exclusion restrictions necessary requirement, we include all variables that enter the second-stage (outcome) regression. We employ religion as an instrumental variable. Religious beliefs or in a broader sense spiritual values can fundamentally influence individuals, family, and corporate decisions (Astrachan et al., 2020; Balog et al., 2014; Hilary & Hui, 2009). Abbott et al. (1990) find that religious institutions sponsor and support activities that bring family members together. Related religious activities provide opportunities for family members to interact and share experience with another, potentially enhancing the quality and closeness of their relationships (D’Antonio et al., 1982; King, 2010). Mahoney et al. (2003) show that religions play a salient role in family relationships.

Table 13 presents the results of regressing performance on family ties index. We use religious affiliation dummy variable as an instrumental variable for family ties index. We include *Religion* dummy variable in the first stage of the model. *Religion* equals 1 if more than 50% of population of a country follows a certain religion.

Column 1 displays first-stage regression results. We observe that religious affiliation coefficients are positively and significantly related to family ties index at the 1% level. We conduct two tests that provide support for our choice of instrument and report the results in the bottom of Table 13. We use the Durbin-Wu-Hausman (DWH) chi-squared test to test whether family ties index is endogenous.<sup>10</sup> The result shows that family ties index is endogenous. In addition, to test whether our instrument is relevant, we calculate the Cragg-Donald statistic, which is 9126.56 and is higher than the 11.04 critical value reported by Stock and Yogo (2005). This implies that our instrument for family ties index is not weak.

Columns 2 and 3 provide second-stage (outcome) regression results. After controlling for endogeneity, we observe that the results of IV 2SLS regression are similar to OLS regression results. We conclude that the results are robust to endogeneity issues.

## 5. Conclusion

We demonstrate that family ties, as a component of a country’s culture, play a crucial role in explaining firm performance. By using profitability-based measures such as ROA and ROE, we have found that

<sup>9</sup> The term “caliper” is the difference in predicted probabilities between the treatment and control observations (Dehejia & Wahba, 2002).

<sup>10</sup> The null hypothesis is that family ties index is exogenous with respect to firm performance and the rejection of this hypothesis implies that family ties index is indeed endogenous and validates the IV approach.

family firms nurtured in a society with strong family ties exhibit better performance compared to those nurtured in a society with weak family ties. Additionally, family firms with strong family ties outperform nonfamily firms, whereas family firms with weak family ties underperform relative to nonfamily firms. These findings indicate a significant impact of family ties on firm performance. Moreover, our results suggest that it is not mere involvement, but rather family ties within family firms that contribute to their competitive advantage over nonfamily firms. Our results are robust when considering alternative performance measures, family firm classifications, and different econometric estimation methods.

The implications of our findings extend to future studies investigating the relationship between family firms and performance. In line with Dyer's (2018) research, we demonstrate that family firms can generate either family assets or liabilities. While the former provides family firms with a competitive advantage, the latter leads to underperformance compared to nonfamily firms. Analyzing family ties that are unique to family firms, as they cannot be replicated or acquired in the strategic factor markets (Barney, 1986), allows us to identify the impact of family on firm performance. It also helps us differentiate the

impact of family from ownership concentration and managerial ownership on performance. Overall, our study suggests that family relationships within family firms are the primary factor that generates performance differences between family and nonfamily firms, while also reflecting the diversity within family firms.

Although our measure of country-level family ties captures the societal context rather than the specific ties within a family firm's owning family, we argue that the country context establishes norms that influence how business families balance priorities between family and the firm. We acknowledge that an ideal study would incorporate both country-level cultural measures and firm-level data on family dynamics. Thus, it would be interesting for future research to explore how country-level family ties, as part of a country's culture, and individual-level family ties, derived from personal values that shape family members' behaviors, influence the performance outcomes of family businesses when data becomes available.

#### Declaration of Competing Interest

The authors have declared no conflict of interest.

#### Appendix. Definition of variables and sources

| Variables                            | Definition  | Source                      |
|--------------------------------------|---|-----------------------------|
| <b>Firm performance</b>              |   |                             |
| ROA                                  | Ratio of operating income before interest, tax, depreciation, and amortization (EBITDA) to total assets.  | Datastream                  |
| ROE                                  | Ratio of operating income before interest, tax, depreciation, and amortization (EBITDA) to common equity.   | Datastream                  |
| <b>Family firms with family ties</b> |   |                             |
| FF_General                           | A dummy variable equal to 1 if a firm is a family firm, otherwise 0.  | WVS                         |
| FT_Continous                         | Family ties of a family firm, measured as the sum of the scores from 4 questions:<br>1. Whether a young adult is living at home with his/her parents. The answer yes takes the value of 1, otherwise 0.<br>2. "One of the main goals in life has been to make my parents proud." The scale ranges from 4, strongly agree, to 1, strongly disagree.<br>3. Whether obedience is an important quality for children. The response achieves the value of 1 if obedience is mentioned and 0 if it is not.<br>4. How important the family is in one person's life. Response is assigned the value of 4, very important, to 1, not important at all.                                | WVS                         |
| STFFvsWTF                            | A dummy variable equal to 1 if a family firm has strong family ties, 0 if a family firm has weak family ties.   | WVS                         |
| STFFvsNFF                            | A dummy variable equal to 1 if a family firm has strong family ties, 0 if a firm is a nonfamily firm.   | WVS                         |
| WTFvsNFF                             | A dummy variable equal to 1 if a family firm has weak family ties, 0 if a firm is a nonfamily firm.   | WVS                         |
| FamilyTies_Index                     | The first component from a principal component analysis of the four family values variables described as follows:<br>1. Whether a young adult is living at home with his/her parents. The answer yes takes the value of 1, otherwise 0.<br>2. "One of the main goals in life has been to make my parents proud." The scale ranges from 4, strongly agree to 1, strongly disagree.<br>3. Whether obedience is an important quality for children. The response achieves the value of 1 if obedience is mentioned and 0 if it is not.<br>4. How important the family is in one person's life. Response is assigned the value of 4, very important, to 1, not important at all. |                             |
| <b>Firm characteristics</b>          |   |                             |
| SIZE                                 | Logarithm of total assets.  | Datastream                  |
| AGE                                  | Logarithm of firm age, equal to the difference between observed year and year of establishment.   | Datastream                  |
| LEV                                  | Ratio of long-term interest-bearing debt to market value of a firm.   | Datastream                  |
| GROWTH_OPP                           | Ratio of capital expenditure to total assets.   | Datastream                  |
| RISK                                 | Standard deviation of stock price for previous 60 months.   | Datastream                  |
| <b>Country level variable</b>        |   |                             |
| RealGDPgrowthrate                    | Real GDP growth rate.   | World Bank                  |
| Legal_origin                         | Dummy variable that equals to 1 if legal origin of the country is common-law, otherwise 0.  | La Porta et al. (1998)      |
| Anti_Director_Index                  | Anti-director rights measure how strongly the country's laws favor outside investors against managers and dominant shareholders. For each of the anti-director measures (one share - one vote, proxy by mail allowed, shares are not blocked before shareholders' meeting, cumulative voting or proportional board representation, legal mechanisms against oppression, preemptive rights to new issues, percentage of share capital to call an extraordinary shareholder meeting less or equal to 10%) the country gets a 1 if the investor protection is in the law. The anti-director rights index is the sum of these measures.   | La Porta et al. (1998)      |
| Trust_in_people                      | "Generally speaking, would you say that most people can be trusted or that you can't be too careful in dealing with people?". The percentage of people answering yes is used as proxy for level of generalized trust in a country   | WVS                         |
| Religion                             | A dummy variable equal to 1 if more than 50% of population of a country follows a certain religion, otherwise 0.  | Central Intelligence Agency |

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