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TO THE PH. D IN ADMINISTRATION

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MOHAMED NASR ALLAH KHIAR

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UNIVERSITÉ DU QUÉBEC À MONTRÉAL

CULTURE ET DÉCISIONS FINANCIÈRES

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RÉSUMÉ

Ma thèse de doctorat se constitue de deux articles, analysant empiriquement l'effet des dimensions culturelles sur la prise de décision lors d'événements financiers, tels que la politique de distribution d'entreprises cotées en bourse incluant les dividendes et le rachat d'actions, ainsi que le choix du mécanisme de sortie des entreprises privées à travers le monde.

Article 1. La culture et la politique de distribution des profits : Étude internationale.

L'objectif du premier article est d'examiner l'effet de la culture nationale sur la politique de distribution des profits des entreprises (incluant à la fois les dividendes et les rachats d'actions). En utilisant un large échantillon de données couvrant 55 pays entre 1980 et 2018, nous constatons que le degré de dimension culturelle nationale affecte de manière significative le choix de la politique de paiement et les niveaux de paiement. Les entreprises des pays où l'évitement de l'incertitude, la masculinité, l'orientation à long terme et l'indulgence versus la retenue sont élevées sont enclines à payer par le biais de rachats d'actions. En revanche, les entreprises des pays où l'évitement de l'incertitude, la masculinité, l'orientation à long terme et l'indulgence contre la retenue sont faibles sont enclines à verser des dividendes. Nos résultats sont robustes en contrôlant par les caractéristiques des entreprises et des pays et en utilisant des ratios de distribution alternatifs, différentes mesures de la culture, des échantillons de sous-périodes et des sous-échantillons.

Article 2. La culture et les mécanismes de sortie : Étude internationale.

L'objectif du deuxième article est d'examiner l'effet de la culture nationale sur le choix du mécanisme de sortie des entreprises privées (introductions en Bourse et fusions et acquisitions). En utilisant un échantillon international d'entreprises privées couvrant 60 pays entre 1985 et 2019, nous constatons que les entreprises privées dans les pays à forts niveaux évitement de l'incertitude, masculinité, indulgence versus retenue et individualisme et faibles niveaux de distance hiérarchique et d'orientation à long terme

sont plus inclinées à sortir via des fusions et acquisitions. En revanche, les entreprises privées des pays à faible degré d'évitement de l'incertitude, masculinité, indulgence contre retenue, individualisme et fort degré de distance hiérarchique et orientation à long terme sont plus enclines à sortir par le biais d'introductions en bourse. Nos résultats sont robustes en contrôlant par les caractéristiques des entreprises et du pays, les conditions du marché, la demande de fonds, le mode de paiement, les sous-périodes, les sous-échantillons, les proxys culturels, et l'indice composite du profil culturel. Dans l'ensemble, nos résultats suggèrent que les dimensions culturelles doivent être prises en compte lors de l'analyse des mécanismes de sortie des pays.

SUMMARY

My doctoral thesis consists of two articles that empirically analyzing the effect of cultural dimensions on decision-making during financial events, such as the payout policy of listed firms including dividends and share repurchases, and the choice of the exit mechanism for private firms around the world.

Paper 1. Culture and payout policy: international evidence

The purpose of the study is to examine the effect of national culture on corporate payout mix policy (dividends and share repurchases). Using an extensive data set covering 55 countries during 1980–2018, we find that the national cultural dimension degree significantly affects the payout policy mix, choice, and levels. Firms in countries with high uncertainty avoidance, masculinity, long-term orientation, and indulgence vs. restraint are inclined to payout through share repurchases. In contrast, firms in countries with low uncertainty avoidance, masculinity, long-term orientation, and indulgence vs. restraint tend to payout through dividends. Our findings are robust to control for firm and country characteristics, alternative payout ratios, different culture proxies, sub-period samples, and subsamples.

Paper 2. Culture and exit mechanisms: international evidence

The purpose of this study is to examine the effect of national culture on the choice of exit mechanism for private firms. Using an international data set of private firms covering 60 countries from 1985 to 2019, we find that private firms in countries with high (uncertainty avoidance, masculinity, indulgence vs. restraint, individualism) and low (power distance and long-term orientation) are more inclined to exit through mergers and acquisitions. In contrast, private firms in countries with low (uncertainty avoidance, masculinity, indulgence vs. restraint, individualism) and high (power distance and long-term orientation) are more inclined to exit through initial public offerings. Our findings are robust to control for firm and country characteristics, market conditions, funds demand, payment method, sub-periods, subsamples, culture proxies, and composite cultural profile

index. Overall, our findings underscore the importance of cultural dimensions in understanding exit mechanisms for private firms.

Paper 1. Culture and payout policy: international evidence

ABSTRACT

The purpose of the study is to examine the effect of national culture on corporate payout mix policy (dividends and share repurchases). Using an extensive data set covering 55 countries during 1980–2018, we find that the national cultural dimension degree significantly affects the payout policy mix, choice, and levels. Firms in countries with high uncertainty avoidance, masculinity, long-term orientation, and indulgence vs. restraint are inclined to payout through share repurchases. In contrast, firms in countries with low uncertainty avoidance, masculinity, long-term orientation, and indulgence vs. restraint tend to payout through dividends. Our findings are robust to control for firm and country characteristics, alternative payout ratios, different culture proxies, sub-period samples, and subsamples.

JEL classification: G15; G35.

Keywords: National culture; Dividend policy; Share repurchase policy; Agency theory.

1 Introduction

Hofstede (1980) defines culture as a collective programming of the human mind that distinguishes the members of one group or category of people from another. National cultural dimensions condition the behaviour of managers in financial decision-making. The financial literature has shown the impact of national culture in several fields of finance. For example, Aggarwal et al. (2012) find that Hofstede's national culture dimensions impact foreign portfolio investment for both originating and destination countries. Ahern et al. (2015) find that national culture affects the volume of cross-border mergers and combined announcement returns. Cai and Zhu (2015) find that the underpricing of initial public offerings issued by foreign firms in the United States is affected by cultural differences between issuers' origin country and U.S. national cultural dimensions.

Numerous studies also have found that payout policy is a strategic decision in corporate financial management that is influenced by the national culture dimension (Shao et al., 2010; Fidrmuc and Jacob, 2010; Bae et al., 2012; Chang et al., 2020; among others). The payout policy via dividends varies substantially from one firm to another and from one country to another. Bae et al. (2012) examine the dividend payout policy in 33 countries from 1993 to 2004. They find that, on average, U.S. firms have the lowest dividend payout ratio of 10.1%, while New Zealand firms have the highest dividend payout ratio of 44.6%. They also find that firms in countries with a high degree of uncertainty avoidance *UA*, masculinity *MAS*, and long-term orientation *LTO* pay lower dividends than those with a low degree of *UA*, *MAS*, and *LTO*. Chang et al. (2020) examine a sample of 16,440 firms from 1987 to 2017 across 35 countries and find that the payment of dividends is less affected by firm characteristics in countries with a high (low) degree of uncertainty avoidance (individualism) compared to countries with a low (high) degree of UA (IND).

Shao et al. (2010) analyze dividend payouts across 21 countries between 1995 and 2007 using Schwartz's national culture dimension database and find that more than 25% of firm-years are not dividend payers. They also find that countries with high conservatism degrees pay higher dividends, while countries with high degrees of mastery pay low dividends. Fidrmuc and Jacob (2010) analyze 5,797 firms across 41 countries in 2004 and find that cultural dimensions are relevant explanatory factors in dividends policy. They also show

that firms in countries with low individualism, high power distance, and high uncertainty avoidance pay low dividends.

However, even if the dividend payment is an important mechanism to redistribute profits, it is not the only one. Share repurchase is also an important payout policy as many firms worldwide consider it mainly for its flexibility. Firms that initiate share repurchase programs do not have to maintain them yearly, as is the case for a dividend payout policy. Grilling and Michaely (2002) have already confirmed the substitution hypothesis in the U.S. market. Further, according to S&P Dow Jones Indices data, for the U.S. market, CNBC (*Consumer News and Business Channel)*[1] reported that share repurchase payout reached $850 billion in 2021, setting a new record after that of 2018 when share repurchase reached $806 billion. Thus, while dividends offer a better commitment device to curb agency costs than share repurchases (John et al., 2015), the latter is more flexible and could have a different relationship with culture. [2]

This study extends previous literature by examining the national culture's effect on share repurchases. Specifically, we investigate whether cultural dimensions explain the payout mix, i.e., dividends versus share repurchases across countries.

Using an extensive data set of 35,687 unique firms with 335,428 firm-year observations in 55 countries during 1980-2018, we analyze the impact of Hofstede's[3] national culture dimensions (Power distance index (*PDI*), uncertainty avoidance index (*UAI*), masculinity index (*MAS*), individualism (*IND*), long-term orientation index (*LTO*) and indulgence vs. restraint (*IVR*)) on payout policy (payout mix, choice, and level) between dividend and share repurchase, controlling for firm and country characteristics. We provide evidence supporting the strong effects of cultural factors on firms' payout policies. Specifically, firms in countries with high *UAI*, *MAS*, *LTO,* and *IVR* prefer to return cash flow to shareholders via share repurchase programs, and firms in low *UAI, MAS, LTO,* and *IVR* countries prefer to return profits through dividend programs. Moreover, firms in countries with high *UAI, MAS, LTO,* and *IVR* pay more through share repurchases than dividends

[1] Bob Pisani: Consumer News and Business Channel ''CNBC'' Senior Markets Correspondent. https://www.cnbc.com/2021/12/30/buybacks-are-poised-for-a-record-year-but-who-do-they-help.html

[2] We thank an anonymous referee for highlighting this important point.

[3] We selected the database of Hofstede for several reasons, which we detail later in the text.

payout. In contrast, firms in countries with low *UAI*, *MAS*, *LTO,* and *IVR* pay more through dividends than share repurchase payout policy.

Our paper contributes to the literature in different aspects. First, several previous studies have examined the effect of the cultural dimension on dividend payment. Khambata and Liu (2005) analyze dividend payout policy in 14 Asian Pacific countries and find that firms with high-risk aversion (high uncertainty avoidance and long-term oriented) pay lower dividends than those with low-risk aversion. Shao et al. (2010) find that Schwartz's national culture dimensions (conservatism and mastery) are determinant factors in dividends payout policy. Specifically, they find that firms in countries with high conservatism and low mastery pay high dividends. Further, Fidrmuc and Jacob (2010) find that firms in countries with high individualism, low power distance, and low uncertainty avoidance pay higher dividend payouts. Bae et al. (2012) also show that national culture matters in dividends payout policy. They find that high uncertainty avoidance, masculinity, and long-term orientation are negatively related to payout dividends level. Byrne and O'Connor (2017) find that firms in countries with high individualism pay high dividends, and firms in countries with low individualism (high collectivism) pay low dividends. Chang et al. (2020) find that dividend policy is less affected by firm characteristics in countries with high uncertainty avoidance, while it is more affected by firm characteristics in countries with high individualism. We complement these previous studies by examining not only the dividend payment as a payout policy but also share repurchases. Share repurchases have experienced a dazzling evolution over the past 20 years worldwide. This evolution is materialized in the levels reached by the share repurchases to assets ratio. For several years, the share repurchases ratio has exceeded certain countries' dividends ratio.[4] To the best of our knowledge, this is the first study that examines the effect of national culture dimensions on the payout mix policy, i.e. dividends vs. share repurchases. Second, unlike most previous studies, we employ different cultural dimensions, including

[4] Previous literature (Jagannathan et al., 2000; Brav et al, 2005; Skinner, 2008; Eije and Megginson, 2008; among others) discusses the numerous advantages of share repurchases for managers. For instance, share repurchases offer more flexibility than dividends. Managers can initiate share repurchases for a limited period without a long-term commitment, while if managers initiate a dividend payout policy, they need to maintain it, given the fact that a cut in dividends could send a negative signal to investors.

Hofstede's and Schwartz's national culture dimensions. We also provide a complete analysis of the relationship between the indulgence vs. restraint dimension and the payout policy.

Third, we investigate the effect of cultural differences on the payout mix and the level and proportion of paying dividends or share repurchases after controlling for firm and country characteristics to shed light on the agency problem associated with the payout policy. Fidrmuc and Jacob (2010), Bae et al. (2012), and Chang et al. (2020) find that investors in certain societies agree with managers and accept a low or non-redistribution of earnings through dividends. Given their cultural characteristics, they invest in firms suffering from agency problems. Adding share repurchases to the payout policy analysis provides an overall view of the relationship between payout policy, national culture, and the agency problem. Overall, our analysis shows that firms in societies seen as suffering from agency problems due to the low dividends payout opt for share repurchases as an alternative payout to compensate for their lower dividends and mitigate the agency problem.

The remainder of the paper is structured as follows. We review the related literature and present our empirical hypotheses in the next section. Section 3 describes key variable construction and our sample. Section 4 presents our empirical results. Section 5 considers alternative specifications and implements some robustness checks. Section 6 concludes.

2 Background and hypothesis development

Hofstede (1980) defines culture as a collective programming of the human mind that distinguishes members of one group or category of people from another. Hofstede (1980 and 2001) describes national culture through six dimensions: uncertainty avoidance (*UA*), power distance (*PD*), individualism vs. collectivism (*IND*), masculinity vs. feminism (*MAS*), long-term orientation (*LTO*), and indulgence vs. restraint (*IVR*). According to Hofstede (1980 and 2001), a society with a high degree of uncertainty avoidance has a low tolerance for risk and ambiguous or unknown situations. Power distance stipulates that less powerful people accept unequal distribution of wealth and power in society with a high degree of power distance and superiors/subordinates relationships within institutions and organizations characterized by hierarchy and formal interactions. A society with a high degree of individualism emphasizes individual identity and personal choice. Individualistic

society is oriented towards competition, achievement, advancement, and recognition. People are more assertive and competitive in society with a high degree of masculinity and less modest and caring. A society with a high degree of long-term orientation focuses more on saving and investing. This society is more flexible and can adapt traditions to deal with changing conditions (Hofstede and Bond (1988)). A society with a high degree of indulgence is oriented toward pleasure, gratification, and people's well-being, and satisfying personal needs and desires (Hofstede et al., 2010).

National cultural dimensions condition the behaviour of managers in financial decision-making. Aggarwal et al. (2012) find that the country's cultural characteristics and distance between originating and destination markets influence cross-border foreign portfolio investment. Countries with higher degrees of individualism, masculinity, and power distance have higher cross-border debt and equity holdings. Chui et al. (2010) find that high individualism is associated with a large trading volume, high volatility, and more profit momentum.

The World Values Survey (WVS) measures cultural differences as well as cultural evolutions for 120 countries around the world. According to WVS, there are seven waves, the first started between 1981 and 1984, and the 7th was carried out between 2017 and 2022. By using WVS cultural dimensions (trust vs. distrust, hierarchy vs. egalitarianism, and individualism vs. collectivism), Ahern et al. (2015) find that cross-border mergers and acquisition volume is negatively associated with culture distance (difference) between the acquirer country and the target country and that combined announcement return is lower when a distance in terms of trust and individualism is higher. Kelly and Hui (2015) examine 503 foreign IPOs from 27 countries issued in the U.S. market from 1980 to 2012 and find a positive relationship between underpricing of foreign IPOs and uncertainty avoidance and individualism. A larger cultural distance between originating countries of foreign IPO issuers and U.S. investors is associated with greater underpricing.

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originating countries of foreign IPO issuers and U.S. investors is associated with greater underpricing.

2.1 Hypothesis 1: uncertainty avoidance and payout policies.

Numerous studies have found that the payout policy via dividends varies substantially from one firm to another and from one country to another. Bae et al. (2012) examine the dividend payout policy in 33 countries from 1993 to 2004. They find that, on average, U.S. firms have the lowest dividend payout ratio of 10.1%, while New Zealand firms have the highest dividend payout ratio of 44.6%. Chang et al. (2020) examine a sample of 16,440 firms from 1987 to 2017 across 35 countries and show that, on average, the dividends to assets ratio ranges from 0% and 5% in each country. They also find that dividend payments are related to firm characteristics and national culture dimensions. Shao et al. (2010) analyze dividend payouts across 21 countries between 1995 and 2007 using Schwartz's national culture dimension database. They find that more than 25% of firm-years are not dividend payers. Fidrmuc and Jacob (2010) analyze 5,797 firms across 41 countries in 2004 and find firms in countries with low individualism, high power distance, and high uncertainty avoidance pay low dividends. Fidrmuc and Jacob (2010) argue that shareholders agree with the manager's decision and accept receiving low dividends in a society with high *UA*. Thereby the firm can keep a high level of cash flow that would allow it to face future unforeseen situations. Their rationale is that a society with high uncertainty avoidance has a low tolerance for risk and ambiguous or unknown situations, and thus managers are reluctant to distribute dividends. We mainly focus on the manager's decision to maintain cash in this situation, even if investors' preference impacts the payout decision (catering theory). As highlighted by Bae et al. (2012, p. 294), as firms' dividend payout decisions rest primarily in their managers' hands, managers generally prefer to pay lower dividends in the face of high UA. [5] However, the abundant availability of financial resources allows managers to give themselves more economic advantages and the possibility to invest in unprofitable projects, thus increasing their control (Jensen, 1986). To mitigate the agency problem's

[5] Meanwhile, we should note that Shao et al. (2010) find a positive relationship between UA and dividend payouts, without further explanation. Bae et al. (2012) also find that the relationship between UA and dividends is positive only when investor protection is strong.

intensity and maintain the confidence of shareholders and investors, in general, managers can also consider share repurchases as an alternative payout policy. Previous studies show that share repurchases are less restrictive for firms over time. It allows redistribution of cash-flow excess without a long-term commitment and without compromising the financial independence of the firm when it faces growth and investment opportunities or financial difficulties (Brav et al., 2005; Jagannathan et al., 2000). Therefore, one would expect firms in societies with high uncertainty avoidance to adopt more redistributive policies through share repurchases. In other words, we expect a negative (positive) relation between uncertainty avoidance and the share of dividends (repurchases) in total payouts. Our hypotheses 1 are as follows:

Hypothesis 1a. The share of dividends in total payouts is lower for firms in countries with high uncertainty avoidance.

Hypothesis 1b. The share of repurchases in total payouts is higher for firms in countries with high uncertainty avoidance.

2.2 Hypothesis 2: masculinity and payout policies

Hofstede (2001) suggests that a society with high masculinity degree has distinct gender roles. Hofstede (2001, p.297) notes that "men are supposed to be assertive, tough, and focused on material success; women are supposed to be more modest, tender, and concerned with the quality of life". Thus, social gender roles do not overlap between men and women in masculine societies. Countries with a high masculinity degree focus on achievement, assertiveness, ambition, and material rewards. According to Bae et al. (2012), Gupta et al. (2018), and Chourou et al. (2018), managers in a society with a high degree of masculinity are looking for independence, control, and power. Few studies analyzed masculinity's effect on payout policies. Bae et al. (2012) and Chang et al. (2020) show that managers adopt a low dividend payout strategy in a high-masculinity society. They prefer to maintain a high level of cash flow as they seek more independence in their decision-making when faced with an investment opportunity, as their compensation is linked to their performance. Managers can also use share repurchases as an alternative payout policy for dividends. Share repurchase payout gives managers more flexibility on cash flow control. Managers can use the free cash flow if a good investment opportunity arises without

negatively affecting the expectations of shareholders and agents in the market (Denis et al., 1994; Grullon and Michaely, 2004; Babenko et al., 2012). Therefore, even if share repurchase payouts still involve cash distribution to shareholders, they could be suitable for firms in countries with high masculinity. Thus, our hypotheses 2 are as follows:

Hypothesis 2a. The share of dividends in total payouts is lower for firms in countries with high masculinity.

Hypothesis 2b. The share of repurchases in total payouts is higher for firms in countries with high masculinity.

2.3 Hypothesis 3: long-term orientation and payout policies

According to Hofstede (1990), a society with a high degree of long-term orientation (LTO) fosters virtues oriented towards future rewards, particularly perseverance and thrift. A society with high LTO gives less importance to traditions and social norms. It is also a pragmatic society that encourages efforts in modern education to prepare for the future. Zheng and Ashraf (2014) examine banks' payout dividend policy in 51 countries from 1998–2007. They find that banks in high long-term orientation countries are associated with less propensity to pay dividends and low payout dividends. Khambata and Liu (2005) analyze dividend payout policies across 14 Asia-Pacific countries from 1992 to 2003. They use uncertainty avoidance and long-term orientation as a proxy for risk aversion. They find that firms in countries with a high degree of long-term orientation pay low dividends. Bae et al. (2012) examine dividends payout policy with a larger sample than Zheng and Ashraf (2014) and Khambata and Liu (2005), including 11 industries covering 33 countries. They show that firms in long-term-oriented countries pay less dividends than those in short-term-oriented countries. This result is confirmed by Chang et al. (2020), who find a negative and significant relation between dividends and a high long-term orientation degree.

Overall, previous studies agree that firms in countries with a high degree of long-term orientation pay less dividends than those with a low degree of LTO. In a high long-term orientation society, managers prefer to retain a high proportion of earnings to invest in growth opportunities when they arise. Managers give more importance to long-term investment. Khambata and Liu (2005), Bae et al. (2012), and Chang et al. (2020) argue that

managers and investors have a long-term investment perspective. On the one hand, Managers in H_LTO give more importance to long-term investment objectives and strategy, which constrains them from retaining a larger proportion of earnings, instead of paying high dividends. On the other hand, shareholders in high LTO countries agree to receive a low dividend to allow the company to exploit new investment opportunities that bring them more wealth in the future. Smith and Watts (1992), La Porta et al. (2000), and Fenn and Liang (2001) also confirm the relation between growth opportunities and dividend payout. Firms facing growth opportunities tend to pay low dividends and reinvest in high-retained earnings proportion. According to the previous literature, we expect a negative relation between high long-term orientation and dividend payout. We thus postulate that firms in countries with high long-term orientation degrees suffer more from agency problems than those with low long-term orientation degrees. Further, as the market will see cutting dividends as a negative sign, a firm that initiates a dividend payout is constrained to maintain or increase the payout level over the long term. Therefore, in the case of an unfortunate investment, the H_LTO managers should prefer to substitute dividend payouts with share-repurchase payouts. Shares repurchase is a temporary policy. It has the advantage of preventing managers from engaging in a high dividend payout policy over the long term, allowing them to maintain a better agency relationship with shareholders and take advantage of investment opportunities. Our hypotheses 3 are as follows:

Hypothesis 3a. The share of dividends in total payouts is lower for firms in high long-term orientation countries.

Hypothesis 3b. The share of repurchases in total payouts is higher for firms in high long-term orientation countries.

2.4 Hypothesis 4: indulgence vs. restraint and payout policies.

According to Hofstede et al. (2010), indulgence vs. restraint (IVR) is a national culture dimension that captures the degree of life control and subjective happiness in society. Countries with a high degree of IVR have fewer social norms and regulations. People in an indulgent society are inclined toward leisure and free gratification of basic and natural human drives and give high importance to enjoying life and having fun. We do not find

any literature supporting indulgence vs. restraint impact on payout policy. Chang et al. (2020) focus mainly on UA and IND dimensions, and they added four other national culture dimensions MAS, PD, LTO, and IVR, as control variables. They report, however, mixed results regarding the indulgence vs. restraint cultural dimension. The relation between IVR and dividends payout is positive in some specification models and negative in others. In national culture dimensions analysis, managers and shareholders are assumed to reflect societal behaviour on average. From the manager's point of view, in a county with a high degree of IVR, managers are oriented toward well-being. For these reasons, managers could restrain a higher proportion of earnings to give themselves a more private economic advantage. That allows managers to enjoy life, have more fun, and fulfill their desire and pleasure in indulgent societies.

The dividend distribution is a long-term commitment between managers and shareholders compared to the share repurchase policy. Choosing dividends as the main payout policy would motivate managers to maintain dividends payout policy and payment levels over the long term; otherwise, they are exposed to a negative market reaction. Thus, the dividend payout is expected to be avoided or maintained at a low level in countries with high indulgence vs. restraint degrees. To alleviate the potential agency problem, managers can use share repurchases as an alternative or a substitute for dividends. Therefore, in a high IVR country, we expect that firms have a high propensity to payouts through a share repurchase program. From the investor's point of view, in an indulgent society, people are thought to have short mentalities, on average, as noted by Gupta et al. (2018). They give more importance to the present moment, have more fun, and enjoy life. This behavioral description is more in line with short-term investors. Therefore, investors will prefer share repurchases (with a share repurchase premium) instead of receiving a relatively low dividend over a more extended period.

To sum up, in a highly indulgent country, managers are more inclined to use a share repurchase payout policy to substitute for a dividend payout policy. On the one hand, share repurchases indeed fit more with investor expectations in a high-indulgence society characterized by a short-term perspective and enjoying the present moment. On the other hand, share repurchases allow managers to keep more control over free cash flow. Our hypotheses 4 are as follows:

Hypothesis 4a. The share of dividends in total payouts is lower for firms in countries with a high degree of indulgence vs. restraint.
Hypothesis 4b. The share of repurchases in total payouts is higher for firms in countries with a high degree of indulgence vs. restraint.

2.5 Hypothesis 5: Power distance and payout policies

Power distance measures the degree of acceptability for equality/inequality between people within a society. Hofstede (2001) defines power distance (PD) as the degree to which the less powerful members of a society accept and behave when power and wealth are unequally distributed. The unequal sharing of power and wealth is the basis of social order in countries with high power distance. A society with high power distance is associated with a centralized decision-making structure, with a tall pyramid organization, where authority is more concentrated. Authoritative leadership and close supervision also characterize this society. Moreover, there is a wide salary disparity between the top and bottom of the organization and a high level of opportunism for personal gain because managers feel underpaid and dissatisfied with their careers (Hofstede, 2001). Fidrmuc and Jacob (2010) show that in countries with high power distance, the severity of agency conflicts is lower; hence, investors have a lower preference for dividends. In contrast, countries with low power distance degrees pay high dividend levels. Chang et al. (2020) also confirm Fidrmuc and Jacob's (2010) findings. Thus, our hypotheses 5 are as follows:
Hypothesis 5a. The share of dividends in total payouts is lower for firms in high power distance countries.
Hypothesis 5b. The share of repurchases in total payouts is higher for firms in high power distance countries.

2.6 Hypothesis 6: Individualism and payout policies

Hofstede (2001) defines individualism as a preference for a loosely-knit social framework in which individuals are expected to take care of only themselves and their immediate families. A society with a high individualism degree prevails individual interests over collective interests. Members of individualist societies are characterized by individual freedom, autonomy, a high need for personal achievement, opportunistic behaviour, and

the maximization of private profits. Individualism effect on payout dividends policy was also analyzed by Shao et al. (2010), Byrne and O'Connor (2017), and Chang et al. (2020). These studies agree that firms in countries with a high degree of individualism pay less dividends than firms in countries with low individualism. However, Fidrmuc and Jacob (2010) find the opposite results. They show evidence that firms in countries with high individualism pay high dividends. Bae et al. (2012) exclude individualism from their regression analysis due to possible multicollinearity problems. They find a high correlation between individualism and long-term orientation (-0.87). From a manager's point of view, in a society with a high degree of individualism, managers are seen as opportunists, self-reliant, seeking individual freedom, and high need for personal achievement. Thus, managers are expected to maintain a high level of earnings rather than following a high payout dividend policy in the long term to seize investment and growth opportunities when they arise without resorting to external financing, which reduces manager freedom in decision-making. Thus, one can expect firms in countries with a high degree of individualism to pay low dividends. However, this could aggravate the agency problem, as investors are expected to be opportunistic and autonomous, seeking to maximize their personal interest in an individualistic society. Therefore, we expect that a punctual redistribution of earnings, like share repurchases, will alleviate the agency problem and satisfy investors' expectations. Our hypotheses 6 are as follows:

Hypothesis 6a. The share of dividends in total payouts is lower for firms in high-individualism countries.

Hypothesis 6b. The share of repurchases in total payouts is higher for firms in high-individualism countries.

3 Data, variables, and methods:

We collect financial data from the Worldscope database. We exclude firms in mandatory dividend countries, i.e., Brazil, Chile, Colombia, Greece, and Venezuela, and firms with less than three firm-year observations (Byrne and O'Connor (2017)). We also exclude firm-year observations with missing data for payout policies (dividends and share repurchase), total assets, common equity, total sales, and earnings. Following previous literature, we set

the repurchase amount and the dividend amount to zero when it is missing one of them to increase the sample size (see Attig et al., 2021) and restraint our sample to observations with positive earnings, cash flow, and total sales (Shao et al., 2010; Bae et al., 2012; Chang et al., 2020; among others). We use Fama and French industry classifications to identify the industry of firms, and we exclude firms operating in the financial and utility sectors.

To proxy for national culture, we rely on Hofstede's cultural dimensions. We use Hofstede's data available at https://geerthofstede.com (version 2015).[6] This database includes long-term orientation (*LTO*) and indulgent vs. Restraint (*IVR*) dimension in addition to the four previous national culture dimensions: power distance (*PD*), uncertainty avoidance (*UA*), masculinity (*MAS*), and individualism (*IND*) Hofstede (1980, 1991, and 2001). We exclude countries with unavailable national culture dimensions data.

[6] The impact of national culture on corporate finance decisions is well-examined in the literature. In this study, we chose Hofstede's database for several reasons. The concept of a national culture of Hofstede is based on the idea that certain dimensions of culture distinguish one group from another. Hofstede's approach emphasizes relativity rather than evolution. However, Hofstede (2001, 2nd edition. p. 44) notes that the correlation coefficients for the five original dimensions range from 0.68 to 0.97, indicating a high degree of stability over time. Moreover, the database was constructed for analysis in business and management organisations. Regarding the sample, the original study of Geert Hofstede was conducted on a sample of 117,000 IBM employees from 40 countries. Since then, the database has been updated and expanded to cover more than 110 countries, with two additional dimensions. In comparison, the Globe project database of culture includes a sample of over 17,000 middle managers from 951 organisations in 62 countries (See. Hofstede (2010) The GLOBE debate: Back to relevance). Schwartz (1994, 1999, 2006) and Hofstede share the closest theoretical foundation approach. Schwartz's database is based on surveys from over 15,000 urban public school teachers in 55 countries and was conducted between 1994 and 1998. The World Values Survey (WVS) is a global research project that collects data on people's values, beliefs, and social and political attitudes. It covers 90 countries and includes over 153,000 respondents. They added the 7th wave in 2022. For researchers criticizing the stability of national culture and considering that culture changes drastically over time, the World Values Survey (WVS) database could be more appropriate. However, they must build their own index by selecting their responses in the database (Ahern et al., 2015). Tang and Koveos (2008) and Zhao et al. (2016) updated Globe's and Hofstede's databases, including the GDP per capita for each national cultural dimension. As expected, they found an evolution of cultural dimensions over time, as GDP per capita is changing over time, but it does not mean a change in the collective programming of the human mind that distinguishes members of one group or category of people from another. In addition, Hofstede's database has the most consensus among researchers in analysing the effect of culture on decision-making in finance, business and management. Ferreira, Serra, and Pinto (2014) report that until the end of 2010, Hofstede's works have been cited in 665 papers in business and management journals. The majority of studies that analyse the effect of national culture on financial decision-making relied on the works of Hofstede (e.g. Khambata and Liu, 2005; Fidrmuc and Jacob, 2010; Bae et al., 2012; Byrne and O'Connor, 2017; Chang et al., 2020; Chui et al., 2010; Costa et al., 2013; Zheng and Ashraf, 2014; Gupta et al. 2018; Chourou et al., 2018). Thus, using Hofstede's database allows us to compare our results to previous studies. Finally, as highlighted by Shenkar (2001) and Karolyi (2016), concepts and assumptions underlying each database should be carefully considered, and researchers should use them cautiously.

We use continuous and dummy variable for national cultural dimensions. Using dummy variables makes the interpretation of results much easier as we mainly focus on high and low values of each cultural dimension. to present the results separately for the two subgroups (high vs low). Note that results with continuous variables are qualitatively similar to those with dummy variables.

We measure high power distance (*H_PD*) using a dummy variable that equals 1 for firms in countries with power distance equal to or higher than the median of all firm-years observations and 0 otherwise. High uncertainty avoidance (*H_UA*) is a dummy variable that equals 1 for firms in countries with uncertainty avoidance equal to or higher than the median of all firm-year observations and 0 otherwise. High masculinity (*H_MAS*) is a dummy variable that equals 1 for firms in countries with masculinity equal to or higher than the median of all firm-year observations and 0 otherwise. High individualism (*H_IND*) is a dummy variable that equals 1 for firms in countries with individualism equal to or higher than the median of all firm-year observations and 0 otherwise. High long-term orientation (*H_LTO*) is a dummy variable that equals 1 for firms in countries with a long-term orientation equal to or higher than the median of all firm-years observations and 0 otherwise. High indulgence vs. restraint (*H_IVR*) is a dummy variable that equals 1 for firms in countries with indulgence vs. restraint equal to or higher than the median of all firm-years observations and 0 otherwise. Our initial sample includes 335,428 firm-year observations for 35,687 unique firms from 55 countries between 1980 and 2018.

We use several payout policy variables as dependent variables. Payout policies dummy variables are used to express the preference of payout policies in each firm year. *Dividends* is a dummy variable that equals one if the firm pays only dividends in a given year. *Share repurchases* equals two if the firm only repurchases its shares in a given year. *Dividends and Share repurchases* is a dummy variable that equals three if the firm pays dividends and repurchases its shares in a given year. *Non-paying* equals four if the firm retains all earnings in a given year.

We use several payout policy variables as dependent variables. Dividends to total payout and share repurchases to total payout represent the payout mix. Dividends to total payout (share repurchases to total payout) is measured by the value of dividends (share repurchases) divided by the sum of the value of dividends and share repurchases paid by

each firm-year. As the payout mix varies between 0 and 1, and to compare our results to existing dividends payout policy literature, we also use payout level variables, dividends to assets, and share repurchases to assets to measure the sensitivity of the level of earnings redistribution in each firm country regarding the degree of national cultural dimensions. Dividends to assets represent total dividends divided by total assets for each firm-year. Share repurchases to assets equals to total share repurchases divided by total assets for each firm-year. Aivazian et al. (2003) do not recommend the dividends-to-earnings ratio as a payout measure in cross-sectional regression analysis as it is highly unstable when earnings converge towards zero. Moreover, the dividends-to-book value of the equity ratio is exposed to accounting distortion. Bae et al. (2012) explain the relevance of dividends to assets against other payout measures and confirm that the dividends-to-assets ratio is the most reliable measure.

In the robustness checks section, we also consider alternative measures of payout policy, namely dividends to net income before extraordinary items (IBEI), share repurchases to IBEI, dividends to earnings before interest and taxes (EBIT), share repurchases to EBIT, to mitigate criticism regarding of our main payout policy variable (Attig et al., 2016, 2021; Hossain et al., 2021; among others).

We also use payout policies dummy variables to express the preference of payout policies in each firm year. *Dividends* is a dummy variable that equals one if the firm pays only dividends in a given year. *Share repurchases* equals two if the firm only repurchases its shares in a given year. *Dividends and Share repurchases* is a dummy variable that equals three if the firm pays dividends and repurchases its shares in a given year. *Non-paying* equals four if the firm retains all earnings in a given year.

In this study, we also consider a large set of control variables known to affect payout policy according to the previous literature. Specifically, we consider firm characteristics and country characteristics variables. As firm characteristics control variables, we use the following variables: (1) firm's size (Size) measured by the natural logarithm of total assets. Bae et al. (2012) argue that large firms have better access to capital markets and are less inclined to use retained earnings to invest in new investments or growth opportunities. (2) Leverage (Leverage) is measured by total debt divided by total assets. Given the risk of financial stress, firms with significant financial leverage are forced to distribute fewer cash

flows, whether through dividend payments or share repurchases. (3) We use the sales growth rate for three years (Sales growth) to measure the firm's operational growth and needs of cash flows. (4) Return on assets (ROA) measures firm profitability. High profitability allows firms to distribute more profits to shareholders. (5) Volatility of ROA (ROA volatility) measured by the standard deviation of return on assets for the most recent four years including the current year (Chay and Suh, 2009). The managers integrate the risk on the return when establishing the payout policy. (6) Cash-flow (Cash-flow) is measured by the ratio of EBITDA to total assets (John et al. (2015)). (7) Retained earnings to equity (Retained Earnings), namely (Life Cycle) by Shao et al. (2010). This ratio measures a firm's cash flow to face financial hardship (Fidrmuc and Jacob (2010)) or exploit new investment opportunities with a low financing cost. For country characteristics control variables, we use governance variables, market capitalization, legal origin and dividends tax preference. Governance and legal origin variables are from Djankov et al. (2008). (8) Revised anti-director index measures the protection degree of minority shareholders against controlling shareholders. The high degree of the anti-director index indicates high investor protection. (9) Anti-self-dealing index measures the degree of shareholder protection against managers that could gain private benefits owing to firm control (Djankov et al., 2008). Moreover, (10) legal origin (English, French, German and Scandinavian) is a dummy variable used to control for country-level fixed effect. (11) Market capitalization (MRKTCAP) is measured by the market capitalization percentage of GDP for each year-country. Market capitalization is a proxy for liquidity and market development. We collect data from World Development Indicators developed by the World Bank. (12) Dividends tax preference developed by La Porta et al. (2000), measured by 1$ of dividends after tax divided by 1$ of capital gain after tax. This proxy captures the advantage of payout policies for shareholders in terms of net income and drives the investor's decision. The database covers, however, only 39 countries. In addition, we add year dummy variables for year fixed effect to control for macroeconomic cycle factors. Finally, we include industry dummy variables based on the Fama and French 12 industries classification to control for potential industry fixed effects. All variables, definitions, and sources are summarized in Table 1.

*** Insert Table 1 here***

4 Empirical results

4.1 Descriptive statistics

Panel A of Table 2 presents the process used to construct the sample. The initial sample includes 87,959 unique firms. We excluded 1,766 firms from countries with mandatory dividend policies, as well as those with missing and negative values for dividends and share repurchases, total sales, cash flow, net income, total assets, and common equity, resulting in a loss of 25,669 firms. Additionally, we excluded firms in the financial and utility industries (1,958) and those with less than three firm-year observations (7,620). Our final sample comprises 35,687 unique firms in 55 countries from 1980 to 2018. Panel B presents the Pearson correlations between key variables. We use Hofstede's national culture dimension degree of power distance, uncertainty avoidance, masculinity, individualism, long-term orientation, and indulgence vs. restraint. We observe a highly negative correlation between power distance and individualism (-0.781). Indulgence vs. restraint is also highly correlated with power distance (-0.676) and individualism (0.769). Following Bae et al. (2012), we exclude power distance and individualism from the models that analyse all dimensions jointly to prevent multicollinearity. We also maintain Indulgence vs. restraint as a reliable substitute for these two national cultural dimensions.

Table 3 summarizes firm payout policy choices for 335,428 firm-year observations in 55 countries from 1980 to 2018. Table 3 shows that paying dividends is highly used in Austria, China, Japan, France, and the United Kingdom, where almost 80% of firm-years are dividends payer. In contrast, the top countries that payout through share repurchases, are Japan 53.65%, the United States 44.77%, Switzerland 43,71% and Canada 31.39% of the firm year.

Table 4 presents the sample description and summary statistics for the main variables in this analysis. Panel A of Table 4 presents the number of firms by country and firm-year observations by country, the mean of dividends to assets and share repurchase to assets by country, and six national culture dimensions of Hofstede by country. Power distance index (*PDI*), uncertainty avoidance index (*UAI*), masculinity index (*MAS*), individualism (*IND*), long-term orientation index (*LTO*), and indulgence vs. restraint (*IVR*). The median sample

for each national culture dimensions: *PDI* = 54, *UAI* = 46, *MAS* = 62, *IND* = 52, *LTO* = 51, and *IVR* = 49.

Panel B of Table 4 presents the mean, median, and distribution by percentile of payout ratios (dividends to assets, share repurchases to assets, dividends to total payout, Share repurchases to payout, dividends to net income before extraordinary items (IBEI), share repurchases to IBEI, and dividends to earnings before interest and taxes (EBIT), share repurchases to EBIT). On average, dividends represent 82.7% of the total payout and share repurchases represent 17.3%. The mean dividends represent 2% of the total assets, consistent with Chang et al. (2020), while share repurchases represent almost 1% of total assets.

Panel C of Table 4 presents the sample's year distribution. We note that the number of firm-years has increased continually since 1980, with 1,508 observations per year. The threshold of 10,000 observations was exceeded in 2003, and the maximum number of observations per year was reached in 2014 with 18,544 observations. In the next section, we perform a multivariate regression analysis to examine the effect of national culture dimensions on payout policy.

*** Insert Tables 2, 3, and 4 here***

4.2 Payout policies, national culture dimensions, and firm characteristics

We perform multivariate regression analyses. We analyze national culture dimensions' effect on payout policies mix (dividends to total payout vs. share repurchases to total payout) and level (dividends to assets vs. share repurchases to assets). Panel A of Table 5 presents Weighted Least Squares (WLS)[7] regression results of payout mix as dependent variables on Hofstede's national culture dimensions (*UAI, MAS, LTO, IVR, PDI,* and *IND*) controlling for firm characteristics (Size, RAO, RAO volatility, Cash-flow, retained earnings, sales growth, and leverage). We include year and industry dummy variables to control for fixed effects related to the economic cycle and fixed effects related to specific industry sectors, respectively. La Porta et al. (2002), Fidrmuc and Jacob (2010), and Bae

[7] As the number of observations varies greatly across countries, we consider in this study WLS regressions. We thank an anonymous referee for this suggestion.

et al. (2012) recommend random effect in international studies to account for the cross-correlation between error terms for firms in the same country. However, the Durbin-Wu-Hausman test recommends the fixed effect (Chi-square = 60.10 and p-value = 0.000). Thereby, we run the WLS model weighted by country with year and industry dummy for fixed effect.

$$Dividends\ to\ total\ payout\ (Share\ repurchases\ to\ total\ payout) = \alpha_{it} + \beta_1\ National\ cultural\ dimension_{ij} + \beta_2\ Size_{it} + \beta_3\ ROA_{it} + \beta_4\ ROA\ volatilityt_{it} + \beta_5 Cash - flow_{it} + \beta_6\ Retained\ earnings_{it} + \beta_7\ Sales\ growth_{it} + \beta_8\ Leverage_{it} + \beta_9\ Size_{it-1} + \beta_{10}\ ROA_{it-1} + \beta_{11}\ Retained\ earnings_{it-1} + \beta_{12}\ Sales\ growth_{it-1} + \beta_{13}\ Leverage_{it-1} + Year\ dummy + Industry\ dummy + \varepsilon_{it} \quad (1)$$

where i = firm, t = time period and j = national culture dimension. The national culture dimension variable presents Hofstede's national culture dimensions: power distance (*PD*), uncertainty avoidance (*UA*), masculinity (*MAS*), individualism (*IND*), long-term orientation (*LTO*), and indulgent vs. Restraint (*IVR*)

In Model 1 of Table 5, we find that the coefficient of *UAI* is negative and statistically significant at the 1% level using dividend to total payout (-0.0004, *p*-value = 0.000). In contrast, in Model 2 of Table 5, the coefficient of *UAI* is positive and statistically significant at the 1% level using share repurchases to total payout (0.0004, *p*-value = 0.000). These results are consistent with the prediction in Hypothesis 1. Managers in high *UAI* countries are risk-averse, leading them to refrain from engaging in a costly dividend payout policy. Still, they prefer to pay more in share repurchases programs because it is time-limited, which allows them to restrain cash flow in the long term to protect against uncertainty. Regression results in Models 3 and 4 show that the coefficient of *MAS* is negative and statistically significant at the 1% level with dividend payouts (-0.0012, *p*-value = 0.000), and the coefficient of *MAS* is positive and statistically significant at the 1% level with share repurchase payout level (0.0012, *p*-value = 0.000), respectively. In masculine societies, managers pay more through share repurchases to show their performance and achievement without committing to pay over the long term. They keep control over cash flow at the same time, allowing them to exploit future investment

opportunities. These results are consistent with the prediction in Hypothesis 2. In Models 5 and 6, we find that the coefficient of *LTO* is positive in the dividend payout level regression (0.0054, *p*-value = 0.000) and negative and statistically significant at the 1% level in the share repurchase payout regression (-0.0054, *p*-value = 0.000). These results do not support the prediction in Hypothesis 3. The long-term signaling effect of a dividend policy could explain these results. Managers could prefer to distribute dividends as signals when expecting long-term favourable periods and are more reluctant to cut dividends during difficult periods.

In Models 7 and 8, we find that the coefficient of *IVR* is negative and significant at the 1% level with dividend payouts (-0.0068, *p*-value = 0.000), while it is positive and statistically significant at the 1% level with the share repurchase level (0.0068, *p*-value= 0.000). Managers in high IVR are looking for life control and satisfying their entrepreneurial desires. They prefer to pay the highest payout through share repurchases. They adopt a more flexible payout policy that allows them to keep control of the cash flow. These results are consistent with the prediction in Hypothesis 4.

In Models 9 and 10, we find that the coefficient of *PDI* is positive and significant at the 1% level with dividend payouts (0.0051, *p*-value = 0.000), while it is negative and statistically significant at the 1% level with the share repurchase level (-0.0051, *p*-value= 0.000). Thus, contrary to Fidrmuc and Jacob (2010), managers in high *PDI* pay more through dividends payout policy. These findings do not support the prediction in Hypothesis 5.

In Models 11 and 12, we find that the coefficient of *IND* is negative and significant at the 1% level with dividend payouts (-0.0049, *p*-value = 0.000), while it is positive and statistically significant at the 1% level with the share repurchases (0.0049, *p*-value = 0.000). Managers in high *IND* pay more through share repurchases payout policy. Our results confirm those of Shao et al. (2010), Byrne and O'Connor (2017) and Chang et al. (2020) for the relation between individualism and dividends payout. Further, we find that firms in countries with high individualism pay more through share repurchases. In a society with a high degree of individualism, managers are seen as opportunists, self-reliant, seeking individual freedom, and high need for personal achievement. They prefer to maintain a high level of earnings rather than following a high payout dividend policy and take

advantage of the flexibility offered by share repurchases to reduce the possible agency problem associated with excessive cash flow retention. These results are consistent with the prediction in Hypothesis 6.

Models 13 and 14 of Panel A include the four of Hofstede's national culture dimensions (*UAI*, *MAS*, *LTO*, and *IVR*)[8] in the same regressions and we confirm previous findings.

Regarding control variables, we find that firm size affects both payout policies. The Size coefficients are related positively (negatively) and significantly to dividends (share repurchases). The coefficients of return on assets are positive (negative) and significantly related at the 1% level to share repurchases (dividends). The coefficients of leverage are positively (negatively) and significantly related to dividends (share repurchases). Our findings confirm that share repurchases are widely adopted worldwide and related to national cultural dimensions.

To sum up, firms with high uncertainty avoidance, masculinity, and indulgence vs. restraint pay more through share repurchases. In contrast, the coefficient of *LTO* is positive in dividends and negative in share repurchases regression in Models 5, 6, 13, and 14. Note that the estimated coefficients of *UAI*, *MAS*, and *IVR* in share repurchase regressions are higher than the ones in the dividend regressions. We confirm that firms in different cultures opt for different redistribution policy levels.

Panel B of Table 5 reports the results of annual regression, we run the same regression of equation 1 by year.[9] The results in Panel B are qualitatively the same as those reported in Panel A. The firms in countries with high *UAI, MAS, IVR,* and *IND* and low *LTO* and *PDI* pay a significantly higher proportion of total payouts through share repurchases instead of dividends. In contrast, firms in countries with low *UAI, MAS, IVR*, *IND,* and high *LTO* and *PDI* pay a significantly higher proportion of total payouts through dividends.

Next, we analyze national culture dimensions' effect on payout policies level. Panel C of Table 5 presents Tobit regression results of payout policies (dividends to assets vs. share repurchases to assets) as dependent variables on Hofstede's national culture dimensions

[8] *PDI* and *IND* are excluded to avoid multicollinearity problems in the regressions.

[9] Due the missing observations related to ROA volatility and cash flow. We have the results for 21 year-regression for an average sample of 8,171 observations per year.

(*H_UA, H_MAS, H_LTO, H_IVR, H_PD, and H_IND*),[10] controlling for firm characteristics (*Size, RAO*, *retained earnings*, *sales growth*, and *leverage*). We include year and industry dummy variables to control for fixed effects related to the economic cycle and fixed effects related to specific industry sectors.[11] We run the Tobit model with year and industry dummy for fixed effect. [12]

In Models 1 and 2 of Panel C, we find that the coefficient of *H_UA* is negative and statistically significant at the 1% level with dividend payouts level (-0.008, *p*-value = 0.000). In contrast, the coefficient of *H_UA* is positive and statistically significant at the 1% level for the share repurchase payout policy (0.0094, *p*-value = 0.000). Managers in *H_UA* countries are risk averse. They prefer to pay more in share repurchases programs because it is time-limited, which allows them to restrain cash flow in the long term to protect against financial stress. Regression results in Models 3 and 4 show that the coefficient of *H_MAS* is negative and statistically significant at the 1% level with dividend payouts (-0.0128, *p*-value = 0.000), and the coefficient of *H_MAS* is positive and statistically significant at the 1% level with share repurchase payout level (0.0110, *p*-value = 0.000). In masculine societies, managers pay more through share repurchases to show their performance and achievement without committing to pay over the long term. The results confirm our findings in Panel A and B.

In Models 5 and 6, we find that the coefficient of *H_LTO* is positive in the dividend payout level regression (-0.0046, *p*-value = 0.273) and positive and statistically significant at the 1% level in the share repurchase payout regression (-0.0132, *p*-value = 0.000). Thus, firms in countries with *H_LTO* should opt for a flexible payout policy and keep control of earnings to invest in growth and future investment opportunities.

In Models 7 and 8, we find that the coefficient of *H_IVR* is negative and significant at the 1% level with dividend payouts (-0.0059, *p*-value = 0.000). In comparison, it is positive and statistically significant at the 1% level with the share repurchase level (0.0160, *p*-value= 0.000).

[10] We use the dummies variable for national culture for ease of interpretation of the results (firms in high vs. in low national cultural dimensions).

[11] the Durbin-Wu-Hausman test recommends the fixed effect (Chi-square = 14.034 and p-value = 0.007).

[12] Using equation 1, with dividends to assets and share repurchases to assets as dependent variables.

In Models 9 and 10, we find that the coefficient of *H_PD* is positive and significant at the 1% level with dividend payouts (0.0066, p-value = 0.000), while it is negative and statistically significant at the 1% level with the share repurchase level (-0.0066, p-value= 0.000). Managers in high power distance prefer to return cash to investors through dividends.

In Models 11 and 12, we find that the coefficient of *H_IND* is negative and significant at the 1% level with dividend payouts (-0.0068, p-value = 0.000), while it is positive and statistically significant at the 1% level with the share repurchase level (0.0068, p-value= 0.000). These results confirm those Panels A and B that consider the payout mix and the continuous cultural dimensions as dependent variables.

Regressions in Models 13 and 14 of Panel C include the four of Hofstede's national culture dimensions. The results confirm previous findings. The estimated coefficients of *H_UA, H_MAS*, *H_IVR,* and low LTO in share repurchase regressions are higher than the estimated coefficients of *H_UA, H_MAS,* and *H_IVR* in the dividend payout level regression. Firms with high uncertainty avoidance, masculinity, indulgence vs. restraint and low long-term orientation pay more through share repurchases.

Regarding control variables, we find that firm size affects both payout policy levels positively and significantly at the 1% level. The coefficients of return on assets are positively and significantly related at the 1% level to the dividends and the share repurchases payout level. The coefficients of leverage are negatively and significantly related to both payout policy levels in Models 9 and 10.

We also plot the predicted coefficients of payout policy mix regressions on national culture dimensions. Graphs in Panel A (B) of Figure 1 show the relation between dividends (share repurchases) to total payout ratio and the six national culture dimensions. Overall, we observe negative (positive) relations between the predicted dividends payout (the predicted share repurchases payout) and *UAI, MAS, IVR*, and *IND* and positive (negative) relations between the predicted dividends payout (the predicted share repurchases payout) and *LTO* and *PDI*, confirming the results of Table 5 (Panel A).

*** Insert Table 5 and Figure 1 here***

In Table 6, we examine the effect of national culture on the choice of payout policy. We use as dependent variables firm *Payout policy choices* variables (dividend payout policy (*Dividends*), share repurchase payout policy (*Share repurchases*), combined dividend and share repurchase payout policy (*Dividends and share repurchase*s), and non-paying policy (*Non-paying*)), to identify the payout choices. Specifically, we run the models shown in equation 1 with *Payout policy choices* as a dependent variable, using a multinomial logit model with a year-fixed effect.

Payout policy choices equal one if a firm pays dividends in a given year, two if a firm repurchases shares in a given year, three if a firm pays dividends and repurchases shares in a given year, and four if a firm does not payout in a given year. We use continuous national cultural variables in Panel A and dummy variables in Panel B. Results are qualitatively similar in both panels. We focus on results based on dummy variables for brevity and ease of interpretation. Moreover, we report the results for dividends and share repurchases using the non-paying category as a base outcome. In panel A of Table 6, we find that the coefficient of *UAI* is negative and statistically significant at the 1% level (-0.028, *p*-value = 0.000) with the dividend payout policy. In comparison, the coefficient of *H_UA* is positive and statistically significant at the 1% level (0.0040, *p*-value = 0.000) with the share repurchase payout policy. Thus, uncertainty avoidance affects the choice of redistribution policy. In countries with high uncertainty avoidance, the managers are less committed to paying long-term dividends to shareholders to mitigate future uncertainty. Share repurchases as a preferred payout strategy let them cover against unforeseen circumstances and choose to redistribute profits only when it reaches a certain coverage and in a time-limited way.

Further, we find that the coefficient of *MAS* is negative and statistically significant at the 1% level (-0.0012, *p*-value = 0.000) with dividend payout policy, while the coefficient of *H_MAS* is positive and statistically significant at the 1% level (0.0140, *p*-value= 0.000) with share repurchase payout policy. Thus, managers in masculine societies are oriented towards achievement, assertiveness, ambition, and material rewards. They opt for a payout policy that preserves cash control over the long term, allowing them to have more independence to exploit investment opportunities in the future.

In panel A, the coefficient of *LTO* is positive and significant at the 1% level (0.0173, *p*-value = 0.000) in the dividend payout policy regression and positive (-0.0297, *p*-value = 0.000) in the share repurchases regression. The managers foster virtues oriented towards future rewards in countries with high *LTO*. These results show that firms in countries with high *LTO* are more inclined to payout through dividends.

In panel A of Table 6, we find that the coefficient of *IVR* is negative and significant at the 1% level (-0.0053, *p*-value = 0.000) with dividend payout policy, and the coefficient of *H_IVR* is positive and significant at the 1% level (0.0510, *p*-value = 0.000) with share repurchase payout policy. Managers in high *IVR* are looking for life control and satisfying their entrepreneurial desires. They adopt a more flexible payout policy that allows them to keep control of the cash flow. Thus, firms in countries with a high degree of indulgence vs. restraint choose more share repurchases as the main payout policy.

In Models 9 and 10, we find that the coefficient of *PDI* is positive and significant at the 1% level with dividend payouts (0.0059, *p*-value = 0.000), while the coefficient of *PDI* is negative and statistically significant at the 1% level with the share repurchase level (-0.0347, *p*-value= 0.000). Managers in high power distance prefer to return cash to investors through dividends. In Models 11 and 12, we find that the coefficient of *IND* is negative and significant at the 1% level with dividend payouts (-0.0106, *p*-value = 0.000), while the coefficient of *IND* is positive and statistically significant at the 1% level with the share repurchase level (0.0322, *p*-value= 0.000). Models 13 and 14 confirm our previous findings.

In Panel B, we present results for the multinomial logit model regressions of payout policy choice and national cultural dimensions. Overall, we observe that the estimated coefficients of *H_UA, H_MAS, H_IVR,* and *H_IND* in share repurchase regressions are higher than the estimated coefficients of *H_UA, H_MAS, H_IVR,* and *H_IND* in the dividend payout regression. While the estimated coefficients of *H_LTO* and *H_PD* in dividends regressions are higher than in share repurchases regressions. These results show that national culture dimensions significantly affect the choice between share repurchases and dividend payout policies. Firms in countries with high uncertainty avoidance, masculinity, indulgence vs. restraint, and individualism adopt share repurchases payout policy as the main payout

policy. These results indicate that share repurchases are preferred to pay dividends in specific cultures.

Again, we plot the predicted coefficient of payout policy choice regressions on national culture dimensions. Graphs in Panel A (B) of Figure 2 show the relation between dividends (share repurchases) to total payout ratio and the six national culture dimensions. Overall, we observe negative (positive) relations between the predicted dividends payout (the predicted share repurchases payout) and *UAI, MAS, IVR*, and *IND* and positive (negative) relations between the predicted dividends payout (the predicted share repurchases payout) and *LTO* and *PDI*, confirming the results of Table 6 (Panel A).

*** Insert Table 6 and Figure 2 here***

4.3 Payout policies, national culture dimensions, and country-characteristics

In this section, we examine the impact of national culture dimensions on corporate payout policies (the payout mix, level, and choice), including country characteristics as control variables. These control variables (market capitalization, dividends tax preference, revised anti-director index, anti-self-dealing index) have shown an impact on payout policies in the previous literature (La Porta et al. (2000), Bae et al. (2012), Jacob and Jacob (2013), among others). Panel A of Table 7 reports the WLS regressions results of the payout mix (dividends to total payout and share repurchases to total payout). Panel B of Table 7 reports Tobit regressions results of payout level (dividends to assets and share repurchases to assets). Panel C of Table 7 presents multinomial logit regression results of *Payout policy choices* variables (dividend payout policy (*Dividends*), share repurchase payout policy (*Share repurchases*), dividends and share repurchases payout policy (*Dividends and repurchases),* and non-paying). We control for firm-country characteristics and include year, industry, and legal origin dummy variables, as well as the country weighting.

In Panel A, we find that the coefficient of *H_UA* is negative with the dividends to total payout regressions in Model 1 (-0.1559, *p*-value = 0.000) and in Model 13 (-0.2272, *p*-value= 0.000). The coefficient of *H_UA* is positive in the share repurchases to total payout regressions in Model 2 (0.1559, *p*-value = 0.000) and Model 14 (0.2272, *p*-value = 0.000). The coefficients are significant at the 1% level. The managers in countries with *H_UA* are

risk-averse and prefer to pay the highest amount through the share repurchase, allowing them more flexibility. The coefficient of high masculinity is negative in dividends to total payout regressions in Model 3 (-0.0685, *p*-value = 0.000) and Model 13 (-0.0947, *p*-value = 0.000). The coefficient of *H_MAS* is positive in the share repurchase payout regression in Model 4 (0.0685, *p*-value = 0.000) and in Model 14 (0. 0.0947, *p*-value = 0.000). The coefficients of *H_MAS* are significant at the 1% level. The managers in countries with *H_MAS* are ambitious and seek control. They prefer to pay the highest amount through the share repurchase, which gives them more flexibility and independence to invest when opportunities come. The coefficient of *H_LTO* is positive in Model 5 (0.0503, *p*-value = 0.000) and negative in Model 13 (-0.0807, *p*-value = 0.000) in the dividends regression. The coefficient of *H_LTO* is negative in Model 6 (-0.0503, *p*-value = 0.000) and positive in Model 14 (0.0807, *p*-value = 0.000) for share repurchases regressions. The coefficients are significant at the 1% level. The coefficient of *H_IVR* is negative with dividends in Model 7 (-0.0393, *p*-value = 0.000) and Model 13 (-0.0630, *p*-value = 0.000). While the coefficient of *H_IRV* is positive with share repurchases level (0.0393, *p*-value = 0.000) in Model 8 and (0.0630, *p*-value = 0.000) in Model 14. *H_IVR* coefficients are significant at the 1% level. These results confirm that managers in *H_IVR* prefer controlling cash flow by paying more through share repurchases than dividends. The inclusion of country control variables mainly affects the long-term orientation dimension. In Models 9 and 10, we find that the coefficients of *H_PD* are positive and significant at the 1% level with dividend (0.0241, p-value = 0.000), while the coefficient of *H_PD* is negative and statistically significant at the 1% level with the share repurchase level (-0.0241, p-value= 0.000). Managers in high power distance prefer to return cash to investors through dividends. In Models 11 and 12, we find that the coefficient of *H_IND* is negative and significant at the 1% level with dividend payouts (-0.0014, p-value = 0.000). In comparison, the coefficient of IND is positive and statistically significant at the 1% level with the share repurchase level (0.0014, p-value= 0.000).

By definition, dividends tax preference is the preference for dividend payouts against capital gain (La Porta et al., 2000). As expected, in panel A of Table 7, we find that the coefficient of *Dividends tax preference* is positive and significant at the 1% level dividend. The coefficient of *Dividends tax preference* is negative and significant at the 1% level with

share repurchases. The coefficient of the *Revised anti director index* is negative and significant at the 1% level with dividend and share repurchases payout. The coefficients of the *Ant-self-dealing index* are positive and significant at the 1% level for dividends and negative with share repurchases.

To sum up, the results show that the coefficients of *H_UA, H_MAS, H_LTO*, *H_IVR,* and *H_IND* are high in share repurchases regressions than those estimated in dividends regressions. In contrast, the estimated coefficient of *H_PD* is higher in dividends regression than the estimated coefficient in share repurchases regressions.

Panel B of Table 7 reports the results of regressions of the effect of national culture on payout level (dividends to assets and share repurchases to assets), including firm and country control variables. The results show that the coefficients of *H_UA, H_MAS, H_LTO*, *H_IVR* (Models 13 and 14) and *H_IND* are positive and higher in share repurchases regressions that the estimated coefficients of *H_UA, H_MAS, H_LTO*, *H_IVR,* and *H_IND* in dividends regressions. The estimated coefficient of *H_PD* is significantly negative with share repurchases. Panel C of Table 7 reports the results of the choice of payout policy. Models 13 and 14 show that firms in countries with *H_UA, H_MAS, H_LTO*, and *H_IVR* are more inclined to choose share repurchase payout. *H_UA*, *H_MAS*, *H_LTO*, and *H_IVR* coefficients are positive and higher for share repurchases payout choice than the coefficients in dividends regression.

Overall, our findings show that the dimensions of national culture significantly affect the choice and the level of payout policy (dividends and share repurchases). In countries with high uncertainty avoidance, managers are less committed to shareholders paying dividends over the long term. They prefer share repurchases to mitigate uncertainty in the future. In highly masculine countries, managers focus on achievement, assertiveness, ambition, and material rewards. They prefer to keep the cash flows to have more independence and to be able to exploit the investment opportunities that present to them in the future. Our results confirm Chang et al. (2020) that managers are less inclined to adopt a dividends payout policy. Moreover, we find that managers in masculine society, as they need to show their success, achievement, and performance to shareholders (shareholders also expect material rewards), adopt share repurchases without the long-term engagement of a dividend payout policy.

As reported in the previous literature, firms in countries with high long-term orientation are less inclined to payouts through dividends. Our results confirm that the managers looking for a long-term perspective avoid establishing a distribution policy that commits them over the long term. In long-term-oriented countries, managers foster virtues oriented toward future rewards. Therefore, managers in *H_LTO* opt for share repurchases payout policy and pay more through share repurchases than dividends. However, we notice that firms in high long-term orientation pay higher amounts through dividends than share repurchases (when we consider these dimensions separately), even if they choose the latter as the main payout policy and pay more through share repurchases in a full model that includes all national cultural dimensions. Managers in indulgent countries look for life control. Similar to firms in countries with high uncertainty avoidance and high masculinity. Firms in countries with a high degree of indulgence vs. restraint choose to pay low dividends that allow managers to control cash flow over the long term to satisfy their entrepreneurial desires and ambitions. Therefore, managers are more inclined to redistribute profits to shareholders through share repurchases, who expect compensation that allow them to enjoy life and have fun. Khambata and Liu (2005), Fidrmuc and Jacob (2010), and Bae et al. (2012) find that firms in countries with high uncertainty avoidance, high masculinity, or/and high long-term orientation suffer more from agency problems as they redistribute few dividends than firms in other cultures specifications. Our results reveal that firms in these countries prefer share repurchases over dividends.

*** Insert Table 7 here***

5 Robustness

In this section, we conduct additional analyses to test the robustness of our results. Specifically, we perform four robustness tests. First, we use Schwartz's national culture dimensions as an alternative to Hofstede's cultural dimensions. Even if Schwartz's national culture values are conceptually different from Hofstede's national culture dimensions (values vs. dimensions), they are the most considered in the literature among several cultural proxies. Besides, the two Schwartz values, mastery and affective autonomy are

very similar to those of Hofstede, allowing us to test the robustness of our previous results. Mastery captures the degree of ambition, the pursuit of success, independence, and daring in a society. This value corresponds to the masculinity national culture dimension of Hofstede. Affective autonomy captures the level of importance that members of a society place on pleasure, enjoying life, and having an exciting life, which fits perfectly with the cultural dimension of indulgence vs. restraint from Hofstede. Thus, we integrate these two values in payout policy regression choice and level. A high mastery *H_MST* equals 1 for firms in a country with a mastery degree equal to or higher than the sample median of mastery degree and 0 otherwise. A high affective autonomy *H_AUT* equals 1 for firms in a country with an affective autonomy degree equal to or higher than the sample median of autonomy affective degree and 0 otherwise. Table 8 shows the regression results of Hofstede and Schwartz's national culture effect on payout policy (choice, mix, and level). In Model 1, the coefficient of *H_MST* is negative (-1.033, p-value = 0.000) and significant at the 1% level with dividends payout choice. In Model 2, we observe that the coefficient of *H_MST* is positive (0.198, p-value = 0.000) with share repurchase payout choice and statistically significant at the 1% level. These results are similar to the regression results for masculinity with payout choice in Tables 6 and 7. Coefficients *H_MST* and *H_MAS* are higher for share repurchase choice than dividend payout choice. In Models 3 and 4, we also find that the coefficient of high autonomy affective *H_AUT* is positive and significant at the 1% level (0.866, *p*-value = 0.000) with share repurchase payout policy and significant at the 1% level (0.632, *p*-value = 0.000) with dividend payout policy choice. These observations confirm regression results for indulgence vs. restraint with payout choice in Tables 6 and 7. Coefficients of *H_AUT* and *H_IVR* are higher for share repurchase choice than dividend payout policy choice.

In Models 4 and 5, we find that the coefficient of *H_MST* is positive and significant at the 1% level (0.117, p-value = 0.000) with share repurchases payout mix. The coefficient of *H_MST* is negative and significant at the 1% level (-0.117, p-value = 0.000) with the dividend payout mix. These findings are consistent with regression results for masculinity with payout mix in Tables 5 and 7. Coefficients of *H_MST* and *H_MAS* are higher for share repurchases level than dividends payout mix. Thereby, the level of payment through share

repurchases is higher than the level of dividends payout for firms in countries with high masculinity or mastery.

Moreover, we find that the coefficient of *H_AUT* is positive and significant at the 1% level (0.041, p-value = 0.000) with share repurchases payout level. The coefficient of *H_AUT* is negative and significant at the 1% level (-0.041, p-value = 0.000) with the dividend payout mix. The coefficient of *H_AUT* is higher for the share repurchases payout level than the dividends payout, which is consistent with the regression's results of indulgence vs. restraint in Tables 5 and 7. Coefficients of *H_AUT* and *H_IVR* are higher for share repurchases than dividends. Similar to *H_MST* and *H_MAS*, share repurchases are the preferred payout policy for firms in societies with *H_AUT* or *H_IVR*. Thus, the level of payment through share repurchases is higher than the level of dividends payout for firms in countries with *H_AUT* or *H_IVR*. In addition, the results using payout to assets (Models 6 and 7) confirm the results with less significance.

*** Insert Table 8 here***

Second, we consider alternative payout ratios: dividends to net income before extraordinary items (IBEI), share repurchases to IBEI, and dividends to earnings before interest and taxes (EBIT), share repurchases to EBIT. Table 13 shows the results of Tobit regression with an alternative payout ratio. Models 1 to 6 of Table 13 show the results for dividends to EBIT and Share repurchases to EBIT with national culture dimensions. Models 7 to 12 of Table 13 show the regression results of dividends to IBEI and share repurchases to IBEI as payout ratio. Overall, results remain qualitatively similar to those obtained in the previous section. Thus, firms in countries with high uncertainty avoidance, masculinity, long-term orientation, indulgence vs. restraint, individualism, and low power distance pay more through share repurchases than dividends.

*** Insert Table 9 here***

Third, we split the sample into two sub-periods. The first sub-period is before 2009, and

the second one is from 2009 to 2018.[13] Table 10 presents the results of the sub-period analysis. In Panel A, Models 1 to 6 present results of national cultural dimensions' effect on the payout policy choice, while Models 7 to 12 present results of national cultural dimensions on the payout mix for the first sub-period. In Panel B, Models 1 to 6 present results of national cultural dimensions' effect on the payout policy choice, while Models 7 to 12 present results of national cultural dimensions on the payout mix for the first sub-period.

Overall, we note a change in the behavior of managers in the payout policy between the two sub-periods, which can be attributed to the change in the global financial market after the 2008 financial crisis. This change affected specifically the long-term orientation and indulgence dimensions. However, after 2008 the results show that firms in countries with *H_UA, H _MAS, H_LTO*, *H _IVR,* H*_IND* and low power distance are more inclined to payout through share repurchases. All coefficients are significant at the 1% level between 2009 and 2018.

*** Insert Table 10 here***

Finally, in Table 11, we include institutional democracy control as a control variable. Indeed, Duong et al. (2022) examine the influence of democracy on initial public offerings (IPOs) in 45 countries and find that firms issuing in countries with higher institutional democracy experience a lower IPO underpricing. Duong et al. (2022, p. 322) note that *"The rise of democracy around the world has spurred a vast literature on the costs and benefits of democracy with respect to economic outcomes."*. Institutional democracy (*Democracy*) refers to the presence of institutions and procedures that ensure civil liberties to all citizens in their daily lives and acts of political participation, as well as the ability of citizens to express effective preferences for alternative policies and leaders. This index is measured on a scale of zero to ten, with higher values indicating greater institutional democracy. We collect the data from the Polity 5 Project (2018) and include institutional democracy as a

[13] The choice could seem arbitrary. However, we split the sample according to the year 2008 as it marked the global economy in general and the financial market in particular and could affect the payout expectation of investors and managers' behaviours.

control variable to the regression models for payout choice and payout mix. Models 1 to 6 of Table 11 show the results of the effect of national culture on the choice of payout policy. Models 7 to 12 of Table 11 show the results of the effect of national culture on the payout mix.

Overall, controlling for the level of institutional democracy, we confirm our previous results. Firms in countries with *H_UA, H _MAS, H_LTO, H _IVR, H_PD,* and low individualism opt for share repurchases payout choice and pay more through the share repurchases program. Moreover, the results of Table 11 show that the coefficients of democracy are positive (negative) and significant at the 1% level in dividends (share repurchases) to total payout regressions.

*** Insert Table 11 here***

To summarize our results, we find that firms in countries with *H_UA, H _MAS, H_LTO*, and *H _IVR* prefer to payout through share repurchasing. Moreover, we find that firms in countries with *H_UA, H _MAS, H_LTO*, and *H _IVR* payout higher levels via share repurchases than dividends payout.

6 Conclusion

Does the national culture affect corporate payout policy? While prior studies have focused on dividend-paying firms, we focus on the total payout policy, including dividends and share repurchases. Using an extensive data set covering 55 countries during 1980–2018, we find that the national cultural dimension degree significantly affects the payout policy choice and payout levels. Our findings are robust to control for firm and country characteristics, alternative payout ratios, different culture proxies, sub-periods, and subsamples. Specifically, we find that share repurchase payout policy choice is associated with firms in countries with high uncertainty avoidance, masculinity, indulgence vs. restraint, and long-term orientation. In contrast, dividends payout policy choice is associated with firms in countries with low uncertainty avoidance, masculinity, indulgence vs. restraint, and long-term orientation. Moreover, firms in countries with high uncertainty avoidance, masculinity, and indulgence vs. restraint pay a higher proportion of payout through share repurchasing. In contrast, firms in countries with low uncertainty avoidance,

masculinity, and indulgence vs. restraint pay a higher proportion of payout via dividends. Our results provide evidence that firms opt for share repurchase as a flexible alternative to dividends payout that fits their cultural specification and allows managers to mitigate agency problems related to retained earnings.

Even if we consider different firm characteristics in this study, it is important to note that national culture does not affect all companies similarly, especially in countries with diverse national cultures (e.g., India and Canada).[14] For instance, countries built through mass immigration represent a mixture of cultures. Thus, national culture could differ in different parts of a country. Future work could shed further light on the effect of regional culture on corporate decisions.

[14] We thank an anonymous refree for hilghlighting this important point.

National cultural dimensions

The impact of national culture on corporate finance decisions is well-examined in the literature. In this study, we chose Hofstede's database for several reasons. The concept of national culture of Hofstede is based on the idea that certain dimensions of culture distinguish one group from another. Hofstede's approach emphasizes relativity rather than evolution. However, Hofstede (2001, 2nd edition. P. 44) notes that the correlation coefficients for the five original dimensions range from 0.68 to 0.97, indicating a high degree of stability over time. Moreover, the database was constructed for analysis in the field of business and management organizations. Regarding the sample, the original study of Geert Hofstede was conducted on a sample of 117,000 IBM employees from 40 countries. Since then, the database has been updated and expanded to cover more than 110 countries, with two additional dimensions. Whereas the Globe project database of culture includes a sample of over 17,000 middle managers from 951 organizations in 62 countries (See. Hofstede (2010) The GLOBE debate: Back to relevance). Schwartz (1994, 1999, 2006) and Hofstede share the closest theoretical foundation approach. Schwartz's database is based on surveys given to over 15,000 urban public school teachers in 55 countries and conducted between 1994 and 1998. The World Values Survey (WVS) is a global research project that collects data on people's values and beliefs, as well as their social and political attitudes. It covers 90 countries and includes over 153,000 respondents. They added the 7th wave in 2022. For researchers who are criticizing the stability of national culture and considering that culture changes drastically over time, the World Values Survey (WVS) database could be then more appropriate. However, they must build their own index by selecting their responses in the database (Ahern, Daminelli, and Fracassi (2015)). Tang and Koveos (2008) and Zhao, Kwon, and Yang (2016) update Globe's and Hofstede's databases, including the GDP per capita for each national cultural dimension. As expected, they found an evolution of cultural dimensions over time, as GDP per capita is changing over time, but it does not mean a change in the collective programming of the human mind that distinguishes members of one group or category of people from another.

In addition, Hofstede's database has the most consensus among researchers in analyzing the effect of culture on decision-making in finance, business and management. Ferreira, Serra, and Pinto (2014) report that until the end of 2010, Hofstede's works have been cited in 665 papers in business and management journals. The majority of studies that analyze the effect of national culture on financial decision-making relied on the works of Hofstede (e.g., Khambata and Liu (2005), Fidrmuc and Jacob (2010), and Bae, Chang, and Kang (2012), Byrne and O'Connor (2017), Chang, Chang, and Dutta (2020), Chui, Titman, and Wei (2010), Costa, Crawford, and Jakob (2013), Zheng and Ashraf (2014), Gupta, Veliyath, and George (2018), Chourou, Saaidi, and Zhu (2018)). Thus, using Hofstede's database allows us to compare our results to previous studies. Finally, as highlighted by Shenkar (2001) and Karolyi (2016), concepts and assumptions underlying each database should be carefully considered, and researchers should use them cautiously.

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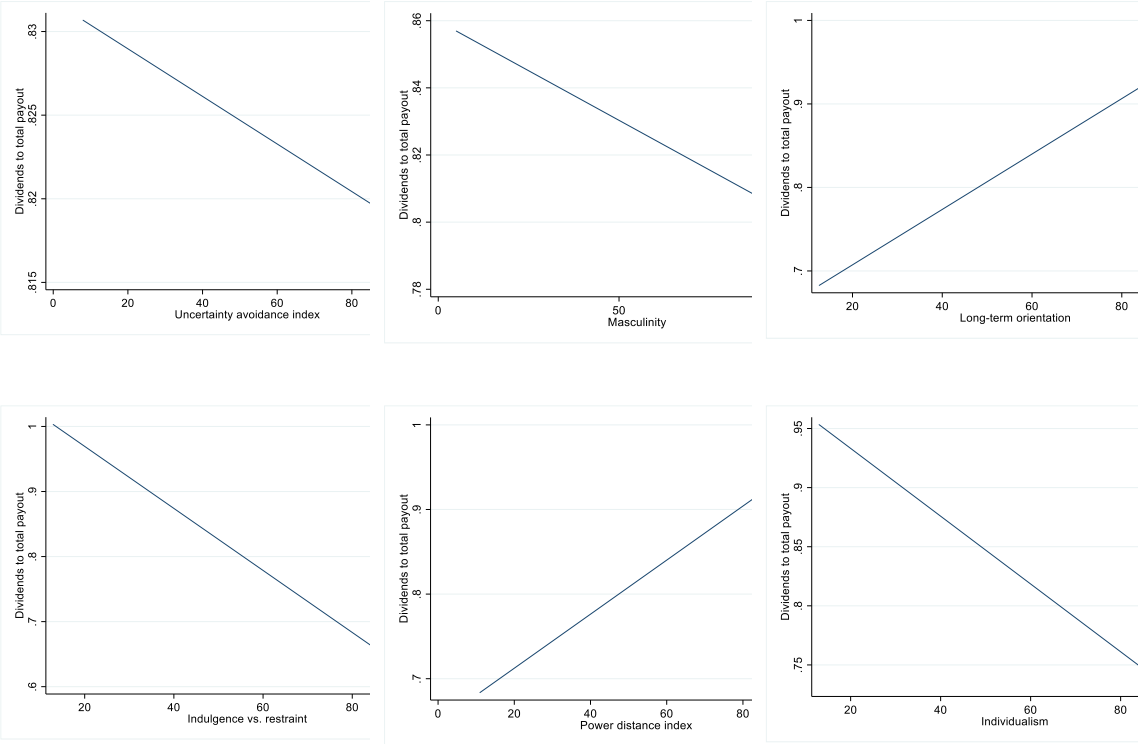
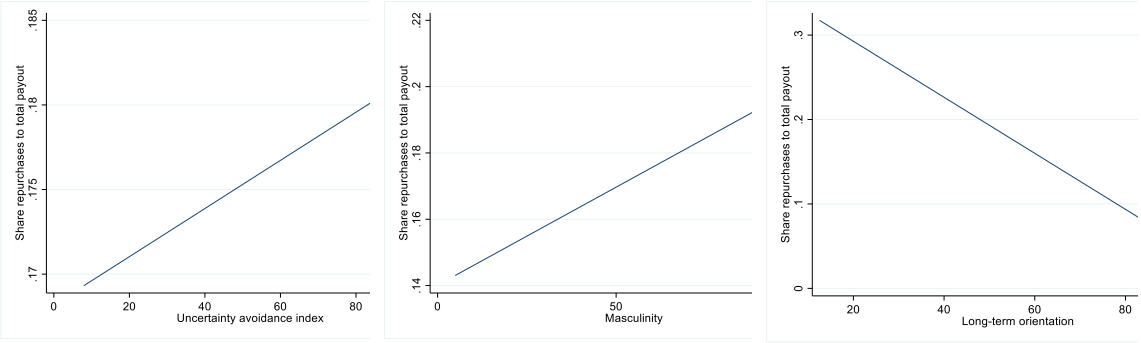
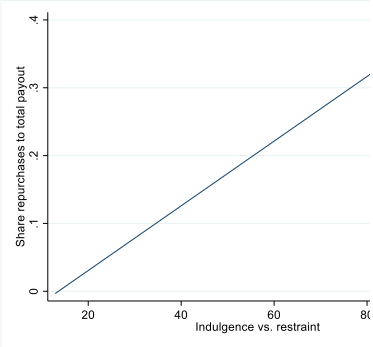
Figure 1: Payout policy mix.

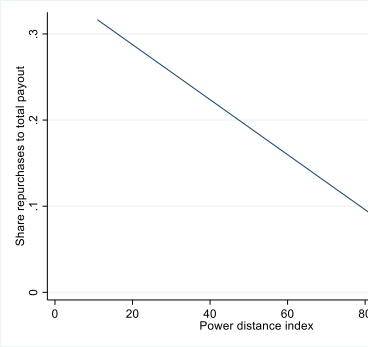
Panel A: The predicted dividends to total payout ratio and national culture dimensions plot



Panel B: The predicted share repurchases to total payout ratio and national culture dimensions plot




Share repurchases to total payout
0
.1
.2
.3
.4
20
40
60
Indulgence vs. restraint


Share repurchases to total payout
0
.1
.2
.3
0
20
40
60
Power distance index

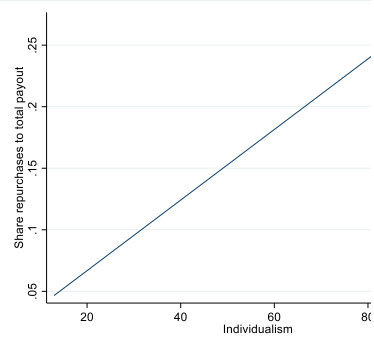
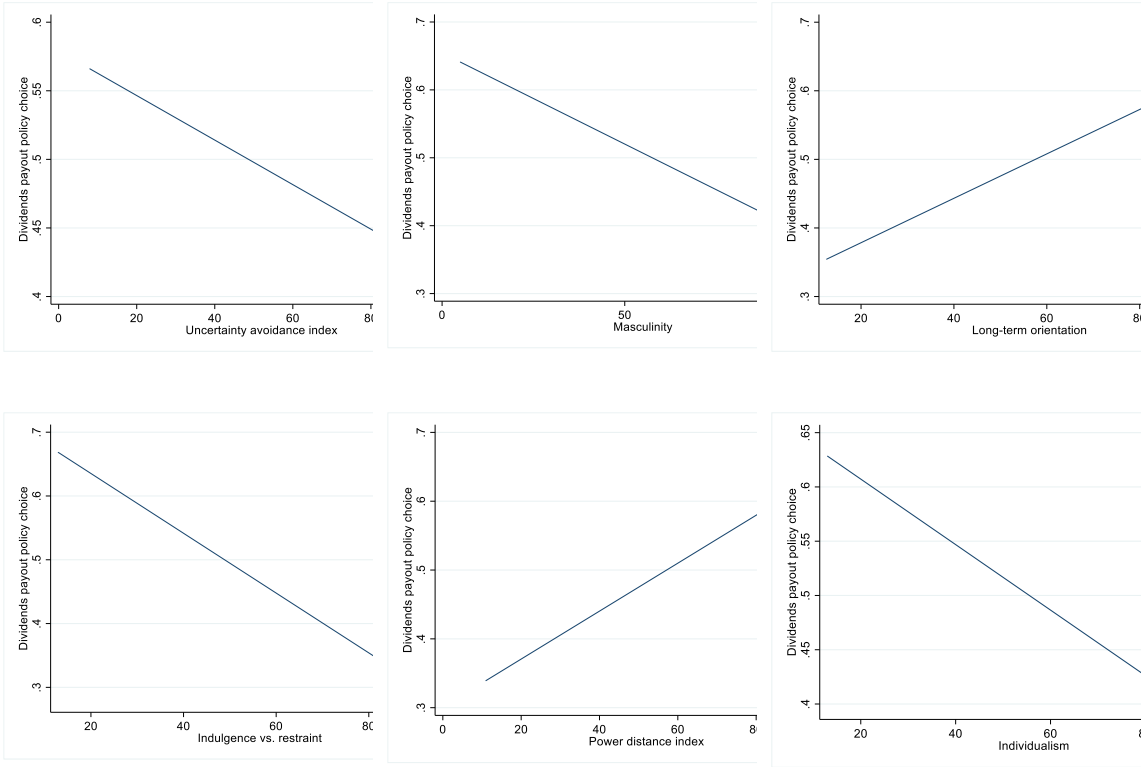
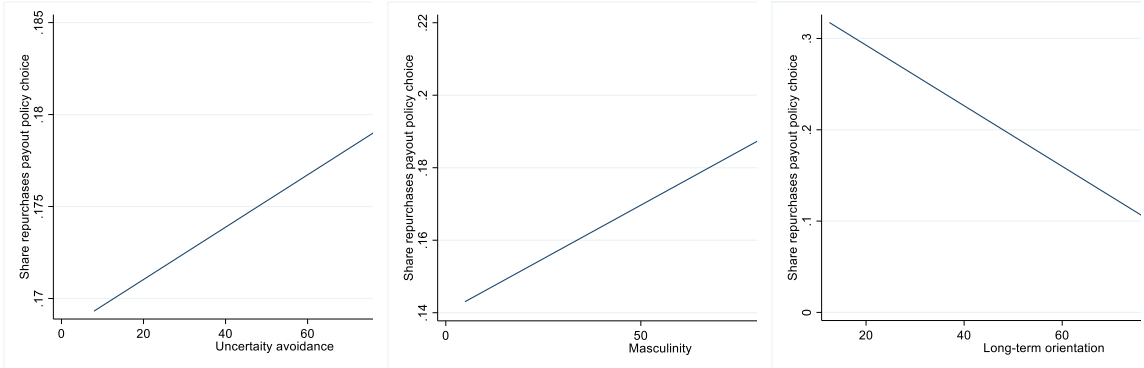

Share repurchases to total payout
.05
.1
.15
.2
.25
20
40
60
Individualism

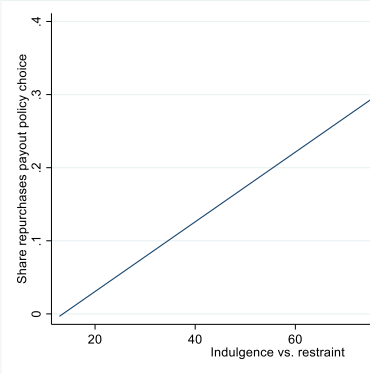
Figure 2: Payout policy choice

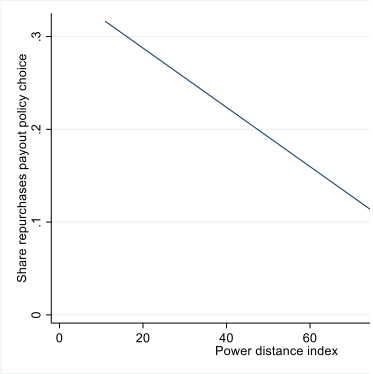
Panel A: The predicted dividends to total payout ratio and national culture dimensions plots



Panel B: The predicted share repurchases to total payout ratio and national culture dimensions plots




Share repurchases payout policy choice
0
.1
.2
.3
.4
20
40
60
Indulgence vs. restraint


Share repurchases payout policy choice
0
.1
.2
.3
0
20
40
60
Power distance index

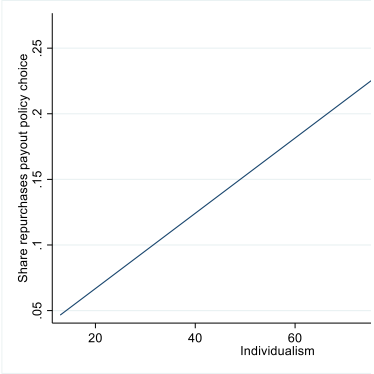

Share repurchases payout policy choice
.05
.1
.15
.2
.25
20
40
60
Individualism

Table 1. Variable definitions.

Variable	Definition	Source
Dividends payout policy (Dividends)	Dummy variable equals 1 if the firm (i) pays only dividends in the year (j).	Worldscope Database
Share repurchases policy (Share repurchases)	Dummy variable equals 2 if the firm (i) only share repurchases in the year (j).	Worldscope Database
Dividends and share repurchases policy (Dividends and share repurchases)	Dummy variable equals 3 if the firm (i) pays dividends and share repurchases in the year (j).	Worldscope Database
No payout (Non-paying)	Dummy variable equals 4 if the firm (i) doesn't payouts in the year (j).	Worldscope Database
Dividends to assets	Measured by dividends value divided by total assets.	Worldscope Database
Share repurchases to assets	Measured by share repurchases value divided by total assets.	Worldscope Database
Dividends to total payout	Measured by dividends value divided by total payout (dividends plus share repurchases).	Worldscope Database
Share repurchases to total payout	Measured by share repurchases value divided by total payout (dividends plus share repurchases).	Worldscope Database
Size	Natural logarithm of the firm's total assets.	Worldscope Database
Return on assets (ROA)	Return on assets measured by net income divided by total assets.	Worldscope Database
ROA volatility	Measured by the standard deviation of return on assets for the most recent four years including the current year (Chay and Suh (2009))	Worldscope Database
Cash-flow	Measured by the ratio of EBITDA to total assets (John, Knyazeva and Knyazeva (2015))	Worldscope Database
Retained earnings	Retained earnings to total equity. Calculate as retained earnings divided by total equity.	Worldscope Database.
Sales growth	Sales growth is the growth rate of sales for 3 years.	Worldscope Database
Leverage	Measured by short-term and long-term debt divided by total assets.	Worldscope Database
Power distance index (PDI)	Hofstede's national culture of power distance degree.	https:/geerthofstede.com
Uncertainty avoidance index (UAI)	Hofstede's national culture of uncertainty avoidance degree.	https://geerthofstede.com

Masculinity (MAS)	Hofstede's national culture of masculinity degree.	https://geerthofstede.com
Individualism (IND)	Hofstede's national culture of individualism degree.	https://geerthofstede.com
Long-term orientation (LTO)	Hofstede's national culture of long-term orientation degree.	https://geerthofstede.com
Indulgence vs. restraint (IVR)	Hofstede's national culture of indulgence vs. restraint degree.	https://geerthofstede.com
High power distance degree (H_PD)	Dummy variable equals 1 for firms in a country with a power distance index equal or higher than the sample median of power distance index and zero otherwise.	https://geerthofstede.com
High uncertainty avoidance degree (H_UA)	Dummy variable equals 1 for firms in a country with an uncertainty avoidance index equal or higher than sample median of uncertainty avoidance index and zero otherwise.	https://geerthofstede.com
High masculinity degree (H_MAS)	Dummy variable equals 1 for firms in a country with a masculinity degree equal or higher than sample median of masculinity and zero otherwise.	https://geerthofstede.com
High individualism degree (H_IND)	Dummy variable equals 1 for firms in a country with an individualism degree equal or higher than sample median of individualism and zero otherwise.	https://geerthofstede.com
High long-term orientation degree (H_LTO)	Dummy variable equals 1 for firms in a country with a long-term orientation degree equal or higher than sample median of long-term orientation and zero otherwise.	https://geerthofstede.com
High indulgence vs. Restraint degree (H_IVR)	Dummy variable equals 1 for firms in a country with an indulgence vs. Restraint degree equal or higher than sample median of indulgence vs. restraint and 0 otherwise.	https://geerthofstede.com
Revised anti-director index	Measure the protection of minority shareholders in the corporate decision-making process including the right to vote.	Djankov et al. (2008)
Anti self-dealing index	Measure the legal protection of minority shareholders against expropriation by corporate insiders.	Djankov et al. (2008)
Dividends tax preference	Measured by 1$ of dividends after tax divided by 1$ of capital gain after tax and developed by La Porta et al. (2000).	La Porta et al. (2000)
Market capitalization % to GDP (MRKTCAP)	Country stock market capitalization equals to the average of annual stock market capitalization divided by the gross domestic product multiplied by 100.	World Development Indicator (Word Bank)
Legal origin	Dummy variable that represents the legal origin of governance in countries (*English, French, German and Scandinavian*).	Djankov et al. (2008)
Fama and French industry classification	Based on four-digit SIC code, Fama and French classified firms in 12 industries class.	Kenneth R. French - Detail for 12 Industry Portfolios

Table 2. Construction of the sample and Pearson Correlation Coefficients.

Table 2. Panel A presents the construction of the sample. Panel B presents Pearson correlation coefficients of Hofstede' national culture dimensions, firm and country characteristics control variables. Power distance index (PDI), uncertainty avoidance index (UAI), masculinity (MAS), individualism (IND), long-term orientation (LTO), and indulgence vs. Restraint (IVR). Size is measured by the natural logarithm of total assets. Leverage is measured by total debt divided by total assets. Sales growth is the growth rate of sales for 3 years. Return on assets (ROA) is measured by earnings divided by total assets. Retained earnings to equity (Retained Earnings) is equal to retained earnings divided by total equity.

Panel A: Construction of the sample.

Description	Number of firms
Worldscope coverage of firms (active and inactive) between 1980 and 2018.	87,959
Firms in mandatory dividend countries.	-1,766
Missing and negative (dividends and share repurchases) and negative total sales, cash-flow to sales, net income, total assets, and common equity.	-25,669
Financial and utility firms.	-15,259
Missing national culture dimensions data.	-1,958
Firms with less than three firm-year observations.	-7,620
Sample	35,687

Panel B: Pearson Correlation Coefficients.

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
(1) Uncertainty avoidance index (UAI)	1.000												
(2) Masculinity (MAS)	0.295	1.000											
(3) Long-term orientation (LTO)	0.393	0.189	1.000										
(4) Indulgence vs. restraint (IVR)	-0.115	-0.062	-0.674	1.000									
(5) Power distance index (PDI)	-0.081	-0.085	0.369	-0.676	1.000								
(6) Individualism (IND)	-0.124	0.102	-0.713	0.769	-0.781	1.000							
(7) Size	0.447	0.152	0.512	-0.424	0.255	-0.482	1.000						
(8) ROA	-0.094	-0.079	-0.088	0.043	-0.020	0.042	-0.133	1.000					
(9) ROA volatility	-0.004	-0.001	0.000	-0.006	0.002	-0.004	-0.006	0.002	1.000				
(10) Cash flow	-0.013	-0.017	-0.028	0.029	-0.024	0.028	-0.031	0.106	0.000	1.000			
(11) Retained_Earn~y	0.004	0.001	0.006	-0.005	0.003	-0.005	0.013	-0.009	0.000	-0.001	1.000		
(12) Sales growth	-0.001	0.000	0.000	-0.002	0.002	-0.001	0.001	-0.001	0.000	0.000	0.000	1.000	
(13) Leverage	0.006	-0.047	-0.041	-0.006	0.004	0.013	0.183	-0.121	-0.003	-0.025	-0.007	0.002	1.000

Table 3. Firms' payout policy choice by country.

Table 3 presents the payout policy choices (dividend payers, share repurchases, dividends and share repurchases, non-paying, only dividends and only share repurchases) distribution by firm country and the percentage of firm-country for each payout policy choice. For each country, the first row presents frequencies and the second row presents percentages in parentheses.

Country	Dividend payers	Share repurchases	Non paying	Dividends and share repurchases	Only Dividends	Only share repurchases	Total
Argentina	350	34	215	25	325	9	574
	(60.98)	(5.92)	(37.46)	(4.36)	(56.62)	(1.57)	(100)
Australia	7,487	1,365	2,121	1,178	6,309	187	9,795
	(76.44)	(13.94)	(21.65)	(12.03)	(64.41)	(1.91)	(100)
Austria	684	153	136	137	547	16	836
	(81.82)	(18.30)	(16.27)	(16.39)	(65.43)	(1.91)	(100)
Bangladesh	88	10	83	2	86	8	179
	(49.16)	(5.59)	(46.37)	(1.12)	(48.04)	(4.47)	(100)
Belgium	767	269	179	229	538	40	986
	(77.79)	(27.28)	(18.15)	(23.23)	(54.56)	(4.06)	(100)
Bulgaria	11	1	8	0	11	1	20
	(55.00)	(5.00)	(40.00)	(0.00)	(55.00)	(5.00)	(100)
Canada	4,802	2,646	2,692	1,711	3,091	935	8,429
	(56.97)	(31.39)	(31.94)	(20.30)	(36.67)	(11.09)	(100)
China	20,202	854	6,156	441	19,761	413	26,771
	(75.46)	(3.19)	(23.00)	(1.65)	(73.81)	(1.54)	(100)
Colombia	483	50	49	44	439	6	538
	(89.78)	(9.29)	(9.11)	(8.18)	(81.60)	(1.12)	(100)
Croatia	86	38	55	35	51	3	144
	(59.72)	(26.39)	(38.19)	(24.31)	(35.42)	(2.08)	(100)
Czech Republic	196	27	73	27	169	0	269
	(72.86)	(10.04)	(27.14)	(10.04)	(62.83)	(0.00)	(100)
Denmark	1,132	400	307	310	822	90	1,529
	(74.04)	(26.16)	(20.08)	(20.27)	(53.76)	(5.89)	(100)
Estonia	70	22	6	17	53	5	81
	(86.42)	(27.16)	(7.41)	(20.99)	(65.43)	(6.17)	(100)
Finland	1,413	270	186	253	1,160	17	1,616
	(87.44)	(16.71)	(11.51)	(15.66)	(71.78)	(1.05)	(100)
France	6296	2,074	1,358	1,726	4,570	348	8,002
	(78.68)	(25.92)	(16.97)	(21.57)	(57.11)	(4.35)	(100)
Germany	4,333	834	1,405	670	3,663	164	5,902
	(73.42)	(14.13)	(23.81)	(11.35)	(62.06)	(2.78)	(100)
Hong Kong	8439	1,472	3,876	1,238	7,201	234	12,549
	(67.25)	(11.73)	(30.89)	(9.87)	(57.38)	(1.86)	(100)
Hungary	210	89	105	62	148	27	342
	(61.40)	(26.02)	(30.70)	(18.13)	(43.27)	(7.89)	(100)
India	15,113	1,259	8,182	941	14,172	318	23,613
	(64.00)	(5.33)	(34.65)	(3.99)	(60.02)	(1.35)	(100)
Indonesia	2,004	163	1,248	128	1,876	35	3,287
	(60.97)	(4.96)	(37.97)	(3.89)	(57.07)	(1.06)	(100)
Ireland	1,071	332	297	257	814	75	1,443
	(74.22)	(23.01)	(20.58)	(17.81)	(56.41)	(5.20)	(100)
Italy	2,496	462	618	375	2,121	87	3,201
	(77.98)	(14.43)	(19.31)	(11.72)	(66.26)	(2.72)	(100)
Japan	34,924	20,589	2,435	19,575	15,349	1,014	38,373
	(91.01)	(53.65)	(6.35)	(51.01)	(40.00)	(2.64)	(100)
Latvia	6	0	2	0	6	0	8
	(75.00)	(0.00)	(25.00)	(0.00)	(75.00)	(0.00)	(100)
Lithuania	52	3	26	1	51	2	80
	(65.00)	(3.75)	(32.50)	(1.25)	(63.75)	(2.50)	(100)
Luxembourg	244	107	71	73	171	34	349
	(69.91)	(30.66)	(20.34)	(20.92)	(49.00)	(9.74)	(100)
Malaysia	9,189	1,776	2,492	1,595	7,594	181	11,862
	(77.47)	(14.97)	(21.01)	(13.45)	(64.02)	(1.53)	(100)
Malta	23	4	16	4	19	0	39

	(58.97)	(10.26)	(41.03)	(10.26)	(48.72)	(0.00)	(100)
Mexico	981	630	480	383	598	247	1,708
	(57.44)	(36.89)	(28.10)	(22.42)	(35.01)	(14.46)	(100)
Morocco	253	15	16	12	241	3	272
	(93.01)	(5.51)	(5.88)	(4.41)	(88.60)	(1.10)	(100)
Netherlands	2,645	760	650	621	2,024	139	3,434
	(77.02)	(22.13)	(18.93)	(18.08)	(58.94)	(4.05)	(100)
New Zealand	1,259	204	171	191	1,068	13	1,443
	(87.25)	(14.14)	(11.85)	(13.24)	(74.01)	(0.90)	(100)
Norway	1,339	464	523	375	964	89	1,951
	(68.63)	(23.78)	(26.81)	(19.22)	(49.41)	(4.56)	(100)
Peru	432	49	128	43	389	6	566
	(76.33)	(8.66)	(22.61)	(7.60)	(68.73)	(1.06)	(100)
Philippines	1,240	346	756	256	984	90	2,086
	(59.44)	(16.59)	(36.24)	(12.27)	(47.17)	(4.31)	(100)
Poland	1,255	345	935	193	1,062	152	2,342
	(53.59)	(14.73)	(39.92)	(8.24)	(45.35)	(6.49)	(100)
Portugal	488	193	93	168	320	25	606
	(80.53)	(31.85)	(15.35)	(27.72)	(52.81)	(4.13)	(100)
Romania	53	2	19	2	51	0	72
	(73.61)	(2.78)	(26.39)	(2.78)	(70.83)	(0.00)	(100)
Russia	913	340	350	255	658	85	1,348
	(67.73)	(25.22)	(25.96)	(18.92)	(48.81)	(6.31)	(100)
Serbia	17	11	21	6	11	5	43
	(39.53)	(25.58)	(48.84)	(13.95)	(25.58)	(11.63)	(100)
Singapore	5,556	805	1,714	702	4,854	103	7,373
	(75.36)	(10.92)	(23.25)	(9.52)	(65.83)	(1.40)	(100)
Slovakia	61	12	16	8	53	4	81
	(75.31)	(14.81)	(19.75)	(9.88)	(65.43)	(4.94)	(100)
Slovenia	180	49	19	37	143	12	211
	(85.31)	(23.22)	(9.00)	(17.54)	(67.77)	(5.69)	(100)
South Korea	10,099	3,888	3,044	3,019	7,080	869	14,012
	(72.07)	(27.75)	(21.72)	(21.55)	(50.53)	(6.20)	(100)
Spain	1,589	786	282	640	949	146	2,017
	(78.78)	(38.97)	(13.98)	(31.73)	(47.05)	(7.24)	(100)
Sweden	1,852	334	674	267	1,585	67	2,593
	(71.42)	(12.88)	(25.99)	(10.30)	(61.13)	(2.58)	(100)
Switzerland	1,865	1,050	285	798	1,067	252	2,402
	(77.64)	(43.71)	(11.87)	(33.22)	(44.42)	(10.49)	(100)
Taiwan	10,563	2,116	3,046	1671	8,892	445	14,054
	(75.16)	(15.06)	(21.67)	(11.89)	(63.27)	(3.17)	(100)
Thailand	3191	91	830	81	3,110	10	4,031
	(79.16)	(2.26)	(20.59)	(2.01)	(77.15)	(0.25)	(100)
Trinidad & Tobago	31	3	3	3	28	0	34
	(91.18)	(8.82)	(8.82)	(8.82)	(82.35)	(0.00)	(100)
Turkey	1,009	49	592	23	986	26	1,627
	(62.02)	(3.01)	(36.39)	(1.41)	(60.60)	(1.60)	(100)
United Kingdom	21,178	4,529	3,909	4,008	17,170	521	25,608
	(82.70)	(17.69)	(15.26)	(15.65)	(67.05)	(2.03)	(100)
United States	41,098	37,483	27,064	21,923	19,175	15,560	83,722
	(49.09)	(44.77)	(32.33)	(26.19)	(22.90)	(18.59)	(100)
Uruguay	0	0	4	0	0	0	4
	(0.00)	(0.00)	(100)	(0.00)	(0.00)	(0.00)	(100)
Vietnam	712	81	241	63	649	18	971
	(73.33)	(8.34)	(24.82)	(6.49)	(66.84)	(1.85)	(100)
Total	232,030	89,938	80,262	66,802	165,228	23,136	335,428
	(69.17)	(26.81)	(23.93)	(19.92)	(49.26)	(6.90)	(100)

Table 4. Sample description and summary statistics.

Table 4 presents the sample descriptive statistics. Panel A presents the number of firms and observations by country, the mean of payout ratios measures by country, as well as the degree for each of the six Hofstede's national culture dimensions (NCD) by country (Power distance index (PDI), uncertainty avoidance index (UAI), masculinity index (MAS), individualism (IND), long-term orientation index (LTO), and indulgence vs. restraint (IVR). Panel B presents the mean, median, and different percentile of payout ratios (dividends to assets, share repurchases to assets, dividends to net income before extraordinary items (IBEI), share repurchases to IBEI, dividends to earnings before interest and taxes (EBIT), share repurchases to EBIT. Panel C presents the distribution of firm observations by year from 1980 to 2018

Panel A. Sample description, payout ratios, and national cultural dimensions

Country	Sample		Payout measures								Hofstede's NCD					
	Firms by Country	Observations by Country	Dividends to assets	Share repurchases to assets	Dividends to total payout	Share repurchases to total payout	Dividends to IBEI	Share repurchases to IBEI	Dividends to EBIT	Share repurchases to EBIT	UAI	MAS	LTO	IVR	PDI	IND
Argentina	72	574	0.023	0.001	0.945	0.055	0.247	0.056	0.197	0.020	86	56	20	62	49	46
Australia	1,087	9,795	0.040	0.007	0.931	0.069	0.856	0.130	0.305	0.027	51	61	21	71	38	90
Austria	83	836	0.017	0.002	0.921	0.079	0.421	0.067	0.224	0.033	70	79	60	63	11	55
Bangladesh	32	179	0.010	0.004	0.905	0.095	0.227	0.030	0.108	0.022	60	55	47	20	80	20
Belgium	110	986	0.028	0.007	0.870	0.130	0.969	0.222	0.244	0.096	94	54	82	57	65	75
Bulgaria	3	20	0.050	0.000	0.917	0.083	0.362	0.000	0.305	0.000	85	40	69	16	70	30
Canada	1,019	8,429	0.023	0.008	0.734	0.266	0.881	0.782	0.255	0.175	48	52	36	68	39	80
China	4,252	26,771	0.022	0.001	0.974	0.026	0.887	0.017	0.305	-0.007	30	66	87	24	80	20
Colombia	44	538	0.031	0.002	0.962	0.038	0.712	0.038	0.318	0.016	80	64	13	83	67	13
Croatia	20	144	0.027	0.001	0.897	0.103	0.436	0.018	0.291	0.015	80	40	58	33	73	33
Czech republic	39	269	0.037	0.002	0.968	0.032	0.946	0.034	-6.659	0.021	74	57	70	29	57	58
Denmark	165	1,529	0.025	0.012	0.813	0.187	0.356	0.164	0.195	0.077	23	16	35	70	18	74
Estonia	9	81	0.052	0.009	0.861	0.139	0.709	0.098	0.445	0.062	60	30	82	16	40	60
Finland	173	1,616	0.031	0.005	0.946	0.054	0.993	0.083	0.339	0.168	59	26	38	57	33	63
France	796	8,002	0.023	0.003	0.883	0.117	0.558	0.111	0.235	0.030	86	43	63	48	68	71
Germany	665	5,902	0.022	0.003	0.922	0.078	1.289	0.096	0.260	0.030	65	66	83	40	35	67
Hong kong	1,310	12,549	0.031	0.003	0.946	0.054	0.596	0.080	0.345	0.058	29	57	61	17	68	25
Hungary	40	342	0.028	0.007	0.834	0.166	0.475	0.438	0.199	0.022	82	88	58	31	46	80
India	2,691	23,613	0.013	0.002	0.950	0.050	0.247	0.117	0.100	0.042	40	56	51	26	77	48
Indonesia	391	3,287	0.025	0.001	0.963	0.037	0.381	0.027	0.159	0.010	48	46	62	38	78	14
Ireland	116	1,443	0.018	0.009	0.842	0.158	0.488	0.202	0.222	0.069	35	68	24	65	28	70
Italy	353	3,201	0.019	0.002	0.930	0.070	0.965	0.094	0.235	0.021	75	70	61	30	50	76
Japan	3,779	38,373	0.010	0.004	0.864	0.136	0.693	0.178	0.246	0.060	92	95	88	42	54	46
Latvia	2	8	0.018	0.000	1.000	0.000	0.384	0.000	0.342	0.000	63	9	69	13	44	70
Lithuania	13	80	0.053	0.000	0.952	0.048	0.498	0.013	0.415	0.006	65	19	82	16	42	60
Luxembourg	49	349	0.025	0.007	0.801	0.199	0.619	0.150	0.236	0.066	70	50	64	56	40	60
Malaysia	1,045	11,862	0.026	0.001	0.952	0.048	0.575	0.041	0.225	0.016	36	50	41	57	104	26
Malta	6	39	0.046	0.003	0.960	0.040	0.364	0.018	0.261	0.018	96	47	47	66	56	59
Mexico	166	1,708	0.021	0.007	0.708	0.292	0.712	0.145	0.178	0.064	82	69	24	97	81	30

Morocco	28	272	0.070	0.003	0.977	0.023	1.105	0.026	0.500	0.017	68	53	14	25	70	46	
Netherlands	290	3,434	0.021	0.006	0.869	0.131	0.376	0.269	0.134	0.061	53	14	67	68	38	80	
New Zealand	130	1,443	0.047	0.009	0.953	0.047	0.815	0.186	0.479	0.067	49	58	33	75	22	79	
Norway	229	1,951	0.032	0.005	0.875	0.125	0.646	0.116	0.245	0.047	50	8	35	55	31	69	
Peru	67	566	0.046	0.002	0.961	0.039	0.516	0.073	0.293	0.017	87	42	25	46	64	16	
Philippines	194	2,086	0.022	0.014	0.873	0.127	0.451	0.474	0.137	0.095	44	64	27	42	94	32	
Poland	318	2,342	0.022	0.004	0.842	0.158	0.564	0.175	0.267	0.063	93	64	38	29	68	60	
Portugal	71	606	0.020	0.002	0.877	0.123	1.796	0.133	0.264	0.037	104	31	28	33	63	27	
Romania	11	72	0.046	0.000	0.973	0.027	0.520	0.010	0.378	0.004	90	42	52	20	90	30	
Russia	198	1,348	0.029	0.006	0.815	0.185	0.738	0.415	0.194	0.057	95	36	81	20	93	39	
Serbia	12	43	0.012	0.004	0.738	0.262	0.338	0.174	0.209	0.127	92	43	52	28	86	25	
Singapore	732	7,373	0.031	0.002	0.956	0.044	0.769	0.046	0.301	0.032	8	48	72	46	74	20	
Slovakia	12	81	0.030	0.020	0.900	0.100	0.671	3.309	0.408	0.639	51	110	77	28	104	52	
Slovenia	30	211	0.016	0.002	0.894	0.106	1.973	0.054	0.370	0.034	88	19	49	48	71	27	
South korea	1,405	14,012	0.009	0.005	0.808	0.192	0.357	0.318	0.127	0.066	85	39	100	29	60	18	
Spain	200	2,017	0.024	0.006	0.810	0.190	0.827	0.442	0.257	0.084	86	42	48	44	57	51	
Sweden	373	2,593	0.030	0.005	0.914	0.086	0.636	0.086	0.279	-0.003	29	5	53	78	31	71	
Switzerland	251	2,402	0.022	0.013	0.767	0.233	0.513	0.432	0.230	0.124	58	70	74	66	34	68	
Taiwan	1,629	14,054	0.033	0.003	0.909	0.091	0.962	0.196	1.648	0.078	69	45	93	49	58	17	
Thailand	571	4,031	0.045	0.001	0.990	0.010	1.133	0.012	0.386	0.007	64	34	32	45	64	20	
Trinidad & tobago	5	34	0.217	0.001	0.974	0.026	0.600	0.016	0.404	0.010	55	58	13	80	47	16	
Turkey	181	1,627	0.032	0.001	0.969	0.031	0.499	0.024	0.243	0.010	85	45	46	49	66	37	
United Kingdom	2,461	25,608	0.028	0.006	0.920	0.080	0.813	0.098	0.391	0.061	35	66	51	69	35	89	
United States	7,545	83,722	0.015	0.019	0.560	0.440	0.384	0.457	0.135	0.161	46	62	26	68	40	91	
Uruguay	1	4	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	100	38	26	53	61	36	
Vietnam	213	971	0.034	0.001	0.964	0.036	0.574	0.044	0.267	0.007	30	40	57	35	70	20	
Total	35,687	335,428								Median	46	62	51	49	54	52	

Panel B. Summary statistics of payout ratios.

	Mean	Median	p5	p25	p75	p95
Dividends to assets	0.021	0.009	0.000	0.000	0.024	0.073
Share repurchases to assets	0.008	0.000	0.000	0.000	0.000	0.039
Dividends to total payout	0.827	1.000	0.000	0.884	1.000	1.000
Share repurchases to payout	0.173	0.000	0.000	0.000	0.116	1.000
Dividends to IBEI	0.615	0.211	0.000	0.000	0.473	1.347
Share repurchases to IBEI	0.230	0.000	0.000	0.000	0.001	0.702
Dividends to EBIT	0.279	0.120	0.000	0.000	0.272	0.719
Share repurchases to EBIT	0.077	0.000	0.000	0.000	0.000	0.393

Panel C. Observations by year

Year	Observations	Year	Observations	Year	Observations	Year	Observations
1980	1,499	1990	4,314	2000	8,918	2010	11,827
1981	1,560	1991	4,417	2001	8,829	2011	12,177
1982	1,601	1992	4,601	2002	9,266	2012	14,307
1983	1,740	1993	4,960	2003	10,458	2013	17,488
1984	1,918	1994	6,241	2004	11,502	2014	18,544

1985	2,028	1995	6,985	2005	11,714	2015	18,411
1986	2,130	1996	7,683	2006	12,577	2016	18,353
1987	3,209	1997	7,837	2007	12,388	2017	18,063
1988	3,907	1998	7,767	2008	11,414	2018	12,172
1989	4,235	1999	7,842	2009	10,546	Total	335,428

Table 5. Payout policy level, national culture dimensions, and firm characteristics.

Table 5 presents the results of regressions of the payout level, dividends to total payout vs. share repurchases to total payout (Panel A), annual regressions of dividends to total payout vs. share repurchases to total payout (Panel B), and dividends to assets vs. share repurchases to assets (Panel C) on Hofstede's national culture dimension with a firm control variable. Dividends to total payout represent the total value of dividends divided by dividends plus share repurchases for each firm-year. Share repurchases to assets equals to the total value of share repurchases divided by dividends plus share repurchases for each firm-year. Dividends to assets represent the total value of dividends divided by total assets for each firm-year. Share repurchases to assets equals to the total value of share repurchases divided by total assets for each firm-year. High uncertainty avoidance (H_UA) is a dummy variable that equals 1 for firms in countries with uncertainty avoidance higher or equal to the median of all firm-year observations and 0 otherwise. High masculinity (H_MAS) is a dummy variable that equals 1 for firms in countries with masculinity higher or equal to the median of all firm-year observations and 0 otherwise. High long-term orientation (H_LTO) is a dummy variable that equals 1 for firms in countries with long-term orientation higher or equal to the median of all firm-year observations and 0 otherwise. High indulgence vs. restraint (H_IVR) is a dummy variable that equals 1 for firms in countries with indulgence vs. restraint higher or equal to the median of all firm-year observations and 0 otherwise. High power distance (H_PD) is a dummy variable that equals 1 for firms in countries with power distance higher or equal to the median of all firm-year observations and 0 otherwise. High individualism (H_IND) is a dummy variable that equals 1 for firms in countries with individualism degrees higher or equal to the median of all firm-year observations and 0 otherwise. Size is measured by the natural logarithm of total assets. Leverage is measured by total debt divided by total assets. (Sales growth) is three years of sales growth. Return on assets (ROA) is measured by earnings divided by total assets. ROA volatility is measured by the standard deviation of return on assets for the most recent four years including the current year. Cash-flow is measured by the ratio of EBITDA to total assets. Retained earnings to equity (Retained Earnings) equal retained earnings divided by total equity. Regressions include year and industry dummy variables and weighting by country. P-value in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

Panel A. WLS model regression of payout mix with continuous national cultural dimensions

Variables	(1) Dividends to total payout	(2) Share repurchases to total payout	(3) Dividends to total payout	(4) Share repurchases to total payout	(5) Dividends to total payout	(6) Share repurchases to total payout	(7) Dividends to total payout	(8) Share repurchases to total payout	(9) Dividends to total payout	(10) Share repurchases to total payout	(11) Dividends to total payout	(12) Share repurchases to total payout	(13) Dividends to total payout	(14) Share repurchases to total payout
UAI	-0.0004***	0.0004***											-0.0017***	0.0017***
	(0.0000)	(0.0000)											(0.0000)	(0.0000)
MAS			-0.0012***	0.0012***									-0.0013***	0.0013***
			(0.0000)	(0.0000)									(0.0000)	(0.0000)
LTO					0.0054***	-0.0054***							0.0049***	-0.0049***
					(0.0000)	(0.0000)							(0.0000)	(0.0000)
IVR							-0.0068***	0.0068***					-0.0028***	0.0028***
							(0.0000)	(0.0000)					(0.0000)	(0.0000)
PDI									0.0051***	-0.0051***				
									(0.0000)	(0.0000)				

IND											-0.0049***	0.0049***		
											(0.0000)	(0.0000)		
Size	0.0746***	-0.0746***	0.0754***	-0.0754***	0.0539***	-0.0539***	0.0446***	-0.0446***	0.0574***	-0.0574***	0.0406***	-0.0406***	0.0403***	-0.0403***
	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)
ROA	-0.0008***	0.0008***	-0.0008*	0.0008*	-0.0005**	0.0005**	-0.0007**	0.0007**	-0.0008**	0.0008**	-0.0008**	0.0008**	-0.0007**	0.0007**
	(0.0000)	(0.0000)	(0.0504)	(0.0504)	(0.0109)	(0.0109)	(0.0235)	(0.0235)	(0.0342)	(0.0342)	(0.0263)	(0.0263)	(0.0185)	(0.0185)
ROA volatility	-0.0000	0.0000	-0.0000	0.0000	-0.0000	0.0000	-0.0000	0.0000	-0.0000	0.0000	-0.0000	0.0000	-0.0000	0.0000
	(0.4438)	(0.4438)	(0.4007)	(0.4007)	(0.4661)	(0.4661)	(0.2588)	(0.2588)	(0.3786)	(0.3786)	(0.3289)	(0.3289)	(0.3210)	(0.3210)
Cash-flow	-0.1203***	0.1203***	-0.1237	0.1237	-0.0635	0.0635	-0.0687	0.0687	-0.0778	0.0778	-0.0334	0.0334	-0.0371	0.0371
	(0.0000)	(0.0000)	(0.1436)	(0.1436)	(0.1765)	(0.1765)	(0.1678)	(0.1678)	(0.1642)	(0.1642)	(0.2341)	(0.2341)	(0.2262)	(0.2262)
Retained earnings	0.0000	-0.0000	-0.0000	0.0000	0.0000	-0.0000	0.0000	-0.0000	0.0000	-0.0000	0.0000	-0.0000	0.0000	-0.0000
	(0.8899)	(0.8899)	(0.6211)	(0.6211)	(0.5718)	(0.5718)	(0.7025)	(0.7025)	(0.8673)	(0.8673)	(0.5246)	(0.5246)	(0.5493)	(0.5493)
Sales growth	-0.0000**	0.0000**	-0.0000***	0.0000***	-0.0000***	0.0000***	-0.0000***	0.0000***	-0.0000***	0.0000***	-0.0000***	0.0000***	-0.0000***	0.0000***
	(0.0112)	(0.0112)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)
Leverage	-0.2069***	0.2069***	-0.2561***	0.2561***	-0.1055***	0.1055***	-0.1533***	0.1533***	-0.2021***	0.2021***	-0.1315***	0.1315***	-0.1079***	0.1079***
	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)
$Size_{t-1}$	-0.0628***	0.0628***	-0.0587***	0.0587***	-0.0636***	0.0636***	-0.0465***	0.0465***	-0.0480***	0.0480***	-0.0468***	0.0468***	-0.0459***	0.0459***
	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)
ROA_{t-1}	-0.0009***	0.0009***	-0.0016***	0.0016***	-0.0005	0.0005	-0.0013***	0.0013***	-0.0015***	0.0015***	-0.0018***	0.0018***	-0.0013***	0.0013***
	(0.0000)	(0.0000)	(0.0018)	(0.0018)	(0.1071)	(0.1071)	(0.0001)	(0.0001)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)
$Retained\ earnings_{t-1}$	0.0000***	-0.0000***	0.0000	-0.0000	0.0000	-0.0000	0.0000	-0.0000	0.0000	-0.0000	0.0000	-0.0000	0.0000	-0.0000
	(0.0002)	(0.0002)	(0.3738)	(0.3738)	(0.3217)	(0.3217)	(0.3388)	(0.3388)	(0.3602)	(0.3602)	(0.3295)	(0.3295)	(0.3296)	(0.3296)
$Sales\ growth_{t-1}$	0.0000	-0.0000	0.0000***	-0.0000***	0.0000*	-0.0000*	0.0000***	-0.0000***	0.0000**	-0.0000**	0.0000***	-0.0000***	0.0000***	-0.0000***
	(0.1177)	(0.1177)	(0.0035)	(0.0035)	(0.0534)	(0.0534)	(0.0090)	(0.0090)	(0.0108)	(0.0108)	(0.0055)	(0.0055)	(0.0047)	(0.0047)
$Leverage_{t-1}$	0.1674***	-0.1674***	0.1946***	-0.1946***	0.2210***	-0.2210***	0.1900***	-0.1900***	0.1888***	-0.1888***	0.1947***	-0.1947***	0.1954***	-0.1954***
	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)
Constant	0.5275***	0.4725***	0.4483***	0.5517***	0.6489***	0.3511***	1.1561***	-0.1561***	0.2913***	0.7087***	1.2121***	-0.2121***	0.9350***	0.0650***
	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)
Observations	194,954	194,954	194,954	194,954	194,954	194,954	194,954	194,954	194,954	194,954	194,954	194,954	194,954	194,954
Weighting by country	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.05	0.05	0.05	0.05	0.15	0.15	0.12	0.12	0.10	0.09	0.16	0.16	0.18	0.18

Panel B: Annual WLS model regressions of payout mix with continuous national cultural dimensions

	Dividends to payout			Share repurchases to payout		
	Average coefficient	Number of coefficients (+ /-)	Number of significant coefficients (1% to 10%)	Average coefficient	Number of coefficients (+ /-)	Number of significant coefficients (1% to 10%)
UAI	-0,002	21 (-)	21	0,002	21 (+)	21
MAS	-0,001	21 (-)	18	0,001	21 (+)	18
LTO	0,005	21 (+)	21	-0,005	20 (-)	20
IVR	-0,002	17 (-)	19	0,002	17 (+)	19
PDI	0,005	21 (+)	21	-0,005	21 (-)	21
IND	-0,005	21 (-)	21	0,005	21 (+)	21
Control variables (as Panel A)	Yes	Yes	Yes	Yes	Yes	Yes

Panel C. Tobit model regression of payout to total assets with national cultural dimensions (by group: high vs low)

Variables	(1) Dividends to assets	(2) Share repurchases to assets	(3) Dividends to assets	(4) Share repurchases to assets	(5) Dividends to assets	(6) Share repurchases to assets	(7) Dividends to assets	(8) Share repurchases to assets	(9) Dividends to assets	(10) Share repurchases to assets	(11) Dividends to assets	(12) Share repurchases to assets	(13) Dividends to assets	(14) Share repurchases to assets
H_UA	-0.0080***	0.0094***											-0.0056***	0.0070***
	(0.0000)	(0.0000)											(0.0000)	(0.0000)
H_MAS			-0.0128***	0.0110***									-0.0116***	0.0052***
			(0.0000)	(0.0000)									(0.0000)	(0.0000)
H_LTO					0.0046***	-0.0132***							0.0011*	-0.0045***
					(0.0001)	(0.0000)							(0.0940)	(0.0000)

H_IVR							-0.0059***	0.0160***					0.0005	0.0098***
							(0.0000)	(0.0000)					(0.6102)	(0.0000)
H_PD									0.0066***	-0.0169***				
									(0.0000)	(0.0000)				
H_IND											-0.0068***	0.0164***		
											(0.0000)	(0.0000)		
Size	-0.0256***	-0.0235***	-0.0260***	-0.0232***	-0.0256***	-0.0231***	-0.0259***	-0.0223***	-0.0259***	-0.0224***	-0.0259***	-0.0224***	-0.0261***	-0.0222***
	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)
ROA	0.0004*	0.0002**	0.0004*	0.0003**	0.0004*	0.0002**	0.0004*	0.0002**	0.0004*	0.0002**	0.0004*	0.0002**	0.0004*	0.0002**
	(0.0511)	(0.0401)	(0.0532)	(0.0386)	(0.0509)	(0.0394)	(0.0511)	(0.0387)	(0.0512)	(0.0383)	(0.0513)	(0.0382)	(0.0530)	(0.0381)
ROA volatility	-0.0000**	-0.0000	-0.0000**	-0.0000	-0.0000**	-0.0000	-0.0000**	-0.0000	-0.0000**	-0.0000	-0.0000**	-0.0000	-0.0000***	-0.0000
	(0.0127)	(0.3189)	(0.0111)	(0.4090)	(0.0180)	(0.6247)	(0.0181)	(0.4064)	(0.0179)	(0.3190)	(0.0176)	(0.4338)	(0.0076)	(0.6118)
Cash-flow	0.0670*	0.0442*	0.0681*	0.0437*	0.0666	0.0425*	0.0671	0.0414*	0.0676	0.0404*	0.0675	0.0408*	0.0692	0.0394*
	(0.0992)	(0.0882)	(0.0983)	(0.0885)	(0.1011)	(0.0899)	(0.1013)	(0.0910)	(0.1016)	(0.0926)	(0.1014)	(0.0919)	(0.1002)	(0.0945)
Retained earnings	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	(0.3324)	(0.1668)	(0.3351)	(0.1432)	(0.3320)	(0.1483)	(0.3315)	(0.1447)	(0.3318)	(0.1423)	(0.3310)	(0.1444)	(0.3336)	(0.1530)
Sales growth	-0.0000**	-0.0000***	-0.0000**	-0.0000**	-0.0000***	-0.0000***	-0.0000***	-0.0000***	-0.0000**	-0.0000***	-0.0000***	-0.0000***	-0.0000**	-0.0000***
	(0.0254)	(0.0009)	(0.0247)	(0.0139)	(0.0072)	(0.0027)	(0.0093)	(0.0029)	(0.0104)	(0.0052)	(0.0099)	(0.0091)	(0.0450)	(0.0082)
Leverage	0.0241***	0.0574***	0.0244***	0.0573***	0.0252***	0.0534***	0.0256***	0.0526***	0.0259***	0.0522***	0.0259***	0.0523***	0.0249***	0.0523***
	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)
$Size_{t-1}$	0.0259***	0.0230***	0.0257***	0.0234***	0.0252***	0.0241***	0.0254***	0.0235***	0.0254***	0.0236***	0.0254***	0.0236***	0.0261***	0.0231***
	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)
ROA_{t-1}	0.0006**	0.0004**	0.0006**	0.0004**	0.0006**	0.0004**	0.0006**	0.0004**	0.0006**	0.0004**	0.0006**	0.0004**	0.0006**	0.0004**
	(0.0280)	(0.0329)	(0.0296)	(0.0317)	(0.0279)	(0.0325)	(0.0281)	(0.0318)	(0.0283)	(0.0314)	(0.0284)	(0.0312)	(0.0296)	(0.0313)
$Retained\ earnings_{t-1}$	0.0000	0.0000**	0.0000	0.0000**	0.0000	0.0000**	0.0000	0.0000**	0.0000	0.0000**	0.0000	0.0000**	0.0000	0.0000**
	(0.1260)	(0.0232)	(0.1240)	(0.0134)	(0.1142)	(0.0286)	(0.1141)	(0.0224)	(0.1142)	(0.0200)	(0.1136)	(0.0230)	(0.1288)	(0.0186)
$Sales\ growth_{t-1}$	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	(0.4278)	(0.4670)	(0.4569)	(0.4428)	(0.4282)	(0.4409)	(0.4289)	(0.4422)	(0.4369)	(0.4218)	(0.4413)	(0.4132)	(0.4633)	(0.4171)
$Leverage_{t-1}$	-0.0513***	-0.0675***	-0.0517***	-0.0674***	-0.0503***	-0.0691***	-0.0507***	-0.0680***	-0.0507***	-0.0681***	-0.0507***	-0.0681***	-0.0520***	-0.0674***
	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)
Constant	0.0068	0.0138**	0.0252***	-0.0022	0.0142**	-0.0061	0.0219***	-0.0255***	0.0166***	-0.0098**	0.0243***	-0.0274***	0.0235***	-0.0235***
	(0.3585)	(0.0130)	(0.0002)	(0.6691)	(0.0202)	(0.1768)	(0.0000)	(0.0000)	(0.0060)	(0.0381)	(0.0000)	(0.0000)	(0.0000)	(0.0000)
Observations	194,954	194,954	194,954	194,954	194,954	194,954	194,954	194,954	194,954	194,954	194,954	194,954	194,954	194,954
Weighting by country	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Log likelihood	1.360e+08	1.420e+08	1.360e+08	1.420e+08	1.360e+08	1.420e+08	1.360e+08	1.420e+08	1.360e+08	1.420e+08	1.360e+08	1.420e+08	1.360e+08	1.420e+08

Table 6. Payout policy choice, national culture, and firm characteristics.

Table 6 presents the results of multinomial logit model regressions of the choice of payout policy (dividends, share repurchases, dividends and repurchases and non-payout) on Hofstede's national culture dimensions and firm control variables. Dividends, share repurchases, Dividend and share repurchases and non-paying are dummies variables. Payout policy choices equal one if firms pay dividends in a given year. Payout policy choices equal two if firm-year share repurchases, three if firm-year pay dividends and share repurchases and four if firm-year do not payouts. High uncertainty avoidance (H_UA) is a dummy variable that equals 1 for firms in countries with uncertainty avoidance higher or equal to the median of all firm-year observations and 0 otherwise. High masculinity (H_MAS) is a dummy variable that equals 1 for firms in countries with masculinity higher or equal to the median of all firm-year observations and 0 otherwise. High long-term orientation (H_LTO) is a dummy variable that equals 1 for firms in countries with long-term orientation higher or equal to the median of all firm-year observations and 0 otherwise. High indulgence vs. restraint (H_IVR) is a dummy variable that equals 1 for firms in countries with indulgence vs. restraint higher or equal to the median of all firm-year observations and 0 otherwise. High power distance (H_PD) is a dummy variable that equals 1 for firms in countries with power distance higher or equal to the median of all firm-year observations and 0 otherwise. High individualism (H_IND) is a dummy variable that equals 1 for firms in countries with individualism degrees higher or equal to the median of all firm-year observations and 0 otherwise. Size is measured by the natural logarithm of total assets. Leverage is measured by total debt divided by total assets. (Sales growth) is three years of sales growth. Return on assets (ROA) is measured by earnings divided by total assets. ROA volatility is measured by the standard deviation of return on assets for the most recent four years including the current year. Cash flow is measured by the ratio of EBITDA to total assets. Retained earnings to equity (Retained Earnings) equals retained earnings divided by total equity. The base outcome is non-paying for payout choice regressions. All models include year and industry dummy variables and weighting by country. P-value in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

Panel A. Multinomial logit model regressions of payout policy choice and national cultural dimensions (Continues)

Variables	(1) Dividends	(2) Share repurchases	(3) Dividends	(4) Share repurchases	(5) Dividends	(6) Share repurchases	(7) Dividends	(8) Share repurchases	(9) Dividends	(10) Share repurchases	(11) Dividends	(12) Share repurchases	(13) Dividends	(14) Share repurchases
UAI	-0.0028***	0.0040***											-0.0083***	0.0113***
	(0.0000)	(0.0000)											(0.0000)	(0.0000)
MAS			-0.0012***	0.0140***									-0.0012**	0.0154***
			(0.0065)	(0.0000)									(0.0108)	(0.0000)
LTO					0.0173***	-0.0297***							0.0235***	-0.0203***
					(0.0000)	(0.0000)							(0.0000)	(0.0000)
IVR							-0.0053***	0.0510***					0.0113***	0.0346***
							(0.0000)	(0.0000)					(0.0000)	(0.0000)
PDI									0.0059***	-0.0347***				
									(0.0000)	(0.0000)				
IND											-0.0106***	0.0322***		
											(0.0000)	(0.0000)		
Size	-0.1526***	-0.3693***	-0.1959**	-0.3785***	-0.2219**	-0.3477***	-0.2055**	-0.2888***	-0.1985**	-0.3279***	-0.2231**	-0.2873***	-0.1951**	-0.2987***
	(0.0000)	(0.0000)	(0.0225)	(0.0000)	(0.0161)	(0.0000)	(0.0224)	(0.0000)	(0.0253)	(0.0000)	(0.0185)	(0.0000)	(0.0383)	(0.0000)
ROA	-0.0005	-0.0106***	-0.0004	-0.0079	-0.0005	-0.0049	-0.0003	-0.0034	-0.0004	-0.0036	-0.0022	-0.0004	-0.0014	-0.0005
	(0.3367)	(0.0000)	(0.4031)	(0.3191)	(0.3898)	(0.4606)	(0.4699)	(0.5923)	(0.3866)	(0.5693)	(0.1090)	(0.7409)	(0.1810)	(0.7128)
ROA volatility	-0.0000*	-0.0000	-0.0001	-0.0000	-0.0000	-0.0000	-0.0000	-0.0000	-0.0000	-0.0000	-0.0000	-0.0000	-0.0000	-0.0000
	(0.0953)	(0.6604)	(0.7856)	(0.2679)	(0.7742)	(0.2668)	(0.7615)	(0.7770)	(0.7792)	(0.3096)	(0.7646)	(0.4062)	(0.7617)	(0.5148)
Cash-flow	1.8426***	4.1553***	1.6526***	4.2335***	2.5028***	3.3208***	1.9139***	2.9879***	1.9185***	3.2187***	2.5146***	2.6743***	2.4003***	2.6652***
	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)

Retained earnings	0.0014***	0.0003***	0.0011	0.0003*	0.0012	0.0003*	0.0011	0.0003*	0.0011	0.0003*	0.0013	0.0003*	0.0012	0.0003*
	(0.0000)	(0.0000)	(0.5235)	(0.0651)	(0.5304)	(0.0641)	(0.5229)	(0.0708)	(0.5234)	(0.0641)	(0.5296)	(0.0631)	(0.5253)	(0.0517)
Sales growth	-0.0004***	0.0000	-0.0006***	0.0000**	-0.0007***	0.0000**	-0.0009***	0.0000**	-0.0008***	0.0000**	-0.0010***	0.0000**	-0.0011***	0.0000***
	(0.0000)	(0.3064)	(0.0084)	(0.0487)	(0.0047)	(0.0375)	(0.0021)	(0.0171)	(0.0027)	(0.0254)	(0.0011)	(0.0105)	(0.0013)	(0.0069)
Leverage	0.5009***	1.1086***	0.5495**	1.3667***	0.9593***	0.9126***	0.7054***	0.9314***	0.6508**	1.1133***	0.8277***	0.8389***	0.8699***	0.8949***
	(0.0000)	(0.0000)	(0.0278)	(0.0000)	(0.0004)	(0.0000)	(0.0066)	(0.0000)	(0.0116)	(0.0000)	(0.0021)	(0.0000)	(0.0011)	(0.0000)
$Size_{t-1}$	0.3983***	0.4228***	0.4739***	0.4737***	0.4197***	0.5189***	0.4609***	0.4926***	0.4673***	0.4795***	0.4434***	0.5153***	0.4288***	0.4885***
	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)
ROA_{t-1}	0.0009	-0.0007	0.0007	0.0000	0.0008	-0.0001	0.0009	0.0006	0.0007	0.0005	-0.0004	0.0010	-0.0001	0.0009
	(0.1355)	(0.5454)	(0.4371)	(0.9945)	(0.4238)	(0.9081)	(0.4336)	(0.6455)	(0.4589)	(0.6369)	(0.5868)	(0.3334)	(0.8950)	(0.3688)
$Retained\ earnings_{t-1}$	0.0007***	0.0000	0.0006	0.0000	0.0007	0.0000	0.0006	0.0000	0.0006	0.0000	0.0006	0.0000	0.0007	0.0000
	(0.0000)	(0.5495)	(0.6508)	(0.7009)	(0.6344)	(0.6987)	(0.6507)	(0.6509)	(0.6560)	(0.6844)	(0.6666)	(0.6506)	(0.6422)	(0.6904)
$Sales\ growth_{t-1}$	-0.0000	-0.0000	-0.0000*	-0.0000	-0.0000	-0.0000*	-0.0000	-0.0000*	-0.0000	-0.0000	-0.0000	-0.0000	-0.0000	-0.0000*
	(0.1467)	(0.1438)	(0.0825)	(0.1076)	(0.1087)	(0.0950)	(0.1237)	(0.0619)	(0.1354)	(0.1020)	(0.1573)	(0.1103)	(0.1231)	(0.0859)
$Leverage_{t-1}$	-1.8902***	-2.0336***	-1.9622***	-2.2824***	-1.8878***	-2.3447***	-1.9526***	-2.3162***	-1.9683***	-2.2775***	-1.9334***	-2.3382***	-1.9044***	-2.3039***
	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)
Constant	-3.8784***	-1.8921***	-4.6811***	-3.3308***	-4.0179***	-2.7752***	-4.0238***	-7.7294***	-4.8754***	-1.9920***	-2.8878***	-7.5676***	-5.1474***	-7.1629***
	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)
Observations	194,954	194,954	194,954	194,954	194,954	194,954	194,954	194,954	194,954	194,954	194,954	194,954	194,954	194,954
Weighting by country	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Chi-squared	45,150	45,150	32,961	32,961	30,309	30,309	32,365	32,365	32,012	32,012	36,716	36,716	41,862	41,862
Pseudo R-squared	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.13	0.13	0.14	0.14

Panel B. Multinomial logit model regressions of payout policy choice and national cultural dimensions (By group: High vs. vs low)

Variables	(1) Dividends	(2) Share repurchases	(3) Dividends	(4) Share repurchases	(5) Dividends	(6) Share repurchases	(7) Dividends	(8) Share repurchases	(9) Dividends	(10) Share repurchases	(11) Dividends	(12) Share repurchases	(13) Dividends	(14) Share repurchases
H_UA	-1.0400***	1.5071***											-0.9708***	1.3573***
	(0.0000)	(0.0000)											(0.0000)	(0.0000)
H_MAS			-0.5007***	1.3723***									-0.3032***	0.7404***
			(0.0000)	(0.0000)									(0.0000)	(0.0000)
H_LTO					0.5273***	-1.1361***							0.4528***	-0.0188
					(0.0000)	(0.0000)							(0.0000)	(0.6351)
H_IVR							-0.4201***	1.6666***					0.0507**	1.3197***
							(0.0000)	(0.0000)					(0.0419)	(0.0000)
H_PD									0.4789***	-1.6491***				
									(0.0000)	(0.0000)				
H_IND											-0.4365***	1.6841***		
											(0.0000)	(0.0000)		
Size	-0.1904**	-0.3964***	-0.1976**	-0.3702***	-0.2117**	-0.3414***	-0.2181**	-0.2892***	-0.2144**	-0.3026***	-0.2135**	-0.2997***	-0.1936**	-0.3020***
	(0.0232)	(0.0000)	(0.0275)	(0.0000)	(0.0213)	(0.0000)	(0.0176)	(0.0000)	(0.0204)	(0.0000)	(0.0208)	(0.0000)	(0.0381)	(0.0000)

ROA	-0.0017	-0.0043	-0.0017	-0.0014	-0.0003	-0.0072	-0.0004	-0.0037	-0.0006	-0.0020	-0.0006	-0.0019	-0.0061***	-0.0003
	(0.2963)	(0.5367)	(0.2405)	(0.7435)	(0.4604)	(0.3496)	(0.4133)	(0.5572)	(0.3238)	(0.7005)	(0.3190)	(0.7116)	(0.0009)	(0.7171)
ROA volatility	-0.0000	-0.0000	-0.0000	-0.0000	-0.0000	-0.0000	-0.0000	-0.0000	-0.0000	-0.0000	-0.0000	-0.0000	-0.0000	-0.0000
	(0.7592)	(0.4556)	(0.7686)	(0.4348)	(0.7596)	(0.4045)	(0.7739)	(0.3779)	(0.7770)	(0.3484)	(0.7736)	(0.3865)	(0.7634)	(0.3694)
Cash-flow	2.5238***	3.5749***	2.0520***	3.4319***	2.1969***	3.6966***	2.1383***	3.1317***	2.2546***	2.8871***	2.1869***	2.9575***	3.2177***	2.5867***
	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)
Retained earnings	0.0010	0.0003**	0.0012	0.0003*	0.0012	0.0002*	0.0012	0.0002*	0.0012	0.0002*	0.0012	0.0002*	0.0012	0.0003**
	(0.4940)	(0.0369)	(0.5387)	(0.0532)	(0.5298)	(0.0811)	(0.5307)	(0.0799)	(0.5311)	(0.0731)	(0.5290)	(0.0787)	(0.5230)	(0.0378)
Sales growth	-0.0010***	0.0000**	-0.0008***	0.0000**	-0.0007***	0.0000**	-0.0008***	0.0000**	-0.0008***	0.0000**	-0.0008***	0.0000**	-0.0013***	0.0000***
	(0.0008)	(0.0229)	(0.0029)	(0.0109)	(0.0051)	(0.0370)	(0.0032)	(0.0167)	(0.0022)	(0.0154)	(0.0021)	(0.0121)	(0.0002)	(0.0037)
Leverage	0.6917***	1.2730***	0.6232**	1.2965***	0.7947***	0.9983***	0.7736***	0.8744***	0.7965***	0.8680***	0.7848***	0.8694***	0.8586***	0.8954***
	(0.0048)	(0.0000)	(0.0166)	(0.0000)	(0.0030)	(0.0000)	(0.0036)	(0.0000)	(0.0031)	(0.0000)	(0.0035)	(0.0000)	(0.0010)	(0.0000)
$Size_{t-1}$	0.5235***	0.4534***	0.4584***	0.5007***	0.4412***	0.5145***	0.4529***	0.5069***	0.4472***	0.5172***	0.4464***	0.5198***	0.4733***	0.4802***
	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)
ROA_{t-1}	0.0001	0.0000	-0.0002	0.0006	0.0009	-0.0004	0.0008	0.0004	0.0006	0.0006	0.0006	0.0007	-0.0017*	0.0010
	(0.8117)	(0.9593)	(0.7482)	(0.4339)	(0.4133)	(0.8321)	(0.4353)	(0.7318)	(0.5119)	(0.5335)	(0.5288)	(0.4823)	(0.0856)	(0.4035)
$Retained\ earnings_{t-1}$	0.0005	0.0000	0.0006	0.0000	0.0006	0.0000	0.0006	0.0000	0.0006	0.0000	0.0006	0.0000	0.0006	0.0000
	(0.6313)	(0.6783)	(0.6672)	(0.6748)	(0.6468)	(0.6689)	(0.6541)	(0.6233)	(0.6569)	(0.6388)	(0.6542)	(0.6264)	(0.6497)	(0.7267)
$Sales\ growth_{t-1}$	-0.0000	-0.0000	-0.0000	-0.0000	-0.0000*	-0.0000*	-0.0000	-0.0000*	-0.0000	-0.0000	-0.0000	-0.0000	-0.0000	-0.0000
	(0.1343)	(0.1131)	(0.1035)	(0.1055)	(0.0935)	(0.0939)	(0.1242)	(0.0629)	(0.1350)	(0.1002)	(0.1369)	(0.1035)	(0.1511)	(0.1011)
$Leverage_{t-1}$	-2.0835***	-2.2639***	-1.9838***	-2.2829***	-1.9160***	-2.3344***	-1.9411***	-2.3336***	-1.9430***	-2.3374***	-1.9391***	-2.3418***	-2.0383***	-2.2940***
	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)
Observations	194,954	194,954	194,954	194,954	194,954	194,954	194,954	194,954	194,954	194,954	194,954	194,954	194,954	194,954
Weighting by country	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Chi-squared	34,231	34,231	36,073	36,073	29,849	29,849	33,582	33,582	34,233	34,233	34,407	34,407	42,863	42,863
Pseudo R-squared	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.15	0.15

Table 7. Payout policy choice, national culture dimensions, and country characteristics.

Table 7 presents the results regressions of the mix of payout (Panel A), the payout level (Panel B), and the payout choice (Panel C), on Hofstede's national culture dimensions including firm (as described in Tables 5 and 6) and country control variables. Governance and legal origin variables are from Djankov et al. (2008). The revised anti-director index measures the protection degree of minority shareholders against controlling shareholders. The anti-self-dealing index measures the degree of shareholder protection against managers that could gain private benefits from firm control. MRKTCAP is measured by the market capitalization percentage of GDP for each year-country from World Development Indicators developed by the World Bank. Dividends tax preference is measured by 1$ of dividends after tax divided by 1$ of capital gain after tax developed by La Porta et al. (2000). Regressions include a dummy variable of Legal origin (English, French, German, and Scandinavian) to control for country level, year and industry dummy variables and weighting by country. P-value in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

Panel A. WLS model regression of payout mix to total payout and national cultural dimensions

Variables	(1) Dividends to total payout	(2) Share repurchases to total payout	(3) Dividends to total payout	(4) Share repurchases to total payout	(5) Dividends to total payout	(6) Share repurchases to total payout	(7) Dividends to total payout	(8) Share repurchases to total payout	(9) Dividends to total payout	(10) Share repurchases to total payout	(11) Dividends to total payout	(12) Share repurchases to total payout	(13) Dividends to total payout	(14) Share repurchases to total payout
H_UA	-0.1559***	0.1559***											-0.2272***	0.2272***
	(0.0000)	(0.0000)											(0.0000)	(0.0000)
H_MAS			-0.0685***	0.0685***									-0.0947***	0.0947***
			(0.0000)	(0.0000)									(0.0000)	(0.0000)
H_LTO					0.0503***	-0.0503***							-0.0807***	0.0807***
					(0.0000)	(0.0000)							(0.0000)	(0.0000)
H_IVR							-0.0393***	0.0393***					-0.0630***	0.0630***
							(0.0000)	(0.0000)					(0.0000)	(0.0000)
H_PD									0.0241***	-0.0241***				
									(0.0000)	(0.0000)				
H_IND											-0.0130***	0.0130***		
											(0.0000)	(0.0000)		
Size	0.0036***	-0.0036***	-0.0007	0.0007	0.0007	-0.0007	-0.0000	0.0000	-0.0000	0.0000	0.0003	-0.0003	0.0016***	-0.0016***
	(0.0000)	(0.0000)	(0.1630)	(0.1630)	(0.1687)	(0.1687)	(0.9327)	(0.9327)	(0.9828)	(0.9828)	(0.5442)	(0.5442)	(0.0016)	(0.0016)
ROA	-0.0010**	0.0010**	-0.0011**	0.0011**	-0.0010**	0.0010**	-0.0010**	0.0010**	-0.0010**	0.0010**	-0.0010**	0.0010**	-0.0011**	0.0011**
	(0.0365)	(0.0365)	(0.0365)	(0.0365)	(0.0346)	(0.0346)	(0.0344)	(0.0344)	(0.0347)	(0.0347)	(0.0351)	(0.0351)	(0.0385)	(0.0385)
ROA volatility	-0.0000	0.0000	-0.0000	0.0000	-0.0000	0.0000	-0.0000	0.0000	-0.0000	0.0000	-0.0000	0.0000	-0.0000	0.0000
	(0.2630)	(0.2630)	(0.2588)	(0.2588)	(0.2493)	(0.2493)	(0.2628)	(0.2628)	(0.2680)	(0.2680)	(0.2717)	(0.2717)	(0.2585)	(0.2585)
Cash-flow	-0.0317	0.0317	-0.0296	0.0296	-0.0318	0.0318	-0.0330	0.0330	-0.0334	0.0334	-0.0346	0.0346	-0.0234	0.0234
	(0.2582)	(0.2582)	(0.2675)	(0.2675)	(0.2535)	(0.2535)	(0.2466)	(0.2466)	(0.2456)	(0.2456)	(0.2405)	(0.2405)	(0.3213)	(0.3213)
Retained earnings	0.0000	-0.0000	0.0000	-0.0000	0.0000	-0.0000	0.0000	-0.0000	0.0000	-0.0000	0.0000	-0.0000	0.0000	-0.0000

	(0.4437)	(0.4437)	(0.4177)	(0.4177)	(0.4258)	(0.4258)	(0.4223)	(0.4223)	(0.4234)	(0.4234)	(0.4254)	(0.4254)	(0.4297)	(0.4297)
Sales growth	-0.0000***	0.0000***	-0.0000***	0.0000***	-0.0000***	0.0000***	-0.0000***	0.0000***	-0.0000***	0.0000***	-0.0000***	0.0000***	-0.0000***	0.0000***
	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)
Leverage	0.0867***	-0.0867***	0.0930***	-0.0930***	0.0927***	-0.0927***	0.0935***	-0.0935***	0.0937***	-0.0937***	0.0923***	-0.0923***	0.0900***	-0.0900***
	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)
Dividends tax preference	0.0079***	-0.0079***	0.0083***	-0.0083***	0.0087***	-0.0087***	0.0084***	-0.0084***	0.0092***	-0.0092***	0.0091***	-0.0091***	0.0059***	-0.0059***
	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)
MRKTCAP	0.0001***	-0.0001***	0.0000***	-0.0000***	0.0000***	-0.0000***	0.0000***	-0.0000***	0.0000***	-0.0000***	0.0000***	-0.0000***	0.0000***	-0.0000***
	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)
Revised anti-director index	0.0563***	-0.0563***	0.1168***	-0.1168***	0.1326***	-0.1326***	0.1224***	-0.1224***	0.1208***	-0.1208***	0.1239***	-0.1239***	-0.0070*	0.0070*
	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0598)	(0.0598)
Anti self-dealing index	0.2793***	-0.2793***	0.2099***	-0.2099***	0.1522***	-0.1522***	0.2200***	-0.2200***	0.2071***	-0.2071***	0.2128***	-0.2128***	0.4134***	-0.4134***
	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)
Constant	0.1725***	0.8275***	0.0518***	0.9482***	-0.0626***	1.0626***	-0.0188	1.0188***	-0.0499***	1.0499***	-0.0572***	1.0572***	0.5646***	0.4354***
	(0.0000)	(0.0000)	(0.0029)	(0.0000)	(0.0001)	(0.0000)	(0.2587)	(0.0000)	(0.0037)	(0.0000)	(0.0023)	(0.0000)	(0.0000)	(0.0000)
Observations	174,275	174,275	174,275	174,275	174,275	174,275	174,275	174,275	174,275	174,275	174,275	174,275	174,275	174,275
Weighting by country	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Legal origin dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.2612	0.2612	0.2588	0.2588	0.2562	0.2562	0.2558	0.2558	0.2554	0.2554	0.2552	0.2552	0.2684	0.2684

Panel B. Tobit model regression of payout to total assets and national cultural dimensions

VARIABLES	(1) Dividends to assets	(2) Share repurchases to assets	(3) Dividends to assets	(4) Share repurchases to assets	(5) Dividends to assets	(6) Share repurchases to assets	(7) Dividends to assets	(8) Share repurchases to assets	(9) Dividends to assets	(10) Share repurchases to assets	(11) Dividends to assets	(12) Share repurchases to assets	(13) Dividends to assets	(14) Share repurchases to assets
H_UA	-0.0001	0.0007											-0.0015	0.0033**
	(0.9618)	(0.5861)											(0.2717)	(0.0453)
H_MAS			-0.0025***	0.0069***									-0.0043***	0.0066***
			(0.0036)	(0.0000)									(0.0000)	(0.0000)
H_LTO					-0.0024***	-0.0037***							-0.0019**	0.0029**
					(0.0000)	(0.0000)							(0.0257)	(0.0144)
H_IVR							0.0031**	0.0062***					0.0038***	0.0050***
							(0.0121)	(0.0000)					(0.0001)	(0.0000)
H_PD									-0.0014	-0.0070***				
									(0.3211)	(0.0000)				
H_IND											0.0017	0.0064***		
											(0.1911)	(0.0000)		
Size	0.0000	0.0011***	-0.0000	0.0012***	-0.0002***	0.0011***	0.0001	0.0012***	0.0001	0.0013***	0.0001	0.0014***	0.0000	0.0013***
	(0.8102)	(0.0000)	(0.8717)	(0.0000)	(0.0008)	(0.0000)	(0.4823)	(0.0000)	(0.5764)	(0.0000)	(0.4993)	(0.0000)	(0.7071)	(0.0000)
ROA	0.0004**	0.0003**	0.0004**	0.0003**	0.0006***	0.0003**	0.0004**	0.0003**	0.0004**	0.0003**	0.0004**	0.0003**	0.0004**	0.0003**
	(0.0411)	(0.0318)	(0.0416)	(0.0311)	(0.0000)	(0.0316)	(0.0410)	(0.0314)	(0.0410)	(0.0312)	(0.0410)	(0.0313)	(0.0415)	(0.0310)

ROA volatility	-0.0000**	0.0000	-0.0000**	0.0000	-0.0000	0.0000	-0.0000**	0.0000	-0.0000**	0.0000	-0.0000**	0.0000	-0.0000**	0.0000
	(0.0319)	(0.9583)	(0.0299)	(0.5546)	(0.3944)	(0.5059)	(0.0336)	(0.4601)	(0.0324)	(0.3840)	(0.0326)	(0.4437)	(0.0318)	(0.5008)
Cash-flow	0.0689*	0.0422*	0.0692*	0.0415*	0.0719***	0.0419*	0.0687*	0.0416*	0.0688*	0.0413*	0.0688*	0.0415*	0.0689*	0.0412*
	(0.0827)	(0.0804)	(0.0830)	(0.0815)	(0.0000)	(0.0813)	(0.0835)	(0.0813)	(0.0840)	(0.0818)	(0.0838)	(0.0815)	(0.0839)	(0.0822)
Retained earnings	0.0000	0.0000**	0.0000	0.0000**	0.0000***	0.0000**	0.0000	0.0000**	0.0000	0.0000**	0.0000	0.0000**	0.0000	0.0000**
	(0.2435)	(0.0229)	(0.2426)	(0.0220)	(0.0000)	(0.0225)	(0.2440)	(0.0232)	(0.2437)	(0.0235)	(0.2440)	(0.0236)	(0.2447)	(0.0224)
Sales growth	-0.0000	-0.0000**	-0.0000	-0.0000**	-0.0000	-0.0000**	-0.0000	-0.0000**	-0.0000	-0.0000**	-0.0000	-0.0000**	-0.0000	-0.0000**
	(0.2658)	(0.0300)	(0.2584)	(0.0359)	(0.4795)	(0.0279)	(0.2634)	(0.0228)	(0.2679)	(0.0259)	(0.2693)	(0.0260)	(0.2567)	(0.0265)
Leverage	-0.0226***	-0.0152***	-0.0226***	-0.0152***	-0.0246***	-0.0154***	-0.0228***	-0.0155***	-0.0227***	-0.0159***	-0.0228***	-0.0158***	-0.0229***	-0.0153***
	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)
Dividends tax preference	0.0008***	-0.0003***	0.0008***	-0.0002***	0.0008***	-0.0003***	0.0008***	-0.0002**	0.0008***	-0.0003***	0.0008***	-0.0003***	0.0008***	-0.0001**
	(0.0000)	(0.0001)	(0.0000)	(0.0097)	(0.0000)	(0.0017)	(0.0000)	(0.0181)	(0.0000)	(0.0001)	(0.0000)	(0.0005)	(0.0000)	(0.0374)
MRKTCAP	0.0000*	-0.0000***	0.0000	-0.0000**	0.0000***	-0.0000***	0.0000***	-0.0000**	0.0000**	-0.0000***	0.0000**	-0.0000***	0.0000*	-0.0000
	(0.0544)	(0.0000)	(0.5757)	(0.0175)	(0.0001)	(0.0000)	(0.0016)	(0.0116)	(0.0155)	(0.0076)	(0.0153)	(0.0022)	(0.0598)	(0.3765)
Revised anti-director index	-0.0008*	-0.0063***	-0.0012***	-0.0049***	-0.0009***	-0.0064***	-0.0004	-0.0052***	-0.0004	-0.0041***	-0.0003	-0.0043***	-0.0018***	-0.0025***
	(0.0719)	(0.0000)	(0.0004)	(0.0000)	(0.0048)	(0.0000)	(0.2704)	(0.0000)	(0.3344)	(0.0000)	(0.3673)	(0.0000)	(0.0022)	(0.0000)
Anti self-dealing index	0.0216***	-0.0089	0.0213***	-0.0084	0.0218***	-0.0047	0.0209***	-0.0106*	0.0219***	-0.0079	0.0216***	-0.0092	0.0233***	-0.0147***
	(0.0000)	(0.1378)	(0.0000)	(0.1869)	(0.0000)	(0.4207)	(0.0000)	(0.0979)	(0.0000)	(0.2252)	(0.0000)	(0.1509)	(0.0000)	(0.0005)
Constant	-0.0096	0.0246***	-0.0044	0.0090	-0.0050***	0.0210***	-0.0151**	0.0125*	-0.0121*	0.0118*	-0.0141**	0.0066	-0.0061	-0.0033
	(0.2359)	(0.0016)	(0.5667)	(0.1228)	(0.0071)	(0.0014)	(0.0398)	(0.0526)	(0.0852)	(0.0795)	(0.0303)	(0.3498)	(0.3210)	(0.6701)
Observations	174,275	174,275	174,275	174,275	174,278	174,275	174,275	174,275	174,275	174,275	174,275	174,275	174,275	174,275
Weighting by country	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Legal origin dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Log likelihood	1.220e+08	1.260e+08	1.220e+08	1.260e+08	232039	1.260e+08	1.220e+08	1.260e+08	1.220e+08	1.260e+08	1.220e+08	1.260e+08	1.220e+08	1.260e+08

Panel C. Multinomial logit regression of payout policy choice and national cultural dimensions

VARIABLES	(1) Dividends	(2) Share repurchases	(3) Dividends	(4) Share repurchases	(5) Dividends	(6) Share repurchases	(7) Dividends	(8) Share repurchases	(9) Dividends	(10) Share repurchases	(11) Dividends	(12) Share repurchases	(13) Dividends	(14) Share repurchases
H_UA	-0.4965***	1.0002***											-0.4234***	1.6317***
	(0.0000)	(0.0000)											(0.0000)	(0.0000)
H_MAS			0.2035***	0.9095***									0.0778***	1.0095***
			(0.0000)	(0.0000)									(0.0032)	(0.0000)
H_LTO					-0.0403	-0.9231***							0.1014***	0.4088***
					(0.1110)	(0.0000)							(0.0017)	(0.0000)
H_IVR							0.3882***	0.8709***					0.3941***	1.0174***
							(0.0000)	(0.0000)					(0.0000)	(0.0000)
H_PD									-0.7350***	-0.6210***				
									(0.0000)	(0.0000)				
H_IND											0.8339***	0.6676***		
											(0.0000)	(0.0000)		
Size	0.2812***	0.1579***	0.2687***	0.1829***	0.2702***	0.1702***	0.2803***	0.1855***	0.3076***	0.1973***	0.3162***	0.2034***	0.2838***	0.1779***

	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)
ROA	-0.0131***	-0.0023	-0.0137***	-0.0012	-0.0127***	-0.0023	-0.0121***	-0.0019	-0.0110***	-0.0014	-0.0105***	-0.0012	-0.0147***	-0.0008
	(0.0000)	(0.6149)	(0.0000)	(0.6750)	(0.0000)	(0.6170)	(0.0000)	(0.6495)	(0.0000)	(0.6761)	(0.0000)	(0.6734)	(0.0000)	(0.6525)
ROA volatility	-0.0000	-0.0000	-0.0000	-0.0000	-0.0000	-0.0000	-0.0000	-0.0000	-0.0000	-0.0000	-0.0000	-0.0000	-0.0000	-0.0000
	(0.7726)	(0.2471)	(0.7697)	(0.2755)	(0.7695)	(0.2658)	(0.7652)	(0.2800)	(0.7629)	(0.2843)	(0.7667)	(0.2947)	(0.7677)	(0.2678)
Cash-flow	3.4996***	2.5833***	3.4190***	2.4409***	3.4172***	2.5592***	3.2976***	2.4641***	3.1234***	2.3646***	3.0676***	2.3528***	3.4998***	2.2898***
	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)
Retained earnings	0.0019	0.0001*	0.0020	0.0001*	0.0020	0.0001*	0.0020	0.0001*	0.0019	0.0001*	0.0019	0.0001*	0.0020	0.0001*
	(0.2000)	(0.0567)	(0.1842)	(0.0629)	(0.1907)	(0.0645)	(0.1900)	(0.0736)	(0.1933)	(0.0767)	(0.1943)	(0.0787)	(0.1912)	(0.0577)
Sales growth	-0.0000	0.0000	-0.0000	0.0000	-0.0000	0.0000	-0.0000	0.0000	-0.0000	0.0000	-0.0000	0.0000	-0.0000	0.0000
	(0.2558)	(0.2591)	(0.2352)	(0.2447)	(0.2475)	(0.2539)	(0.2343)	(0.2461)	(0.2527)	(0.2376)	(0.2577)	(0.2324)	(0.2431)	(0.2508)
Leverage	-0.6716***	-1.0251***	-0.6490***	-1.0656***	-0.6634***	-1.0721***	-0.6848***	-1.1071***	-0.7451***	-1.1221***	-0.7528***	-1.1275***	-0.6681***	-1.0565***
	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)
Dividends tax preference	0.0204***	-0.0455***	0.0212***	-0.0407***	0.0231***	-0.0473***	0.0306***	-0.0300***	0.0177***	-0.0470***	0.0260***	-0.0403***	0.0256***	-0.0255***
	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)
MRKTCAP	-0.0002***	-0.0008***	-0.0002***	-0.0004***	-0.0003***	-0.0006***	-0.0001***	-0.0004***	-0.0001**	-0.0005***	-0.0001***	-0.0005***	-0.0000	-0.0002***
	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0023)	(0.0000)	(0.0343)	(0.0000)	(0.0033)	(0.0000)	(0.2359)	(0.0000)
Revised anti-director index	0.0812***	-0.1646***	0.3745***	-0.3771***	0.3159***	-0.6266***	0.3617***	-0.4751***	0.5047***	-0.4370***	0.5270***	-0.4264***	0.2078***	0.5248***
	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)
Anti self-dealing index	3.0755***	-0.0141	2.8410***	0.0334	2.8533***	0.9123***	2.7151***	-0.0726	3.1902***	0.4158**	2.9349***	0.2225	2.8040***	-1.2147***
	(0.0000)	(0.9335)	(0.0000)	(0.8389)	(0.0000)	(0.0000)	(0.0000)	(0.6584)	(0.0000)	(0.0121)	(0.0000)	(0.1724)	(0.0000)	(0.0000)
Constant	-7.6078***	-3.4820***	-8.7613***	-3.3797***	-8.4254***	-1.9665***	-9.1058***	-3.0565***	-9.9641***	-2.7692***	-10.8887***	-3.4793***	-8.4470***	-7.9924***
	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)
Observations	174,275	174,275	174,275	174,275	174,275	174,275	174,275	174,275	174,275	174,275	174,275	174,275	174,275	174,275
Weighting by country	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Legal origin dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Chi-squared	37,913	37,913	41,775	41,775	37,212	37,212	38,096	38,096	38,073	38,073	37,828	37,828	43,505	43,505
Pseudo R-squared	0.17	0.17	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.17	0.17	0.17	0.17

Table 8. Payout policy and alternative national cultural proxy.

Table 8 presents the results of multinomial logit model regressions of the choice of payout policy (dividends, share repurchases, dividends and share repurchases, and non-paying) and the results of WLS model regressions of payout mix (dividends to total payout and share repurchases to total payout) , and Tobit model regressions of payout level (dividends to assets and share repurchases to assets) on Schwartz' national culture including firm and country control variables described in tables 5 and 7 respectively. High mastery (H_MST) is a dummy variable that equals 1 for firms in countries with mastery higher or equal to the median of all firm-year observations and 0 otherwise. High egalitarianism (H_AUT) is a dummy variable that equals 1 for firms in countries with affective autonomy higher or equal to the median of all firm-year observations and 0 otherwise. Regressions include year, industry and legal origin dummy variables and weighting by country. P-value in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

	(1)	(2)	(4)	(5)	(6)	(7)
Variables	Dividends	Share repurchases	Dividends to total payout	Share repurchases to total payout	Dividends to assets	Share repurchases to assets
H_MST	-1.033***	0.198***	-0.117***	0.117***	-0.008***	0.001*
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.066)
H_ AUT	0.632***	0.866***	-0.041***	0.041***	-0.001	0.006***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.625)	(0.000)
Size	0.339***	0.202***	0.004***	-0.004***	0.000**	0.001***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.025)	(0.000)
ROA	-0.011***	-0.001	-0.001**	0.001**	0.000**	0.000**
	(0.000)	(0.651)	(0.038)	(0.038)	(0.041)	(0.031)
ROA_Volatility	-0.000	-0.000	-0.000	0.000	-0.000**	0.000
	(0.610)	(0.242)	(0.358)	(0.358)	(0.038)	(0.712)
Cash_Flow	3.098***	2.271***	-0.033	0.033	0.069*	0.041*
	(0.000)	(0.000)	(0.251)	(0.251)	(0.083)	(0.082)
Retained_Earnings_to_Equity	0.002	0.000*	0.000	-0.000	0.000	0.000**
	(0.205)	(0.072)	(0.448)	(0.448)	(0.250)	(0.023)
Sales_G	-0.000	0.000	-0.000***	0.000***	-0.000	-0.000**
	(0.236)	(0.217)	(0.000)	(0.000)	(0.322)	(0.021)
LEV	-0.817***	-1.113***	0.078***	-0.078***	-0.024***	-0.015***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Div_tax_pref	0.021***	-0.023***	0.007***	-0.007***	0.001***	-0.000*
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.091)
MRKTCAP	0.000***	-0.000***	0.000***	-0.000***	0.000***	-0.000**
	(0.001)	(0.000)	(0.000)	(0.000)	(0.001)	(0.010)
RevisedAntidirectorIndex	0.259***	-0.429***	0.101***	-0.101***	-0.002***	-0.005***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Antiselfdealingindex	1.904***	0.081	0.138***	-0.138***	0.015***	-0.011*
	(0.000)	(0.635)	(0.000)	(0.000)	(0.000)	(0.088)
Constant	-8.638***	-3.817***	0.129***	0.871***	0.002	0.010
	(0.000)	(0.000)	(0.000)	(0.000)	(0.744)	(0.120)
Observations	174,275	174,275	174,275	174,275	174,275	174,275
Weighting by country	Yes	Yes	Yes	Yes	Yes	Yes
Year dummy	Yes	Yes	Yes	Yes	Yes	Yes
Industry dummy	Yes	Yes	Yes	Yes	Yes	Yes
Legal origin dummy	Yes	Yes	Yes	Yes	Yes	Yes
Chi-squared	-43,594	-43,594				
Pseudo R-squared	0.1714	0.1714				
Log likelihood	-1.020e+08	-1.020e+08	-43,213	-43,213	1.220e+08	1.260e+08
R-squared			0.263	0.263		

Table 9. Alternative payout ratios and national culture.

Table 9 presents the results of the Tobit regressions model of the payout level (dividends to EBIT and share repurchases to EBIT) on Hofstede's national culture dimensions described in table 5 including firm and country control variables described in tables 5 and 7 respectively. EBIT represents earnings before interest and taxes. IBEI represents income before extraordinary items. Data for EBIT and IBEI are from the Worldscope database. All models include year, industry and legal origin dummy variables, and weighting by country. P-value in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
VARIABLES	Dividends to EBIT	Share repurchases to EBIT	Dividends to EBIT	Share repurchases to EBIT	Dividends to EBIT	Share repurchases to EBIT	Dividends to IBEI	Share repurchases to IBEI	Dividends to IBEI	Share repurchases to IBEI	Dividends to IBEI	Share repurchases to IBEI
H_UA					0.023	0.099***					-0.110	0.315**
					(0.755)	(0.000)					(0.568)	(0.018)
H_MAS					0.111	0.066***					0.096	0.058
					(0.170)	(0.000)					(0.246)	(0.368)
H_LTO					0.039	0.034**					-0.273	0.152**
					(0.447)	(0.025)					(0.209)	(0.022)
H_IVR					0.074	0.073***					-0.157	0.288***
					(0.329)	(0.000)					(0.372)	(0.001)
H_PD	-0.180	-0.084***					-0.126	-0.172***				
	(0.257)	(0.000)					(0.262)	(0.000)				
H_IND			0.172	0.074***					0.120	0.139***		
			(0.239)	(0.000)					(0.254)	(0.000)		
Size	0.003	0.010***	0.003	0.010***	0.000	0.009***	0.005	0.016	0.006	0.015	0.003	0.011
	(0.648)	(0.000)	(0.579)	(0.000)	(0.986)	(0.001)	(0.700)	(0.109)	(0.674)	(0.119)	(0.825)	(0.264)
ROA	0.004	0.000	0.004	0.000	0.004	0.000	-0.008**	-0.005**	-0.008**	-0.005**	-0.008**	-0.005**
	(0.288)	(0.785)	(0.287)	(0.781)	(0.285)	(0.766)	(0.016)	(0.016)	(0.016)	(0.016)	(0.016)	(0.016)
ROA volatility	-0.000*	0.000	-0.000*	0.000	-0.000*	0.000	-0.000*	0.000	-0.000*	-0.000	-0.000*	-0.000
	(0.074)	(0.645)	(0.072)	(0.696)	(0.071)	(0.702)	(0.069)	(0.981)	(0.067)	(0.920)	(0.073)	(0.854)
Cash-flow	0.211	-0.055	0.214	-0.053	0.218	-0.058	-0.456*	-0.330*	-0.454*	-0.325*	-0.457*	-0.336*
	(0.521)	(0.198)	(0.520)	(0.206)	(0.515)	(0.187)	(0.094)	(0.082)	(0.094)	(0.082)	(0.094)	(0.081)
Retained earnings	0.000*	0.000	0.000*	0.000	0.000*	0.000	0.000	-0.000	0.000	-0.000	0.000	-0.000
	(0.059)	(0.155)	(0.057)	(0.157)	(0.055)	(0.132)	(0.174)	(0.735)	(0.175)	(0.730)	(0.166)	(0.848)
Sales growth	-0.000**	-0.000**	-0.000**	-0.000**	-0.000**	-0.000**	-0.000*	-0.000*	-0.000*	-0.000*	-0.000*	-0.000**
	(0.034)	(0.019)	(0.035)	(0.019)	(0.034)	(0.016)	(0.065)	(0.079)	(0.066)	(0.079)	(0.076)	(0.045)
Leverage	-0.331**	-0.211***	-0.331**	-0.211***	-0.317**	-0.205***	0.344**	-0.249*	0.343**	-0.247*	0.351**	-0.237*
	(0.039)	(0.000)	(0.039)	(0.000)	(0.038)	(0.000)	(0.028)	(0.060)	(0.028)	(0.062)	(0.019)	(0.073)
Dividends tax preference	0.009***	-0.003***	0.010***	-0.003***	0.012***	-0.001	0.027***	-0.004	0.028***	-0.002	0.027***	0.004
	(0.000)	(0.000)	(0.000)	(0.000)	(0.001)	(0.584)	(0.001)	(0.372)	(0.000)	(0.569)	(0.000)	(0.412)
MRKTCAP	-0.000	0.000	-0.000	-0.000	-0.000	0.000	0.000	-0.000	0.000	-0.000	0.000	-0.000
	(0.778)	(0.749)	(0.694)	(0.981)	(0.938)	(0.280)	(0.798)	(0.641)	(0.822)	(0.436)	(0.783)	(0.978)
Revised anti-director index	0.078	-0.046***	0.074	-0.050***	0.071	0.001	-0.051	-0.080**	-0.054	-0.091***	-0.170	0.084
	(0.355)	(0.000)	(0.351)	(0.000)	(0.183)	(0.948)	(0.609)	(0.011)	(0.582)	(0.003)	(0.335)	(0.310)

Anti self-dealing index	0.445**	-0.015	0.411***	-0.031	0.345*	-0.130*	0.636*	-0.558**	0.612	-0.591**	1.049	-0.990***
	(0.012)	(0.791)	(0.008)	(0.571)	(0.090)	(0.095)	(0.095)	(0.018)	(0.116)	(0.013)	(0.110)	(0.001)
Constant	-0.554	0.218***	-0.709	0.163***	-0.633	-0.062	0.087	1.055***	-0.020	0.973***	0.392	0.250
	(0.272)	(0.000)	(0.255)	(0.003)	(0.151)	(0.250)	(0.821)	(0.000)	(0.961)	(0.001)	(0.565)	(0.449)
Observations	171,018	171,018	171,018	171,018	171,018	171,018	174,270	174,270	174,270	174,270	174,270	174,270
Weighting by country	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Legal origin dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Log likelihood	-3.580e+08	-1.930e+08	-3.580e+08	-1.930e+08	-3.580e+08	-1.930e+08	-3.690e+08	-3.170e+08	-3.690e+08	-3.170e+08	-3.690e+08	-3.170e+08

Table 10. payout policy and national culture (sub-period robustness test)

Table 10 presents the results of multinomial logit model regressions of the choice of payout policy (dividends, share repurchases, dividends and share repurchases, and non-paying) and the results of WLS model regressions of payout mix (dividends to total payout and share repurchases to total payout) on Hofstede's national culture dimensions including firm and country control variables described in tables 5 and 7 respectively. The first sub-period (Panel A) includes firm-year observations until 2008 and the second from 2009 to 2018 (Panel B). The base outcome is non-paying for payout choice regressions. All models include year, industry and legal origin dummy variables and weighting by country. P-value in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively

Panel A. Payout policy and national culture, sub-period before 2009

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Variables	Dividends	Share repurchases	Dividends	Share repurchases	Dividends	Share repurchases	Dividends to total payout	Share repurchases to total payout	Dividends to total payout	Share repurchases to total payout	Dividends to total payout	Share repurchases to total payout
H_UA					-0.582***	1.316***					-0.2016***	0.2016***
					(0.000)	(0.000)					(0.0000)	(0.0000)
H_MAS					-0.088**	0.693***					-0.0736***	0.0736***
					(0.037)	(0.000)					(0.0000)	(0.0000)
H_LTO					0.383***	-0.045					0.0119*	-0.0119*
					(0.000)	(0.756)					(0.0972)	(0.0972)
H_IVR					1.057***	0.675***					0.0603***	-0.0603***
					(0.000)	(0.000)					(0.0000)	(0.0000)
H_PD	-1.052***	0.052					-0.0512***	0.0512***				
	(0.000)	(0.540)					(0.0000)	(0.0000)				
H_IND			1.117***	0.053					0.0570***	-0.0570***		
			(0.000)	(0.492)					(0.0000)	(0.0000)		
Constant	-11.640***	-1.695***	-12.801***	-1.926***	-10.028***	-6.421***	-1.2258***	0.3123***	-1.3973***	0.3003***	-0.8773***	0.0374
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.0000)	(0.7481)	(0.0000)	(0.8907)	(0.0000)	(0.6330)
Observations	77,553	77,553	77,553	77,553	77,553	77,553	77,553	77,553	77,553	77,553	77,553	77,553
Control variables (Table 7)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Weighting by country	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Legal origin dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Chi-squared	20,194	20,194	20,260	20,260	21,716	21,716						
Log likelihood	-4.940e+07	-4.940e+07	-4.930e+07	-4.930e+07	-4.910e+07	-4.910e+07	126824	86930	126830	86928	126879	86945

R-squared							0.264	0.138	0.266	0.138	0.266	0.141

Panel B. Payout policy and national culture, sub-period after 2008

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Variables	Dividends	Share repurchases	Dividends	Share repurchases	Dividends	Share repurchases	Dividends to total payout	Share repurchases to total payout	Dividends to total payout	Share repurchases to total payout	Dividends to total payout	Share repurchases to total payout
H_UA					-0.149***	1.703***					-0.2094***	0.2094***
					(0.002)	(0.000)					(0.0000)	(0.0000)
H_MAS					0.195***	1.164***					-0.1002***	0.1002***
					(0.000)	(0.000)					(0.0000)	(0.0000)
H_LTO					-0.012	0.617***					-0.1188***	0.1188***
					(0.772)	(0.000)					(0.0000)	(0.0000)
H_IVR					-0.053	1.092***					-0.1181***	0.1181***
					(0.184)	(0.000)					(0.0000)	(0.0000)
H_PD	-0.306***	-0.948***					0.0806***	-0.0806***				
	(0.000)	(0.000)					(0.0000)	(0.0000)				
H_IND			0.437***	0.963***					-0.0678***	0.0678***		
			(0.000)	(0.000)					(0.0000)	(0.0000)		
Constant	-8.453***	-3.007***	-9.054***	-3.970***	-7.825***	-8.248***	0.1695***	0.8305***	0.2155***	0.7845***	0.7329***	0.2671***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.4579)	(0.7202)	(0.5574)	(0.3588)	(0.3337)	(0.0005)
Observations	96,722	96,722	96,722	96,722	96,722	96,722	96,722	96,722	96,722	96,722	96,722	96,722
Control variables (Table 7)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Weighting by country	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Legal origin dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Chi-squared	19,485	19,485	19,201	19,201	23,611	23,611	.	.	.	.	.	.
Log likelihood	-5.330e+07	-5.330e+07	-5.320e+07	-5.320e+07	-5.250e+07	-5.250e+07	108,499	165,688	108,498	165,686	108,507	165,780
R-squared							0.232	0.232	0.231	0.231	0.245	0.245

Table 11. payout policy, national culture, and democracy

Table 11 presents the multinomial logit model regressions of the choice of payout policy (dividends, share repurchases, dividends and share repurchases, and non-paying) and the results of WLS model regressions of payout level (dividends to total payout and share repurchases to total payout) on Hofstede's national culture dimensions including firm and country control variables described in tables 5 and 7 respectively, and a variable of (Democracy) that represent the degree of democracy by country from Polity5 Project, Political Regime Characteristics and Transitions (Polity Project - Systemic Peace). All models include year, industry and legal origin dummy variables and weighting country. P-value in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Variables	Dividends	Share repurchases	Dividends	Share repurchases	Dividends	Share repurchases	Dividends to total payout	Share repurchases to total payout	Dividends to total payout	Share repurchases to total payout	Dividends to total payout	Share repurchases to total payout
H_UA					-2.432***	2.432***					-0.2720***	0.2720***
					(0.000)	(0.000)					(0.0000)	(0.0000)
H_MAS					-1.146***	1.146***					-0.1370***	0.1370***
					(0.000)	(0.000)					(0.0000)	(0.0000)
H_LTO					0.182	-0.182					-0.0597***	0.0597***
					(0.168)	(0.168)					(0.0000)	(0.0000)
H_IVR					-0.649***	0.649***					-0.0820***	0.0820***
					(0.000)	(0.000)					(0.0000)	(0.0000)
H_PD	-1.010***	1.010***					-0.0813***	0.0813***				
	(0.000)	(0.000)					(0.0000)	(0.0000)				
H_IND			0.954***	-0.954***					0.0974***	-0.0974***		
			(0.000)	(0.000)					(0.0000)	(0.0000)		
Democracy	-0.175***	0.175***	-0.174***	0.174***	0.080***	-0.080***	-0.0126***	0.0126***	-0.0144***	0.0144***	0.0149***	-0.0149***
	(0.000)	(0.000)	(0.000)	(0.001)	(0.000)	(0.000)	(0.0000)	(0.2762)	(0.0000)	(0.7639)	(0.0000)	(0.0172)
Constant	-8.737***	-3.148***	-10.059***	-3.728***	-8.310***	-7.938***	-0.0023	0.0123*	-0.0099	0.0061	-0.0057	-0.0028
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.7238)	(0.0556)	(0.1081)	(0.3814)	(0.3324)	(0.7251)
Observations	83,724	83,724	83,724	83,724	83,724	83,724	83,724	83,724	83,724	83,724	83,724	83,724
Control variables (Table 7)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Weighting by country	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Legal origin dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Chi-squared	35,812	35,812	35,700	35,700	41,129	41,129						
Log likelihood							1.210e+08	1.200e+08	1.210e+08	1.200e+08	1.210e+08	1.210e+08
R-squared							0.317	0.317	0.318	0.314	0.331	0.331
Pseudo R-squared	0.17	0.17	0.17	0.17	0.18	0.18						

Papier 2. Culture and exit mechanisms: international evidence

Abstract

The purpose of this study is to examine the effect of national culture on the choice of exit mechanism for private firms. Using an international data set of private firms covering 60 countries from 1985 to 2019, we find that private firms in countries with high (uncertainty avoidance, masculinity, indulgence vs. restraint, individualism) and low (power distance and long-term orientation) are more inclined to exit through mergers and acquisitions. In contrast, private firms in countries with low (uncertainty avoidance, masculinity, indulgence vs. restraint, individualism) and high (power distance and long-term orientation) are more inclined to exit through initial public offerings. Our findings are robust to control for firm and country characteristics, market conditions, funds demand, payment method, sub-periods, subsamples, culture proxies, and composite cultural profile index. Overall, our findings underscore the importance of cultural dimensions in understanding exit mechanisms for private firms.

JEL classification: G15; G34; G41.

Keywords: National culture; Initial public offerings; Mergers and acquisitions, Exit mechanisms.

1. Introduction

Initial public offerings (IPOs) and mergers and acquisitions (M&As) are among the most attractive and closely followed financial events by agents in the financial market. These two corporate events involve a significant amount of capital and provide a glimpse into the dynamism of the corporate market. According to Bloomberg data, mergers and acquisitions totaled 5.4 trillion U.S. dollars globally in 2021, while initial public offerings reached 692 billion U.S. dollars. It's no surprise that these two events have remained hot topics in corporate finance for decades, with numerous studies examining their impact on the domestic and global markets. (e.g., Agrawal, Jaffe, and Mandelker (1992), Rau and Vermaelen (1998), Mitchell and Stafford (2000), Mulherin and Simsir (2015), Avinadav, Chermonog, and Perlman (2017), and Kanagaretnam et al. (2022)). IPOs and M&As are the exit mechanisms that allow private business owners (entrepreneurs) to exit from the capital of private firms they created or developed for liquidity or for the founders to harvest their latent wealth (Ang and Brau (2003) and Brau, Francis, and Kohers (2003)). For instance, Brau, Francis, and Kohers (2003, p. 583) note that "*agreeing to a takeover by a publicly traded acquirer is often an attractive opportunity for private firms and presents an alternative to the IPO route."* Thus, private firms can choose between an IPO and a takeover by another firm. However, the risks and benefits are different for each exit mechanism. Frijns et al. (2013) note that the national culture dimension impacts, on average, the behaviors and perceptions of managers (entrepreneurs) vis-à-vis risks and benefits.

In the last decade, academic research has paid very close and growing attention to the impact of national cultural dimensions on decision-making in finance (e.g., Shao, Kwok, and Guedhami (2010), Fidrmuc and Jacob (2010), Aggarwal, Kearney, and Lucey (2012), Zheng et al. (2012), Ashraf, Zheng, and Arshad (2016), Karolyi (2016) Chang, Chang, and Dutta (2020), among others). The purpose of this study is to examine the effect of national culture on the choice of exit mechanism for private firms.

Using an international data set of private firms covering 60 countries from 1985 to 2019 and based on Hofstede's (1980, 2001)[15] six dimensions of national cultures, we find that

[15] Hofstede (1980, 2001) defines national culture as the collective programming of the human mind that distinguishes the members of one group or category of people from another. Hofstede (1980, 2001) finds that

private firms in countries with high (uncertainty avoidance, masculinity, individualism, indulgence vs. restraint) and low (power distance and long-term orientation) are more inclined to exit through mergers and acquisitions. In contrast, private firms in countries with low (uncertainty avoidance, masculinity, individualism, indulgence vs. restraint) and high (power distance and long-term orientation) are more inclined to exit through initial public offerings. Our findings are robust to control for firm and country characteristics, market conditions, funds demand, payment method, sub-periods, subsamples, culture proxies, and composite cultural profile index.

Our study makes three contributions to the literature. First, we contribute to the literature on exit mechanisms. Prior studies analyze the relationship between exit mechanism choice and market-firm factors that affect IPOs and/or M&As for individual markets. For example, Brau, Francis, and Kohers (2003) analyze the factors that affect private firms' exit mechanism choice (IPO or M&A) in the U.S. market from 1984 to 1998. They find that the probability that private firms choose an IPO is positively related to the industry concentration, high-tech industry affiliation, current cost of debt, IPO waves, firm size, and the percentage of insider ownership. They also find that the probability of exiting through M&A is positively related to private firms in high market-to-book industries, financial service sectors, highly leveraged industries, and deals involving greater liquidity for selling insiders. We contribute to this literature by providing international evidence on the importance of exit. We consider a large international data set of private firms covering 60 countries from 1985 to 2019. This allows us to provide further understanding of the phenomenon of the going public decision for privately held companies worldwide.

Second, we contribute to the literature that examines the effect of national culture dimensions on financial decision-making. Numerous studies focus principally on IPOs or M&As. For example, Nahata et al. (2014) analyze the impact of institutional and cultural differences on success in global venture capital (VC) investing and find that cultural differences affect VC success. Tykvová (2018) also considers the exit event to distinguish

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differences in national cultures vary substantially along six dimensions of national cultures: power distance, uncertainty avoidance, individualism/collectivism, masculinity/femininity, long/short-term orientation, and indulgence/restraint.

between successful and unsuccessful investments and investigates the relationship between success of venture capital investments and legal frameworks in the investment countries. Cai and Zhu (2015) examine the effect of Hofstede's national culture distance on IPOs and find that a greater difference in national culture between U.S. investors and foreign issuers involves a higher underpricing. Costa, Crawford, and Jakob (2013) also analyze the effect of the national culture dimension on IPO underpricing across 39 countries and find that countries with high power distance and long-term orientation experience higher IPO underpricing, and countries with high uncertainty avoidance experience lower IPO underpricing. Lewellyn and Bao (2014) investigate the effect of national culture on IPO activity across 45 countries between 2001 and 2011 and find that the quality of formal institutions and the degree of performance orientation dimension have a positive effect on IPO activity, and the degree of uncertainty avoidance dimension has a negative impact on IPO activity.[16] Gupta, Veliyath, and George (2018) examine the impact of national culture on IPOs in 47 countries between 2003 and 2012. They find that IPO activity is higher in countries with high power distance, collectivism, and long-term orientation. Chourou, Saadi, and Zhu (2018) analyze the effect of national culture on IPO underpricing from 1980 to 2013 issued in 44 countries. They find that IPOs in countries with a high degree of uncertainty avoidance are associated with low underpricing, while IPOs in countries with high collectivism, masculinity, and power distance are associated with high underpricing. In addition, Steigner and Sutton (2011), Lim, Makhija, and Shenkar (2016), Ahen, Daminelli, and Fracassi (2015) find that national culture distance affects cross-border mergers and acquisitions. Moreover, Frijns et al. (2013), using only one cultural dimension, find that the national culture of acquirers affects the M&A premium. Breuer, Ghufran, and Salzmann (2018) analyze the impact of national culture on M&As performance in 53 countries between 1983 and 2011 and show that the post-acquisition stock price performance is negatively related to high individualism and uncertainty avoidance. While high masculinity is positively related to long-term abnormal returns. In this study, we adopt a different approach by analyzing the impact of six of Hofstede's national cultural

[16] They consider formal institution quality data from the World Governance Index constructed by Kaufmann, Kraay, and Mastruzzi (2007) and two national cultural dimensions, performance orientation (PO) and uncertainty avoidance (UA) from the GLOBE (Global Leadership and Organizational Behavior Effectiveness) project.

dimensions on the exit mechanism selection for private firms worldwide. Instead of solely focusing on IPOs or M&As, we complement this literature by examining both options, which enable firms to access public equity markets either directly with an IPO or indirectly with a takeover.[17]

Third, our paper contributes to the existing research on private firm exit mechanisms and the decline of IPOs worldwide, as highlighted in previous studies by Doidge, Karolyi, and Stulz (2017) and Gao, Ritter, and Zhu (2013), among others. The decrease in the number of listed firms, especially in the United States, has led to more attention on private firms considering M&A as an indirect way to access public equity markets. Previous literature has provided various reasons for this trend, including those outlined by Demir et al. (2023). In our study, we build on this literature by emphasizing the significant role of cultural factors in determining the preference for exit mechanisms by private firms worldwide.

Our paper proceeds as follows. We present the background and discuss hypotheses in section 2. Section 3 presents data and variables considered in this analysis. Section 4 presents our empirical analysis and robustness test. Finally, the conclusion in section 5.

2. Background and hypotheses development:

Previous literature suggests significant differences in risk and benefits between IPOs and M&A (Lowry and Shu (2002), Brau, Francis, and Kohers (2003), Frijns et al. (2013), Fidrmuc, Roosenboom, and Zhang (2018)). On one side, an IPO is more risky, expensive, and uncertain than M&A for private companies. It is also highly unpredictable for firms and new investors, exposing them to the risks of market misvaluation, litigation, and expropriation of profits and assets by insiders (Benveniste and Spindt (1989), Lowry and Shu (2002) and Lewellyn and Bao (2014), among others). Additionally, IPOs require firms to undergo regulatory review, convince investors of the listing's suitability, and incur substantial costs and potentially large underpricing, which can be costly to private firms (Beatty and Ritter (1986), Ritter (1987), Ljungqvist (2007), Chourou, Saadi, and Zhu

[17] Following Brau, Francis, and Kohers (2003) and Nahata et al. (2014), we focus mainly on IPOs and M&As as the two profitable exit avenues. For a broader analysis of all exit mechanisms for private firms IPO, M&A, closure, bankruptcy, and sell-off closure or firms' death, firms' deregistration liquidation (or "bankruptcy"), and firms' sell-off/divestiture, etc.), see Cefis et al. (2022) that provides a systematic literature review of papers on firm exit published in the last three decades.

(2018)). However, the benefits of an IPO cannot be ignored. IPOs enable businesses to raise large amounts of capital from the market to satisfy a demand for funds that cannot be fulfilled by bank loans or private funds, which helps them develop and grow. An IPO also improves a firm's market visibility and increases the confidence of its business partners. Finally, an IPO is an exit mechanism that allows owners (founders) to harvest their latent wealth (Ang and Brau (2003)).

On the other side, mergers and acquisitions offer private firms many advantages that allow them to increase profitability and market values and thus improve shareholders' wealth. Alexandridis, Petmezas, and Travlos (2010) note that the primary purpose of M&A is the creation of synergies, which can promote business growth, raise market power, boost profitability, and increase shareholder wealth. However, private firms exiting through M&A are generally exposed to regulatory risks like antitrust and anti-takeover laws. Fudmuc, Roosenboom, and Zhang (2018) show that all large deals face regulatory costs and risks during the antitrust merger review process. Moeller, Schlingemann, and Stulz (2005), Bena and Li (2014), Bugeja (2011), and Wu and Chung (2019), among others, show that takeover premium increases the target's value and motivates private firms to accept the offer from acquirers. In the case of M&A withdrawals by acquirers, the cost is minimal compared to that of IPOs. Target firms usually get paid a reverse breakup fee, reaching 10% of the firm's market value. However, the owners of the target are more likely to lose control of the company than in an IPO, where the owners have more control over focusing on the impact of cultural dimension on the choice of exit mechanism.

2.1 Hypothesis 1: uncertainty avoidance and exit mechanism.

Gupta, Veliyath, and George (2018) note that members of society with a high degree of uncertainty avoidance are averse to risk. Firms in these societies prioritize compliance, risk management, and adherence to established norms to mitigate uncertainties and maintain a secure business environment. Moreover, a high preference for stability and predictability focuses on reducing risks and uncertainties associated with business operations. Kreiser et al. (2010) and Li et al. (2013) find that the degree of uncertainty avoidance is negatively related to risk-taking. Moreover, Lewellyn and Bao (2014) examine IPO activity variation

across countries and find that the degree of uncertainty avoidance dimension (from Globe project data) has a negative effect on IPO activity. They argue that in countries with a high degree of uncertainty avoidance, managers and investors amplify the risk and the cost of public trading, undermining the firm's long-term benefits. We, therefore, expect a takeover to be more favoured than an IPO as an exit mechanism for entrepreneurs (owners) from countries with high uncertainty avoidance. Our hypothesis 1 is as follows:

Hypothesis 1. Private firms in countries with a high degree of uncertainty avoidance prefer takeovers rather than IPOs as exit mechanisms.

2.2 Hypothesis 2: power distance and exit mechanism.

In societies with high power distance, there is an acceptance of unequal distribution of power and wealth, which forms the basis of social order. Such societies usually have a centralized decision-making structure, where authority is concentrated at the top of a tall pyramid organization. Authoritative leadership and close supervision are also common attributes of these societies (Hofstede (2001)). According to Bjørnskov (2008), a high degree of social inequality is less conducive to a takeover from the acquirer's point of view. Gupta, Veliyath, and George (2018) also show that IPO activity is higher in countries with high power distance. Therefore, we expect that entrepreneurs of private firms in countries with a high degree of power distance are more likely to choose IPOs than takeovers as exit mechanisms. Thus, our second hypothesis is as follows:

Hypothesis 2. Private firms in counties with high power distance prefer IPOs rather than takeovers as exit mechanisms.

2.3 Hypothesis 3: masculinity and exit mechanism.

The members of societies with a high degree of masculinity are inclined toward competition, achievement, assertiveness, and material rewards (Hofstede (1980)). On one hand, societies with high masculinity degrees are associated with highly entrepreneurial activity (Hayton, George, and Zahra (2002)). Meier-Pesti and Penz (2008) find that masculine societies promote higher financial risk-taking. Chourou, Saadi, and Zhu (2018)

find that managers in countries with a high degree of masculinity exhibit more risk-seeking behavior. This risk-taking is also observed in international portfolio management. According to Aggarwal, Kearney, and Lucey (2012), countries with a high masculinity degree are indeed associated with high cross-border debt and equity holdings. In addition, Brau, Francis, and Kohers (2003) show that firms that agree to a takeover by a publicly traded acquirer as an exit mechanism are firms with high leverage and risk. On the other hand, M&A activity allows efficient firms with better management strategies to stay in the market, while poorly managed firms become potential targets. The M&A market thus allows for retaining the most competitive firms in a competitive environment. Masculine societies are also inclined to competition, achievement, and material rewards, which increase competitiveness between firms (Gupta, Veliyath, and George (2018)). Thereby, we can expect high competition for funding, which would make access to the public market more difficult for private firms. Therefore, given these two counterarguments, the effect of a high degree of masculinity on the exit mechanism becomes an empirical issue that requires further investigation. Our hypothesis 3 is as follows:

Hypothesis 3. The high degree of masculinity has a significant impact on the exit mechanism.

2.4 Hypothesis 4: individualism and exit mechanism.

The members of individualist societies are characterized by individual freedom, autonomy, a high need for personal achievement, opportunistic behaviour, and the maximization of private profits (Hofstede (1980)). Chui, Titman, and Wei (2010) find that individualism is positively related to trading volume and volatility. They confirm that managers in highly individualistic countries are over-optimistic and characterized by overconfidence behavior, which overestimates their prediction. Entrepreneurs (owners) in individualistic societies also have a greater need for personal achievement and maximization of private gains. Gupta, Veliyath, and George (2018) find that collectivism is positively associated with IPO activity. They argue that the process of an IPO needs team effort and a high level of cooperation, which conflicts with the individualistic nature of societies that reward independent action and initiative. Further, as individualistic societies are overconfident and

tend to overestimate the benefits and minimize the risk, we expect that firms in countries with a high degree of individualism would be more inclined to choose a takeover than an IPO. Thus, our hypothesis 4 is as follows:

Hypothesis 4. Private firms in countries with a high degree of individualism prefer takeovers over IPOs as exit mechanisms.

2.5 Hypothesis 5: long-term orientation and exit mechanism.

The members of societies with a high degree of long-term orientation foster virtues oriented towards future rewards, particularly perseverance and thrift. In Societies with a high long-term orientation, degrees show a high ability to adapt traditions to changing conditions because they give less importance to traditions and social norms (Hofstede (1980)). While societies that prioritize short-term gains are more likely to limit risk in pursuit of immediate rewards. According to Gupta, Veliyath, and George (2018), high long-term orientation positively affects IPO activity. This suggests that IPOs may be a more attractive option than takeovers for owners who want to retain a significant portion of their shares after going public. Thus, the owners of private firms in countries with high long-term orientation accept to forgo the advantage of takeovers related to the takeover's premium in the short term to have the possibility to sell their shares after the lock-up period. Going public also facilitates IPO firms to acquire other firms after the IPO by providing an infusion of capital (Celikyurt, Sevilir, and Shivdasani (2010)).

Additionally, the probability of retaining control is lower in M&A transactions compared to IPO. Target firms that agree to be taken over by a public acquirer are exposed to the risk of losing control of the firm. Therefore, we expect that entrepreneurs (owners) in countries with high long-term orientation countries are willing to take more risk and sacrifice part of the firm's value by undertaking an IPO to maximize their long-term gain. As a result, firms in countries that prioritize long-term orientation are more likely to undertake IPOs than takeovers as an exit mechanism. Our hypothesis 5 is as follows:

Hypothesis 5: Private firms in countries with a high degree of long-term orientation prefer IPOs over takeovers as exit mechanisms.

2.6 Hypothesis 6: indulgence vs restraint and exit mechanism.

The members of societies with high indulgence vs. restraint are inclined towards leisure and free gratification of basic and natural human drives and give high importance to enjoying life and having fun. This cultural dimension captures society's degree of life control and subjective happiness. The members of societies with low indulgence (high restraint) give more importance to hard work. The rules and regulations are well laid and stricter statutory requirements (Hofstede, Hofstede, and Minkov (2010)). Gupta, Veliyath, and George (2018) note that the IPO process requires compliance, cooperation, and strict guidelines, making it challenging to execute efficiently in countries with high indulgence. In addition, Ang and Kohers (2001) find that private mergers provide significant gains for the acquirer and target, and the premiums paid to private targets are higher than those paid to public targets. Therefore, we expect that the entrepreneurs of private firms in countries with a high degree of indulgence vs. restraint are more likely to choose takeovers than IPOs as exit mechanisms. Thus, our hypothesis 6 is as follows:

Hypothesis 6. Private firms in countries with a high degree of indulgence vs. restraint prefer takeovers over IPOs as exit mechanisms.

Table 1 resumes the expected relationships between the exit mechanism and national culture dimensions.

*** Insert Table 1 here***

3. Sample selection and variable description

3.1 Data sources, definitions, and variable measurement

Our study explores two major ways in which private firms can go public: IPOs and M&As. An IPO is a direct way for companies to access public equity markets, whereas takeovers provide an indirect way to get listed on the equity markets. Following Brau, Francis, and

Kohers (2003), we collect data for initial public offerings (IPOs) and mergers and acquisitions (M&As) from Thomson Reuters SDC Platinum. Table 2 summarizes the construction of our aggregate sample, which consists of two subsamples. The sample of IPOs is collected from Global New Issues Databases. The initial IPO sample includes 283,350 transactions. We exclude unit issues, limited partnerships, spinoffs, previous leveraged buyouts, foreign issuers, closed-end funds, follow-on, deals considered non-IPO, deals for non-private firms, financial and utility firms, and missing data for national cultural dimensions. Thus, the sample of IPOs includes 26,207 transactions of private firms that announced and completed the primary issue between 1985 and 2019.

The sample of M&As is also collected from the SDC Platinum Mergers & Acquisitions database. The database covers 397,553 transactions announced and completed between 1985 and 2019. We retain deals involving 100% acquisitions of targets. We exclude limited partnerships, leveraged buyouts, and spinoffs. We retain deals involving acquisitions of private targets by public acquirers. We exclude financial and utility firms and missing data for national cultural dimensions. Therefore, the sample of M&A includes 43,867 deals involving private target and public acquirer firms where the acquirer owns 100% of target firms after the acquisition. In total, the sample consists of 70,074 private firms covering 60 countries, of which 43,867 firms choose to exit through M&A, and 26,207 opt for IPO as an exit mechanism.

We use Hofstede's data available at https://geerthofstede.com (version 2015), which covers the six national cultural dimensions for more than 100 countries.[18] This database

[18] In this study, we consider Hofstede's database for various reasons. Hofstede's approach to national culture is based on the idea that certain dimensions of culture distinguish one group from another, emphasising relativity rather than evolution. Moreover, the database has demonstrated high stability over time, with correlation coefficients for the five original dimensions ranging from 0.68 to 0.97 (Hofstede (2001) 2nd edition, p. 44). The database was initially constructed for business and management analysis and has been updated and expanded to cover over 110 countries with two additional dimensions. Other databases, such as the Globe project and Schwartz's database, also provide insights into the national culture. Still, Hofstede's database has the most consensus among researchers in analysing the effect of culture on decision-making in finance, business, and management. For example, Ferreira, Serra, and Pinto (2014) report that until the end of 2010, Hofstede's works were cited in 665 papers in business and management journals. Many studies on the impact of national culture on financial decision-making have relied on Hofstede's results (Khambata and Liu (2005), Fidrmuc and Jacob (2010), Bae, Chang, and Kang, (2012), Byrne and O'Connor (2017), Chang, Chang, and Dutta (2020), Chui, Titman, and Wei (2010), Costa, Crawford, and Jakob (2013) Zheng and Ashraf (2014), Gupta, Veliyath, and George (2018), Chourou, Saaidi, and Zhu (2018), among others). However, it is important to acknowledge the limitations of using cultural dimensions, such as Hofstede's, WVS, Globe project, and Schwartz's databases, in research. The underlying concepts and assumptions of the data should be carefully considered, and scholars should approach them with a critical eye, as noted by

includes power distance (*PDI*), uncertainty avoidance (*UAI*), masculinity (*MAS*), and individualism (*IND*) Hofstede (1980, and 2001) and Hofstede, Hofstede, and Minkov (2010). We exclude countries with unavailable national culture dimensions data. Uncertainty avoidance is a degree of concern of the members of a society with respect to situations considered ambiguous, unknown, or uncertain. Power distance refers to the degree of relationships between superiors and subordinates characterized by hierarchy and formal interactions. Masculinity/femininity, masculinity refers to societies where roles are differentiated, and femininity refers to cultures where roles are more interchangeable. Individualism/collectivism is the degree to which a culture emphasizes individual identity and personal choice, as opposed to the collective identity and maintenance of the group's well-being. An individualistic society is characterized by high learning for competition, achievement, advancement, and recognition. Long/short-term, long-term orientation refers to societies with a long-term vision. People in countries with long-term orientation encourage current efforts to prepare adequately for the future. While the members of short-term orientation prefer traditions and avoid change. The sixth dimension is indulgence/restraint. Indulgence refers to societies focusing more on individual happiness, well-being, leisure time, greater freedom, and personal control. In contrast, restraint refers to societies governed by strict social norms that advocate the regulation of the drives of its members.

We measure high uncertainty avoidance (*H_UA*) is a dummy variable that equals 1 for firms in countries with uncertainty avoidance higher or equals to the median of all firm-year observations and 0 otherwise. [19] High power distance (*H_PD*) using a dummy variable that equals 1 for firms in countries with power distance higher or equals to the median of all firm-year observations and 0 otherwise. High masculinity (*H_MAS*) is a dummy variable that equals 1 for firms in countries with masculinity higher or equals the median

previous researchers (Shenkar (2001), Karolyi (2016)) who have analysed the effects of national culture on decision-making.

[19] For ease of interpretation of results, we consider dummy variables. However, we also conduct similar analysis using continuous variables of national culture dimensions (see Table 6) and results remain qualitatively similar.

of all firm-year observations and 0 otherwise. High individualism (*H_IND*) is a dummy variable that equals 1 for firms in countries with individualism higher or equals to the median of all firm-year observations and 0 otherwise. High long-term orientation (*H_LTO*) is a dummy variable that equals 1 for firms in countries with long-term orientation higher or equals to the median of all firm-year observations and 0 otherwise. High indulgence vs. restraint (*H_IVR*) is a dummy variable that equals 1 for firms in countries with indulgence vs. restraint higher or equals to the median of all firm-year observations and 0 otherwise. We use the exit mechanism as the dependent variable. The exit mechanism dummy variable is used to express the choice of private firms to exit via IPO or M&A. Following Brau, Francis, and Kohers (2003) *Exit mechanism* equals one if private firms exit through M&A and 0 if the private firms choose to exit via an IPO.

Following previous studies (Brau, Francis, and Kohers (2003), Rossi and Volpin (2004), Alexandridis, Petmezas, and Travlos (2010), Gupta, Veliyath, and George (2018), Duong et al. (2022), among others), we consider a large set of control variables that have been shown to affect IPOs and M&As activities. Specifically, we consider firm factors, governance, legal origin, and macroeconomic variables. For firm factors, we include the logarithm of the transaction value (*Ln Deal value)* as a proxy for size deals value. A high-tech indicator is a dummy variable that equals one if a private firm operates in high technology industry and 0 otherwise. We also include industry dummy variables based on the Fama and French 12 industry classifications to control for potential industry effects. Governance and legal origin variables are from Djankov et al. (2008). The revised *anti-director index* measures the protection degree of minority shareholders against controlling shareholders. The high degree of the *Anti-director index* indicates high investor protection. *Anti-self-dealing index* measures the degree of shareholder protection against managers that could gain private benefits from firm control (Djankov et al. (2008)). Legal origin (*English, French, German, and Scandinavian*) is a dummy variable used to control for country governance legal origin. For economic control variables from the World Bank.[20] We use *GDP growth* to proxy the change in economic conditions. *GDP growth* represents

[20] See the World Bank website: https://www.worldbank.org/en/home

GDP's annual percentage growth rate at market prices based on constant local currency. The interest rate represents the real interest rate, the lending interest rate adjusted for inflation as measured by the GDP deflator. As a proxy for the country's wealth, we use *Ln_GNP* per capita represents the logarithm of the gross national income divided by the mid-year population. The market capitalization percentage of GDP for each year-country measures market capitalization to GDP (MRKTCAPGDP). Market capitalization is a proxy for liquidity and market development. Ritter (1984), Mitchell and Mulherin (1996), Hoffmann-Burchardi (1999), Lowry and Schwert (2002), Golbe and White (1993), among others, documented the market timing (IPOs and M&As waves) where the IPOs or M&As activities are significantly higher when the market conditions are favorable to the IPO or M&A. To control for the exit market timing, we include the relative volume of IPOs to mergers and acquisitions (*IPOs/M&As*) and the market return (*Market return*). Following Brau, Francis, and Kohers (2003) and Liew and Vassalou (2000), we also control for the demand for funds. We use the return on a portfolio that is long on high book-to-market stocks and short on low book-to-market stocks (*HML*), the return on a portfolio that is long on small capitalization stocks and short on large capitalization stocks (*SMB*), and the cost of debt by the free risk-return (RF). The data for Market return, *RF*, *HML* and *SMB* are collected from international research returns of Kenneth R. French.[21] We also include the latest variables lagged. We use the Hirschman Herfindahl HH market concentration index by countries from WITS (World integration trade solutions developed by the World Bank) to control for market concentration.[22] Antitrust regulation represents an obstacle for mergers and acquisitions in high-concentration industries. Finally, we include year dummy variables to control for the economic cycle. Variables, definitions, and sources are summarized in Table 3.

*** Insert Tables 2 and 3 here***

[21] See website: http://mba.tuck.dartmouth.edu/pages/faculty/ken.french/data_library.html#International

[22] See website : https://wits.worldbank.org/

3.2 Summary statistics

Figure 1 shows the evolution of initial public offerings and mergers and acquisitions in 60 countries from 1985 to 2019. Mergers and acquisitions represent the sum of private firms agreeing to a takeover by publicly traded firms by year. Initial public offerings represent the sum of private firms that choose to undertake an IPO worldwide. We note that in the early 1990s, the choice of exiting through the IPO mechanism dominated the M&As exit mechanism. We also observe that the tendency of IPOs declined more than that of M&As.

Table 4 summarizes each country's six Hofstede national degrees and the exit mechanism choices for 70,074 private firms across 60 countries from 1985 to 2019. Panel A of Table 4 presents the distribution of exit mechanism choices (IPOs and M&As) for private firms' and Hofstede's national culture dimensions by country. Panel B of Table 4 presents exit mechanism distribution (IPOs, M&As) by year from 1985 to 2019. Panel A shows that the United States market represents the highest proportion of private firms that initiate an exit through an IPO and the highest proportion of private firms that initiate an exit through M&A. That limits the effect of the U.S. market on the results of analysis. To eliminate the ambiguity that the United States could drive the results, we perform a robustness test excluding observations from the U.S.

We observe that developed and developing markets represent a large proportion of the sample. However, the exit mechanism choice differs. For example, private firms in countries like Australia, Canada, the United Kingdom, and the United States show a higher proportion of exit mechanisms via M&A, and private firms in China, India, Japan, and South Korea, present a greater proportion of the exit through an IPO.

Panel B of Table 4 shows the evolution of exit mechanism choices of private firms over time. We note that between 1992 and 1996, the global exit mechanism choice via IPO dominated M&A for private firms. And cumulative exit activity by year for private firms (IPOs and M&As) peaked in 2007. In addition, we observe a significant decrease in IPO activity after 2000 (due to the dot-com bubble crisis) and after 2007 (due to the subprime crisis of 2008). The choice of private firms to exit through IPOs remains substantially lower

than the M&A exit mechanism choice until 2019. That support previous finding that shows the decline of IPOs (Gao, Ritter, and Zhu (2013)).

Panel A of Table 5 shows Pearson correlations between national cultural dimensions and control variables. We use Hofstede's national culture dimension degree of uncertainty avoidance, power distance, masculinity, individualism, long-term orientation, and indulgence vs. restraint. We observe highly negative correlations between power distance and individualism (-0.841) and power distance with indulgence vs. restraint (-0.788). In addition, the individualism degree shows a high negative (positive) correlation with long-term orientation (-0.745) (indulgence vs. restraint (0.836)).[23]

Panel B of Table 5 shows the results of different tests between the IPO sample and M&A sample for the main independent variables of our analysis (national culture dimensions). We perform t-tests and Wilcoxon rank difference tests to examine the differences in means and medians, respectively. Panel B shows that the mean and median for all cultural dimensions differ between the IPO and M&A samples. These differences are statistically significant at the 1% level. The results show that the IPO sample means of power distance, uncertainty avoidance, and long-term orientation are higher than the M&A sample means. In contrast, the results of tests show that the M&A sample means of masculinity, individualism, and indulgence vs. restraint are higher than the IPO sample means.

*** Insert Figure 1 and Tables 4 and 5 here***

4. Empirical results

4.1 Exit mechanisms and Hofstede's national culture dimensions

To identify the effect of national culture dimensions on exit mechanism choices. We perform multivariate regression analyses. We include separately the six national cultural

[23] The variance inflation factor (VIF) analysis also confirms these observations. Results are available from the authors upon request.

dimensions. We use a dummy dependent variable *Exit mechanisms,* for the exit mechanisms choice, which equals one if a private firm chooses to exit via a takeover by publicly traded firms and zero if private firms choose to exit through an IPO. Specifically, we run the following logit model. We include year, industry, and legal origin dummy variables to control for the economic cycle, industry specification, and country governance origin, respectively.

$$
\begin{aligned}
Exit\ mechanisms_{1\ if\ M\&A\ and\ 0\ if\ IPO} &= \alpha_{it} + \beta_1\, Hofstede's\ national\ culture_{ij} \\
&+ \beta_2\, Ln\ Deal\ value_f + \beta_3\, High-tech\ indicator_f \\
&+ \beta_4\, Revised\ anti-director\ Index_i + \beta_5\, Anti \\
&- self\ dealing\ index_i + \beta_6\, HH\ market\ concentration\ index_i \\
&+ \beta_7\, IPOs/M\&As_t + \beta_8\, Market\ return_t \\
&+ \beta_9\, Market\ return_{t-1} + \beta_{10}\, Market\ return_{t-2} + \beta_{11}\, RF_t \\
&+ \beta_{12}\, RF_{t-1} + \beta_{13}\, RF_{t-2} + \beta_{14}\, SMB_t + \beta_{15}\, SMB_{t-1} \\
&+ \beta_{16}\, SMB_{t-2} + \beta_{17}\, HML_t + \beta_{18}\, HML_{t-1} + \beta_{19}\, HML_{t-2} \\
&+ \beta_{20} MRKTCAPGDP_{it} + \beta_{21}\, GDP\ growth_{it} \\
&+ \beta_{22} Ln\ GNP\ per\ capita_{it} + \beta_{23} Interest\ rate_{it} \\
&+ year\ dummy + industry\ dummy + legal\ origin\ dummy \\
&+ \varepsilon_{it} \qquad (1)
\end{aligned}
$$

where i = country, f = firm, t = time period, and j = cultural dimension.

Table 6 presents the results of the impact of the national cultural dimensions on the choice of exit mechanisms for private firms, controlling for deal value, high-tech industry, governance (revised anti-director index, anti-self-dealing index), market condition and demand for funds (HH market concentration, IPOs/M&As, market return, risk-free return, SMB, and HML), and macroeconomic factors (market capitalization to GDP, GDP growth,

GNP per capita, and the real interest rate). In addition to the year, industry, and legal origin dummy variables.

Model 1 is the baseline regression model for the exit mechanism choice. Models 2 to 7 show the regression results for each of Hofstede's six dimensions included separately in the baseline regression model.

The result of Model 2 of Table 6 shows that the coefficient of uncertainty avoidance is positive and statistically significant at the 1% level (0.004, *p*-value = 0.001). Private firms in countries with high uncertainty avoidance are more inclined to exit via M&A. The owners (entrepreneurs) of private firms in countries with high uncertainty avoidance are risk averse, which leads them to choose the least risky and more predictable way to exit. Thus, they prefer to exit via M&A rather than IPO. The results of Models 2 of Table 6 are consistent with the prediction of Hypothesis 1.

The result in Model 3 indicates that the coefficient of power distance is negative and significant at the 1% level (-0.076, *p*-value = 0.000). The result shows that private firms in countries with high power distance tend to exit through IPO rather than M&A. A high degree of social inequality related to the high power distance degree is associated with low social trust and is less conducive to M&A, from the acquirer's point of view. The lack of confidence could also be compensated by high underpricing in IPOs, to hedge against information asymmetry. Moreover, societies with high power distance have a high level of hierarchical ordering. That might help to get through the IPO process, which requires guidelines, compliance, cooperative work, and strict regulations. The result of Model 3 supports the prediction of Hypothesis 2.

The result in Model 4 shows that the coefficient of masculinity is positive and statistically significant at the 1% level (0.031, *p*-value = 0.000). The result supports the prediction of Hypothesis 3 and indicates that private firms in countries with high masculinity are more inclined to agree to a takeover by a publicly traded acquirer than to undertake an IPO. High masculinity increases the competitiveness between firms (Gupta, Veliyath, and George (2018)). The increased competition for funding would make access to the public market

more difficult for private firms. Thus, the exit for private firms via M&As is more accessible than via IPOs in masculine countries.

The result in Model 5 shows that the coefficient of individualism is positive and statistically significant at the 1% level (0.060, *p*-value = 0.000). This result indicates that private firms in highly individualistic countries are more inclined to choose an M&A exit mechanism than to undertake an IPO. From the target side, owners of private firms overestimate the value and performance of their firms and avoid IPOs due to underpricing. This result is consistent with the prediction of Hypothesis 4.

The result of Model 6 shows that the coefficient of long-term orientation is negative and statistically significant at the 1% level (-0.041, *p*-value = 0.000). This result indicates that private firms in countries with high long-term orientation are more inclined to exit via IPO. Thus, undertaking IPOs could be more remunerative than M&A in the long term for owners looking to keep a substantial part of the shares and to sell them eventually after the lock-up period. The IPO also increases the probability for owners of private firms to retain control over the firm in the long term, unlike in M&A. Thus, the owners of private firms in counties with high long-term orientation accept to forgo the advantage of M&A offers related to the takeover's premium in the short term to have the possibility to sell their shares after the lock-up period. Going public also makes IPO firms more attractive to future acquirers by reducing information asymmetry. Publicly traded firms are committed to providing high-quality information disclosure. The result is consistent with hypothesis 5.

Model 7 shows that the indulgence vs restraint coefficient is positive and significant at the 1% level (0.089, *p*-value = 0.000). Private firms in countries with high indulgence vs. restraint are more inclined to exit through M&A rather than an IPO. Indulgent societies are short-term orientations, seeking free gratification by having fun and enjoying life. As an IPO is less predictable and requires more effort than agreeing to be acquired, private firms in countries with high indulgence vs. restraint prefer agreeing to a takeover by a publicly

traded acquirer than undertaking an IPO. These results are consistent with hypothesis 6. Regarding control variables, our results confirm previous findings. [24]

Overall, the results in Table 6 show that the national cultural dimensions significantly affect the choice of exit mechanisms. We find that private firms in countries with high uncertainty avoidance, masculinity, individualism, indulgence vs. restraint, and low power distance, and long-term orientation are more inclined to exit through mergers and acquisitions. In contrast, private firms in countries with low uncertainty avoidance, masculinity, individualism, indulgence vs. restraint, and high power distance, and long-term orientation are more inclined to exit through an initial public offering.

In Table 7, we report the results for the cultural dimensions degree using dummy variables rather than continuous variables.[25] Overall, results remain qualitatively unchanged. To test the consistency of our results, we also carried out a battery of robustness tests.

*** Insert Tables 6 and 7 here***

[24] For instance, we find that large-cap firms are more likely to engage in an IPO than small-cap firms and that private firms in the high-technology sector are more inclined to exit via an IPO. The past decades have indeed witnessed a significant investor interest in technology companies seeking the next exceptional growth initial public offering (IPO). We also find that managers' willingness to pursue growth only through acquisitions is attenuated in countries with *H_UA, H_PD, H_LTO,* and *H_IVR* due to a high degree of *Revised anti-director Index,* which reflects the level of supervision of the board monitoring of firm executives. A high degree of *Anti-self-dealing index* positively affects the exit mechanism via M&A. Due to the antitrust laws, the market concentration is more IPOs than M&As conductive. The coefficients of the relative volume of IPOs to M&A are negative and statistically significant at the 1% level with all models (1 to 7). These results are in line with the well-documented clustering phenomena of IPOs and M&As (e.g. Ritter (1984), Mitchell and Mulherin (1996)). The bullish market encourages M&A activity more in countries with *H_UA, H_MAS, H_IND,* and *H_LTO*. These results show that there is a market timing in countries with *H_UA, H_MAS, H_IND,* and *H_LTO*. The results also show that the risk-free rate negatively affects M&As, especially in regression models that include countries with *H_UA*, *H_PD*, *H_LTO*, and *H_IVR* and When the cost of debt increases, financing an acquisition by debt becomes more expensive.

[25] We also consider as a robustness test the first and last tertial and results remain qualitatively unchanged. Results are available from the authors upon request.

4.2 Exit mechanisms and national culture dimensions by M&A payment method.

In this sub-section, we examine the effect of national cultural dimensions on exit mechanisms by M&A payment method. It is well known in the literature that the payment method significantly impacts the valuation of M&A. For example, Travlos (1987) finds significant differences in the abnormal returns between stock and cash offers. Amihud, Lev, and Travlos (1990) confirm the negative abnormal returns when the deal is financed by stock. Moreover, Brau, Francis, and Kohers (2003) point out that private firm owners completely sell off their ownership stake in cash offers while they retain a partial ownership interest in stock offers. Therefore, when considering ownership dynamics, IPOs and stock offers exhibit closer alignment than IPOs and cash offers.

Table 8 reports our results by payment method. In Panel A, the dependent variable is the dummy variable *Exit mechanisms*, which equals one when the private firm is taken over by a public firm with a 100% cash offer and zero if private firms choose to exit through an IPO. In Panel B, the dependent variable *Exit mechanisms* equals one if the private firm chooses M&A with a mixed offer and zero if private firms choose to exit through an IPO. In Panel C, the dependent variable *Exit mechanisms* equals one if the private firm chooses M&A with 100% of the stock offer and zero if private firms choose to exit through an IPO. We include the six national dimensions of Hofstede high (uncertainty avoidance, masculinity, indulgence vs. restraint, power distance, individualism and long-term orientation). We include the same set of control variables as in Table 6.

Overall, except for the result of the coefficient of high long-term in Panel B (insignificant). The results in Table 8 (Panels A, B, and C) show that private firms in countries with high (low) uncertainty avoidance, masculinity, individualism, and indulgence vs. restraint, and low (high) power distance and long-term orientation are more inclined to choose M&A (IPO) exit mechanism. Whereas, private firms in countries with high (low) power distance, long-term orientation, and low (high) uncertainty avoidance, masculinity, individualism, and indulgence vs. restraint are inclined to choose IPO (M&A) as an exit mechanism.

*** Insert Table 8 here***

4.3 Exit mechanisms and national culture dimensions by sub-periods.

Figure 1 and Panel B of Table 4 show that IPO and M&A activity varies yearly, with periods where IPO activity exceeds M&A activity and vice versa. To test the robustness of the results obtained in Tables 6 and 7, we analyze the effect of national cultural dimensions on exit mechanisms choice for private firms by sub-periods. Table 8 presents a logit model regression of the choice of exit mechanisms for private firms on Hofstede's national culture by sub-periods. Panel A reports the regression results for the sub-period from 1985 to 1995. Panel B reports the regression results for the sub-period from 1996 to 2006. Panel C reports the regression results for the sub-period from 2007 to 2019. We include the same control variables in Table 6. To save space, we only report the results related to national cultural dimensions and the exit mechanisms for brevity.

Overall, regardless of the sub-periods, the results in Table 9 confirm our previous findings in Tables 6 ,7 and 8. Specifically, we show that private firms in countries with high (low) uncertainty avoidance, masculinity, individualism, indulgence vs. restraint, and low (high) power distance and long-term orientation are more inclined to choose an M&A (IPO) exit mechanism.

*** Insert Table 9 here***

4.4 Exit mechanisms and alternative national culture dimensions database (Schwartz)..

In this robustness test, we examine the effect of national culture using Schwartz's national cultural value data. Schwartz (1999) identifies seven national cultural values structured along three polar dimensions: Conservatism vs. autonomy, mastery vs. harmony, and egalitarianism vs. hierarchy.[26]

Conservatism (Embeddedness) refers to the traditional societies that avoid change and retain tradition and the conformist societies that focus on sustaining social order, security,

[26] We use egalitarianism vs. hierarchy instead of hierarchy vs. egalitarianism to avoid multiconoiarity issue. Mastery is highly correlated to hierchy (0.85). While, egalitarianism exhibits a lower correlation with mastery (-0.73).

and obedience. Autonomy is split into two components: (1) affective autonomy refers to the independent pursuit of pleasure, where the members of society seek enjoyment by any means without censure; and (2) intellectual autonomy refers to the independent pursuit of ideas and thoughts. Mastery refers to a society where members seek success through personal action and focus on independence, courage, ambition, drive, and competence. While harmony refers to a society that puts more emphasis on the group than on the individual. Egalitarianism refers to societies where all members of society are considered equal. Hierarchy refers to a society where the social order is clearly established between superior and inferior positions, and members of a society accept their hierarchical position.

High conservatism is a dummy variable that equals 1 for firms in countries with a conservatism degree is higher or equals the median of all firm-year observations and 0 otherwise. High mastery is a dummy variable that equals 1 for firms in countries with a mastery degree higher or equals the median of all firm-year observations and 0 otherwise. High egalitarianism is a dummy variable that equals 1 for firms in countries with an egalitarianism degree higher or equal to the median of all firm-year observations and 0 otherwise.

Table 10 presents the results of logit regressions using Schwartz's national cultural dimensions on the exit mechanism choice for private firms. We use the *Exit mechanisms* as a dependent variable. We include the same control variables as in Table 6 (*Ln Deal value, high-tech industry, revised anti-director index, anti-self-dealing index, HH market concentration, relative IPOs activity to M&As, market return and lagged market return, free risk return and lagged free risk return, SMB and lagged SMB, HML and lagged HML, market capitalization to GDP, GDP growth, ln GNP per capita, real interest rate, and a year, industry, legal origin dummy variables*). We estimated the following regression model:

$$
\begin{aligned}
Exit\ mechanisms_{1\ if\ M\&A\ and\ 0\ if\ IPO} &= \alpha_{it} + \beta_1 Schwartz'\ National\ Culture_{ij} + \beta_2\ Ln\ Deal\ value_i \\
&+ \beta_3\ High - tech\ indicator_i + \beta_4\ Revised\ anti \\
&- director\ Index_i + \beta_5\ Anti - self\ dealing\ index_i \\
&+ \beta_6\ HH\ market\ concentration\ index_i + \beta_7\ IPOs/M\&As_t \\
&+ \beta_8\ Market\ return_t + \beta_9\ Market\ return_{t-1} \\
&+ \beta_{10}\ Market\ return_{t-2} + \beta_{11}\ RF_t + \beta_{12}\ RF_{t-1} + \beta_{13}\ RF_{t-2} \\
&+ \beta_{14}\ SMB_t + \beta_{15}\ SMB_{t-1} + \beta_{16}\ SMB_{t-2} + \beta_{17}\ HML_t \\
&+ \beta_{18}\ HML_{t-1} + \beta_{19}\ HML_{t-2} + \beta_{20}\ MRKTCAPGDP_{it} \\
&+ \beta_{21}\ GDP\ growth_{it} + \beta_{22}\ Ln\ GNP\ per\ capita_{it} \\
&+ \beta_{23}\ Interest\ rate_{it} + year\ dummy + industry\ dummy \\
&+ legal\ origin\ dummy + \varepsilon_{it} \qquad (2)
\end{aligned}
$$

Where i = country, f = firm, t = time period, and j = cultural dimension.

Model 1 of Table 10 is the baseline regression model for exit mechanism choice. Models 2 to 4 show the regression results for each of Schwartz's three dimensions included separately in the baseline regression model.

The results of Table 10 show that the national cultural dimensions of Schwartz (high conservatism, mastery, and egalitarianism) significantly affect the choice of the exit mechanism for private firms. In Model 2, the coefficient of high conservatism is positive and statistically significant at the 1% level (1.422, *p*-value = 0.000). The result indicates that private firms in countries with high conservatism are more inclined to opt for an M&A as an exit choice rather than an IPO. As members of societies with high conservatism are risk averse, owners (entrepreneurs) of private firms in countries with high conservatism are more inclined to choose the exit mechanism that represents them the least risk and the most predictable exit option. The definition of conservatism joins the definition of uncertainty avoidance dimension on certain aspects such as seeking security, avoidance of change, and

unknown and risky situations.[27] The coefficients of uncertainty avoidance from Table 6 and the coefficients of conservatism from Table 11 are both positive and statistically significant at the 1% level.

In Model 3, the coefficient of high mastery is positive and statistically significant at the 1% level (1.451, *p*-value = 0.000). The result indicates that private firms in countries with high mastery are more inclined to M&A exit mechanism choice to the detriment of the IPO exit mechanism. Mastery captures the degree of ambition, the pursuit of success, independence, and daring in a society. This value corresponds to the masculinity national culture dimension of Hofstede.

In Model 4, the coefficient of high egalitarianism is positive and statistically significant at 1% (2.695, *p*-value = 0.000). The result indicates that private firms in countries with high egalitarianism prefer to exit through M&As, while private firms in countries with low egalitarianism prefer to exit through IPOs. As expected, we find an opposite relationship between (egalitarianism with the exit mechanism) and (power distance with the exit mechanism). The coefficient of high egalitarianism (power distance) is positive (negative) with the M&A exit mechanism. The definition of egalitarianism (societies where all members of society are considered equal) is the cultural dimension opposed to Hosftede's power distance index (societies where the members of a society accept that power and wealth are unequally distributed).

For control variables, we find almost similar results shown in Table 7. Overall, the results of Table 10 show that the cultural dimensions of Schwartz significantly affect the exit mechanisms choice. These confirm that our previous findings, provided in Tables 6, 8, 9, and 10, are robust to alternative national cultural dimensions.

*** Insert Table 10 here***

[27] Shao, Kwok, and Guelhami (2010) substitute the cultural dimensions of conservatism and mastery by uncertainty avoidance, individualism, and masculinity in their analysis of dividend policy.

4.5 Exit mechanisms, national culture dimensions, and institutional democracy index.

The purpose of this sub-section is to test the effect of national cultural dimensions and institutional democracy index on exit mechanisms. Recently, Duong et al. (2022) highlighted the importance of the rise of democracy worldwide, which could affect several economic outcomes. Institutional democracy (Democracy) refers to the presence of institutions and procedures that ensure civil liberties to all citizens in their daily lives and in acts of political participation, as well as the ability of citizens to express effective preferences for alternative policies and leaders. This index is measured on a scale of zero to ten, with higher values indicating greater institutional democracy. Duong et al. (2022) analyze the effect of democracy on initial public offering (IPO) underpricing in 45 countries. Their results show that firms undertaking IPOs in countries with higher institutional democracy experience a lower IPO underpricing. As we examine the effect of the informal institution (national culture) on the exit mechanisms choice, it is interesting to include an additional factor that captures the impact of formal institutions on exit mechanisms. We collect the data from the Polity 5 Project (2018).

Table 11 presents the regression results for the effect of national culture dimensions and the institutional democracy degree (*Democracy*) on private firms' exit mechanism choices (IPO vs. M&A). The dependent variable is the dummy variable, *Exit mechanisms*. We include national cultural dimensions (high uncertainty avoidance, high masculinity, high indulgence vs. restraint, high power distance, high individualism, and high long-term orientation) and institutional democracy index (*Democracy*). All regression models of Table 11 include all control variables, as in Table 6. To save space, we only report results related to the effect of national culture and democracy on the choice of exit mechanisms. The results of Table 11 show that the coefficient of *Democracy* is positive and significant at the 1% level in models 1 to 7. These results indicate that private firms in countries with a high (low) degree of democracy are more inclined to exit through M&A (IPO). Indeed, in a highly democratic environment, the rule of law and accountability mechanisms are robust, transparency and justice are prioritized, and citizens are held responsible for their actions. This leads to a higher level of trust in daily interactions and economic transactions. This favorable environment creates conducive conditions for M&A activities. Businesses

can confidently engage in transactions, knowing that legal and regulatory frameworks are well-established and enforced. Regarding the national cultural dimensions, we find that private firms in countries with high uncertainty avoidance, masculinity, individualism, indulgence vs. restraint and low (power distance, long-term orientation) choice to exit via M&A. Whereas, private firms in countries with low (uncertainty avoidance, masculinity, individualism, indulgence vs restraint) and high (power distance, long-term orientation) choice to exit through an IPO. To sum up, the results of Table 11 are consistent with those shown in previous Tables.

*** Insert Table 11 here***

4.6 Exit mechanisms, national culture dimensions, deal value, and premiums.

In this section, we test the differences in means and differences in medians for deal value and premium by national culture dimensions for the IPO sample and M&A sample. The deal value represents the value of the principal amount for IPOs and the value of transactions for M&As. The premium represents the ratio of offer price to book value for IPOs and M&As. Table 12 reports the results of t-tests and Wilcoxon rank difference tests. In Panel A of Table 12, we test the deferences of mean and median for deal value and premium for M&A by the private firms in countries with high (low) uncertainty avoidance, power distance, masculinity, individualism, long-term orientation, and indulgence vs. restraint. In Panel B of Table 12, we test the mean and median difference for deal value and premium for IPOs by private firms in countries with high (low) uncertainty avoidance, power distance, masculinity, individualism, long-term orientation, and indulgence vs. restraint.

Panels A and B of Table 12 show that deal values are higher for firms in countries with high uncertainty avoidance, power distance, masculinity and individualism, and low long-term orientation and indulgence vs. restraint, whether for M&A or IPO samples. The results are significant at the 1% level, except for the result of Panel B for power distance (p-value = 0.24 for the t-test and 0.39 for the Wilcoxon test).

In Panel A, the results of the premium by national cultural dimension for M&A show that private firms in countries with high (uncertainty avoidance, power distance, masculinity, and individualism) and low (long-term orientation and indulgence vs. restraint) get a higher takeover premium than private firms in countries low (uncertainty avoidance, masculinity, power distance, and individualism) and high (long-term orientation and indulgence vs. restraint). The results of the t-stat test are statistically significant for uncertainty avoidance, power distance, long-term orientation, and indulgence vs. restraint.

The results in Panel B of Table 12 show that private firms in countries with high uncertainty avoidance, power distance, long-term orientation, indulgence vs. restraint and low masculinity and individualism get a higher IPO premium than private firms in countries with low uncertainty avoidance, power distance, long-term orientation and indulgence vs. restraint and high masculinity and individualism. The t-stat test is statistically significant at the 1% level for power distance and indulgence vs. restraint.[28]

*** Insert Table 12 here***

4.7 Exit mechanisms and national culture dimensions (subsample).

In this sub-section, we analyze the effect of national cultural dimensions on exit mechanisms using the subsample that excludes the United States. U.S. Market is by far the most representative in our sample and the global economy. To test that our results are not driven by the U.S. market, we rerun our regressions excluding U.S. observations

Table 13 presents a subsample regression of the choice of exit mechanisms (IPO vs. M&A) for private firms on Hofstede's national culture. All regression models of Table 13 include all control variables as in Table 6. Model 1 of Table 13 is the baseline regression model for exit mechanism choice. Models 2 to 7 show the regression results for each of Hofstede's

[28] We note that the sample for deal value includes 40,637 private firms for the M&A sample and 19,942 for the IPO sample. However, the sample for premium only includes 4,187 private firms for the M&A sample and 3,580 for the IPO sample.

six dimensions when we include them separately in the baseline regression model. Overall, we confirm that our results remain qualitatively unchanged excluding the U.S.

*** Insert Table 13 here***

4.8 Exit mechanisms and Hofstede's cultural index profile.

To test the effect of national culture on the choice of exit mechanism for private firms, we follow Gupta, Veliyath, and George (2018), and based on our hypotheses, we construct an ideal national cultural profile for the exit mechanism. Considering the assumptions of monotonous relationships, the ideal profile to exit through M&A should exhibit the maximum degree of uncertainty avoidance, masculinity, individualism, indulgence vs restraint, and the minimum degree of power distance and long-term orientation.

The cultural composite index profile is created by calculating the differences between the aggregated cultural profile of our sample and the ideal degree of cultural profile dimensions. These differences are squared and summed across the six culture dimensions for each country. The resulting profile deviation degree is used as an explanatory variable to examine the influence of cultural profile deviations on exit mechanisms. Therefore, we expect a negative relation between the cultural index profile and the exit mechanism. Firms in countries with a greater distance from the ideal profile are less likely to choose M&A as an exit strategy.

$$\text{Cultural index profile} = \sum_{d=1}^{6} \left(NCD_{dj} - NCD_{di}\right)^2 \qquad (3)$$

j= country, d= national cultural dimensions, i= ideal degree. $NCD_{\_dj}$ represents the degree of each cultural dimension by country, and NCD_{di} represents the ideal national cultural degree for each dimension.

The results of Table 14 show that the coefficient *cultural index profile* is negative and statistically significant at the 1% level. As expected, the results show that the greater

distance between the cultural profile of a country and the ideal cultural profile decreases the likelihood of exiting through merger and acquisition. In contrast, the smallest distance between the cultural profile of a country and the ideal cultural profile increases the likelihood of exiting via an IPO. Thus, private firms in countries with high uncertainty avoidance, masculinity, individualism, indulgence vs restraint and, low power distance, long-term orientation are more likely to choose to exit via M&A. While private firms in countries with low uncertainty avoidance, masculinity, individualism, indulgence vs restraint and high power distance, long-term orientation are more likely to choose to exit via M&A. Once again, these results support our previous results.

*** Insert Table 14 here***

4.9 Additional robustness Analysis

In this section, we summarize several supplemental analyses that test the robustness of the above findings. First, as the number of observations varies greatly across countries, we consider in Table 15 Weighted Least Squares (WLS) regressions. Second, in Table 16, we exclude cross-border mergers and acquisitions from the M&A sample. [29] Third, in Table 17, we divide the sample into three sub-periods: from 1999 to 2002 (Dot-com crisis), from 2007 to 2010 (Financial crisis), and the remaining years of the sample. All these additional robustness checks confirm previous findings. Private firms in countries with high uncertainty avoidance, masculinity, individualism, indulgence vs., restraint, low power distance, and long-term orientation are more inclined to exit through mergers and acquisitions. In contrast, private firms in countries with high power distance, long-term orientation, low uncertainty avoidance, masculinity, individualism, and indulgence vs. restraint are more inclined to exit via an IPO.

*** Insert Tables 15, 16, and 17 here***

5. Discussion and conclusions

[29] We also test our results by excluding the U.S. market from this sub-sample and results remain qualitatively similar.

This study sheds new light on the determinants of the exit mechanism. Previous research has identified firm characteristics, market conditions, and institutional quality as key determinants of exit strategy choice. However, this study focuses on the impact of national cultural dimensions. Using an extensive data set covering 60 countries during 1985–2019, we find that national cultural dimensions are potential factors determining the exit mechanism choice for private firms.

Our findings suggest that, on the one hand, private firms in countries with high uncertainty avoidance, masculinity, individualism, indulgence vs. restraint, low power distance, and long-term orientation are more likely to exit through M&A. On the other hand, private firms in countries with low uncertainty avoidance, masculinity, individualism, indulgence vs. restraint, high power distance, and long-term orientation tend to choose the IPO exit mechanism. These findings are robust to control for firm and country characteristics, market conditions, funds demand, payment method, subperiods, subsamples, culture proxies, and composite cultural profile index. Thus, the exit mechanism for private firms is highly influenced by the cultural context predominant in countries.

Our analysis provides valuable insights to international portfolio managers and financial analysts who manage a portfolio of financial events such as M&As and IPOs of private firms worldwide. It also offers a better understanding of the negotiation power during the bidding process in M&As or the going public route via IPOs.

The importance of the national cultural dimension to explain different financial decisions is a relatively new developing research stream. There are many possibilities for further exploration, such as studying how culture affects fostering innovation and enhancing financing for private firms.

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Figure 1.

Figure 1. Shows the evolution of exit mechanism choice from 1985 to 2019. Mergers and acquisitions represent the sum by year of private firms that agreeing to takeover by public traded firms in the global market. Initial public offerings represent the sum of private firms that choose to undertake an IPO around the world.

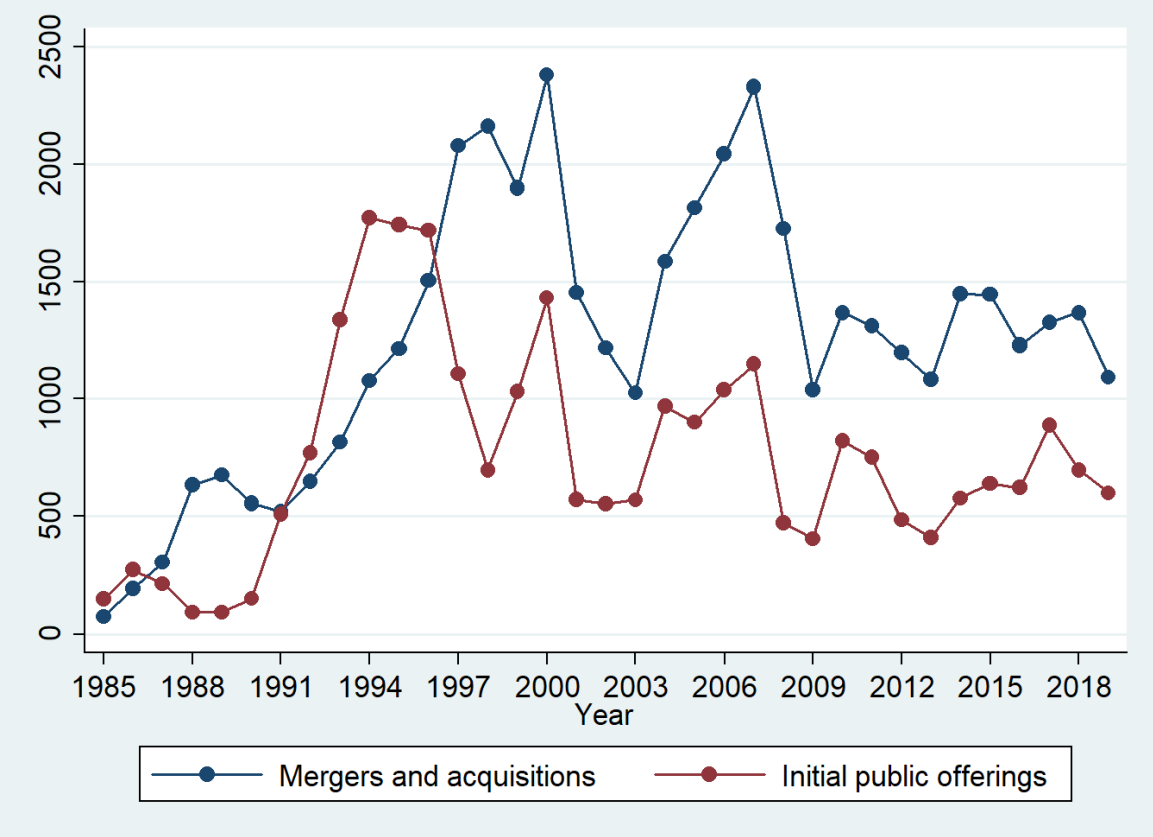

Table 1 : Exit mechanisms and the expected relationships with national culture dimensions

Culture dimensions	Expected exit mechanism choice	
	IPOs activity	M&As activity
H1: High uncertainty avoidance The members of society with a high degree of uncertainty avoidance are averse to risk.	Negative: The managers and investors amplify the risk and the cost of public trading, undermining the firm's long-term benefits (Lewellyn and Bao (2014))	Positive: M&A is more predictable and less risky than the IPO. Firms undertaking IPOs are exposed to more risks factors than M&A (Ritter (1987), Ljungqvist (2007))
H2: High power distance The members of societies with high power distance accept that power and wealth are unequally distributed	Positive: The lack of confidence (trust) will be compensated by high underpricing, as shown by Chourou Saadi, and Zhu (2018) Societies with high power distance have a high level of hierarchical ordering. That could help to make it through the IPO process.	Negative: A high degree of social inequality is associated with low social trust and is less conducive to a takeover from the acquirer's point of view (Bjornskov (2008)).
H3: High masculinity The members of societies with a high degree of masculinity are inclined toward competition, achievement, assertiveness, independence and material rewards	Positive/Negative: Masculine societies promote higher financial risk-taking. (Meier-Pesti and Penz (2008)). IPOs involve more risk factors than M&As for target firms (Lewellyn and Bao (2014))	Positive/Negative: Masculine societies promote competition, which increases competitiveness between firms (Gupta, Veliyath, and George (2018)). Firms are motivated to eliminate competitors by acquisition to ensure a larger market share.

H4: High individualism	Negative:	Positive
The members of individualist societies are characterized by individual freedom, autonomy, a high need for personal achievement, opportunistic behaviour, and the maximization of private profits	Individualistic countries are characterized by the personal achievement, advancement, and recognition of entrepreneurs, which are associated with risk-taking (Li et al. (2013))	The managers in highly individualistic societies are over-optimistic and characterized by overconfidence behavior (Chui et al. (2010)), which overestimates their prediction for synergy of M&A.
H5: High long-term orientation	Positive:	Negative:
The members of societies with a high degree of long-term orientation foster virtues oriented towards future rewards, particularly perseverance and thrift.	In society oriented towards future, owners of private firms could prefer to sacrifice the acquisition premium M&A upon exit by choosing an IPO. IPOs are more attractive than M&As in the long term for owners who are looking to keep a substantial part of the shares to sell them after the lock-up period.	Choosing M&A entails the risk of losing control of the firm. The probability of retaining control is lower in M&A transactions compared to IPO. M&A may not be suitable for an entrepreneur with a long-term perspective.
H6: High indulgence vs. restraint	Negative:	Positive:
The members of societies with high indulgence vs. restraint are inclined towards leisure and free gratification of basic and natural human drives and give high importance to enjoying life, life control, subjective happiness and having fun.	IPO is a process that requires guidelines, compliance, cooperative work, and strict regulations (Gupta, Veliyath, and George (2018)), which does not correspond to characteristics of an indulgent society	Indulgent society is a short mentality society, where it is more likely that owners of private firms would prefer to take the acquisition premium, reap the rewards of their work, and enjoy life.

Table 2 : Construction of the IPO and M&A samples

Construction of the sample for initial public offerings	
SDC Thomson Reuters coverage of completed initial public offerings from 1985 to 2019.	283,350
Excluding unit issues.	-6,258
Excluding limited partnerships.	-392
Excluding spinoffs.	-6,118
Excluding previous leveraged buyouts.	-1,438
Excluding foreign issuers.	-2,935
Excluding closed-end funds.	-5,894
Excluding Follow-on.	-160,425
Excluding deals considered as non-IPO.	-42,627
Excluding deals for non-private firms.	-21,848
Excluding financial and utility firms (6,000-6,999 and 4,000-4,999).	-8,499
Missing data for national cultural dimensions.	-709
Sample for IPOs from 1985 to 2019 covering 60 countries.	26,207
Construction of the sample for mergers and acquisitions	
SDC Thomson Reuters coverage of completed mergers and acquisitions 1985 to 2019.	397,553
Completed deals involving 100% acquisitions of target firms.	-160,282
Excluding limited partnerships.	-3,496
Excluding leveraged buyouts.	-12,013
Excluding spinoffs.	-1,246
Completed deals involving acquisitions of private targets by public acquirers.	-162,919
Excluding financial and utility firms (6,000-6,999 and 4,000-4,999).	-12,780
Missing data for national cultural dimensions.	-950
Sample for M&A from 1985 to 2019 covering 60 countries.	43,867

Table 3 : Variable definitions

Variables	Definition	Source
Exit mechanisms	Dummy variable equals 1 if the private firm exit through mergers and acquisitions and 0 if the private firm exit through an initial public offering.	Thomson Reuters (SDC) Platinum
Power distance index (PDI)	Hofstede's national culture of power distance degree.	https:/geerthofstede.com
Uncertainty avoidance index (UAI)	Hofstede's national culture of uncertainty avoidance degree.	https://geerthofstede.com
Masculinity (MAS)	Hofstede's national culture of masculinity degree.	https://geerthofstede.com
Individualism (IND)	Hofstede's national culture of individualism degree.	https://geerthofstede.com
Long-term orientation (LTO)	Hofstede's national culture of long-term orientation degree.	https://geerthofstede.com
Indulgence vs. restraint (IVR)	Hofstede's national culture of indulgence vs. restraint degree.	https://geerthofstede.com

High power distance degree (H_PD)	Dummy variable equals 1 for firms in countries with a power distance index equal or higher than the sample median of power distance index and zero otherwise.	https://geerthofstede.com
High uncertainty avoidance degree (H_UA)	Dummy variable equals 1 for firms in countries with a power distance index equal or higher than sample median of uncertainty avoidance index. and zero otherwise.	https://geerthofstede.com
High masculinity degree (H_MAS)	Dummy variable equals 1 for firms in countries with power distance index equal or higher than sample median of masculinity. and zero otherwise.	https://geerthofstede.com
High individualism degree (H_IND)	Dummy variable equals 1 for firms in countries with power distance index equal or higher than sample median of individualism and zero otherwise.	https://geerthofstede.com
High long-term orientation degree (H_LTO)	Dummy variable equals 1 for firms in countries with power distance index equal or higher than sample median of long-term orientation. and zero otherwise.	https://geerthofstede.com
High indulgence vs. restraint degree (H_IVR)	Dummy variable equals 1 for firms in countries with power distance index equal or higher than sample median of indulgence vs. restraint. and 0 otherwise.	https://geerthofstede.com
Ln Deal value	Ln Deal value represents the logarithm of value of the principal amount for IPOs and value of transaction for M&As.	Thomson Reuters (SDC) Platinum
Revised anti director index	Measure the protection of minority shareholders in the corporate decision-making process. Including the right to vote.	Djankov et al. (2008)

Anti self-dealing index	Measure the legal protection of minority shareholders against expropriation by corporate insiders.	Djankov et al. (2008)
IPOs/M&As	The volume of IPO in year (i) divided by the number of M&A in the same year (i). As a proxy to control for market timing and the wave effect for IPO and M&A.	Thomson Reuters (SDC) Platinum
Market capitalization % to GDP (MRKTCAPGDP)	Country stock market capitalization equals to the average of annual stock market capitalization divided by the gross domestic product multiplied by 100.	World Bank
GDP growth	Annual percentage growth rate of GDP at market prices based on constant local currency.	World Bank
Ln GNP per capita	Represent the logarithm of GNP per capita which is the gross national income divided by midyear population.	World Bank
HH market concentration index	Hirschman Herfindahl HH market concentration index measures the degree of concentration (competition) market by country. Developed by world integrated trade solutions from World Bank	https://wits.worldbank.org/
Interest rate	Interest rate represents the lending interest rate adjusted for inflation as measured by the GDP deflator.	World Bank
Legal origin	Legal origin (English, French, German and Scandinavian) is a dummy variable used to control for country governance legal origin.	Djankov et al. (2008)
Market return	Rm–Rf for July of year t to June of t+1 include all stocks for which market equity data are available for June of t. SMB and HML for July of year t to	Kenneth R. French — Data Library.

	June of t+1 include all stocks for which we have market equity data for December of t–1 and June of t, and (positive) book equity data for t–1.	
HML	HML is the equal-weight average of the returns for the two high B/M portfolios for a region minus the average of the returns for the two low B/M portfolios.	Kenneth R. French — Data Library.
SMB	SMB is the equal-weight average of the returns on the three small stock portfolios for the region minus the average of the returns on the three big stock portfolios.	Kenneth R. French — Data Library.
Fama and French 12 industry classifications	Based on four-digit SIC code, Fama and French classified firms in 12 industries class.	Kenneth R. French — Detail for 12 Industry Portfolios

Table 4. National cultural dimensions and exit mechanisms distribution by country and year.

Panel A of Table (4) presents the distribution of exit mechanisms choices (initial public offerings IPOs, mergers and acquisitions M&As) for private firms' and Hofstede's national culture dimensions by country. Panel B of Table (4) presents exit mechanisms distribution (IPO, M&A) by year from 1985 to 2019.

Panel (A) : National cultural dimensions and exit mechanisms distribution by countries

	Exit mechanisms by country		Hofstede's national cultural dimensions						
Country	IPOs	M&As	Total	PDI	UAI	MAS	IND	LTO	IVR
Argentina	12	100	112	49	86	56	46	20	62
Australia	1,586	2,515	4,101	38	51	61	90	21	71
Austria	34	49	83	11	70	79	55	60	63
Bangladesh	118	2	120	80	60	55	20	47	20
Belgium	73	204	277	65	94	54	75	82	57
Brazil	57	277	334	69	76	49	38	44	59
Bulgaria	11	9	20	70	85	40	30	69	16
Canada	1,817	3,789	5,606	39	48	52	80	36	68
Chile	23	62	85	63	86	28	23	31	68
China	2,887	1,186	4,073	80	30	66	20	87	24
Colombia	4	52	56	67	80	64	13	13	83
Croatia	2	6	8	73	80	40	33	58	33
Czech Republic	3	49	52	57	74	57	58	70	29
Denmark	70	212	282	18	23	16	74	35	70
El Salvador	1	0	1	66	94	40	19	20	89
Estonia	2	7	9	40	60	30	60	82	16
Finland	64	217	281	33	59	26	63	38	57
France	648	776	1,424	68	86	43	71	63	48
Germany	411	773	1,184	35	65	66	67	83	40
Greece	122	42	164	60	112	57	35	45	50
Hong Kong	684	205	889	68	29	57	25	61	17
Hungary	9	26	35	46	82	88	80	58	31
India	4,346	246	4,592	77	40	56	48	51	26
Indonesia	208	62	270	78	48	46	14	62	38
Iran	1	1	2	58	59	43	41	14	40
Ireland	36	250	286	28	35	68	70	24	65
Italy	168	329	497	50	75	70	76	61	30
Japan	2,250	1,239	3,489	54	92	95	46	88	42
Latvia	3	7	10	44	63	9	70	69	13
Lithuania	5	9	14	42	65	19	60	82	16
Luxembourg	11	22	33	40	70	50	60	64	56
Malaysia	655	268	923	104	36	50	26	41	57
Malta	4	8	12	56	96	47	59	47	66
Mexico	48	203	251	81	82	69	30	24	97
Morocco	11	5	16	70	68	53	46	14	25
Netherlands	71	414	485	38	53	14	80	67	68
New Zealand	62	267	329	22	49	58	79	33	75
Norway	110	254	364	31	50	8	69	35	55
Peru	8	54	62	64	87	42	16	25	46
Philippines	55	44	99	94	44	64	32	27	42
Poland	209	140	349	68	93	64	60	38	29
Portugal	9	54	63	63	104	31	27	28	33
Romania	5	28	33	90	90	42	30	52	20

Russia	39	109	148	93	95	36	39	81	20
Serbia	0	10	10	86	92	43	25	52	28
Singapore	456	244	700	74	8	48	20	72	46
Slovakia	0	8	8	104	51	110	52	77	28
Slovenia	0	3	3	71	88	19	27	49	48
South Korea	1,125	576	1,701	60	85	39	18	100	29
Spain	47	347	394	57	86	42	51	48	44
Sweden	173	621	794	31	29	5	71	53	78
Switzerland	55	193	248	34	58	70	68	74	66
Taiwan	910	88	998	58	69	45	17	93	49
Thailand	413	78	491	64	64	34	20	32	45
Turkey	86	53	139	66	85	45	37	46	49
United Kingdom	1,180	7,606	8,786	35	35	66	89	51	69
United States	4,734	19,412	24,146	40	46	62	91	26	68
Uruguay	0	11	11	61	100	38	36	26	53
Venezuela	1	11	12	81	76	73	12	16	100
Vietnam	75	35	110	70	30	40	20	57	35
Total/Median	26,207	43,867	70,074	40	46	62	89	36	68

Panel B : Exit mechanisms distribution by year.

	Exit mechanisms				Exit mechanisms				Exit mechanisms		
Year	IPOs	M&As	Total	Year	IPOs	M&As	Total	Year	IPOs	M&As	Total
1985	148	73	221	1997	1,108	2,080	3,188	2009	405	1,040	1,445
1986	272	193	465	1998	698	2,163	2,861	2010	822	1,369	2,191
1987	213	306	519	1999	1,032	1,900	2,932	2011	752	1,313	2,065
1988	90	633	723	2000	1,431	2,382	3,813	2012	485	1,199	1,684
1989	90	676	766	2001	572	1,455	2,027	2013	409	1,084	1,493
1990	149	555	704	2002	554	1,218	1,772	2014	578	1,448	2,026
1991	509	521	1,030	2003	569	1,026	1,595	2015	641	1,445	2,086
1992	771	649	1,420	2004	969	1,587	2,556	2016	622	1,229	1,851
1993	1,337	817	2,154	2005	901	1,815	2,716	2017	889	1,327	2,216
1994	1,773	1,078	2,851	2006	1,039	2,045	3,084	2018	698	1,369	2,067
1995	1,743	1,216	2,959	2007	1,148	2,330	3,478	2019	599	1,093	1,692
1996	1,719	1,505	3,224	2008	472	1,728	2,200	Total	26,207	43,867	70,074

Table 5: Pearson correlation coefficients and difference testing between IPO and M&A samples

Panel (A) of the Table (5) presents Pearson correlation coefficients of Hofstede' national culture dimensions firm and country characteristics control variables. Power distance index (PDI). Uncertainty avoidance index (UAI). Masculinity (MAS). Individualism (IND). Long-term orientation (LTO). Indulgence vs. Restraint (IVR). Governance and legal origin variables are from Djankov et al. (2008). Revised anti-director index measures protection degree of minority shareholders against controlling shareholders. Anti-self-dealing index measures the degree of shareholder protection against managers that could gain private benefits owing to firm control. Legal origin (English. French. German and Scandinavian) is a dummy variable used to control for country governance legal origin. MRKTCAPGDP measured by market capitalization percentage of GDP for each year-country, from World Development Indicators developed by the World Bank. Panel (B) of the Table (5) presents the results of difference tests for national cultural degree between the IPO sample and the M&A sample.

Panel A : Pearson correlation coefficients.

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
(1) Power distance index	1.000																
(2) Individualism	-0.841	1.000															
(3) Masculinity	-0.009	0.067	1.000														
(4) Uncertainty avoidance index	0.039	-0.169	0.191	1.000													
(5) Long-term orientation	0.500	-0.745	0.159	0.278	1.000												
(6) Indulgence vs. restraint	-0.788	0.836	-0.068	-0.153	-0.733	1.000											
(7) Revised anti-director Index	-0.053	0.015	-0.026	0.062	0.051	0.045	1.000										
(8) Anti-self-dealing index	-0.075	0.150	0.205	-0.661	-0.152	0.196	0.228	1.000									
(9) HH market concentration index	-0.108	0.038	-0.145	0.042	-0.115	0.192	0.090	-0.078	1.000								
(10) Market return $_t$	-0.056	0.106	0.013	-0.024	-0.088	0.061	0.078	0.006	-0.003	1.000							
(11) RF $_t$	-0.072	0.138	0.011	-0.017	-0.107	0.067	0.112	-0.015	0.001	0.680	1.000						
(12) SMB $_t$	0.001	-0.052	0.009	0.030	0.059	-0.009	-0.033	0.027	0.030	-0.257	-0.413	1.000					
(13) HML $_t$	-0.002	0.044	0.016	-0.030	-0.045	0.015	0.073	0.022	0.008	0.196	0.237	-0.119	1.000				
(14) MRKTCAPGDP	0.131	-0.221	0.138	0.253	0.230	-0.188	-0.144	-0.147	-0.075	-0.147	-0.058	-0.020	-0.012	1.000			
(15) GDP growth	0.470	-0.366	-0.173	-0.269	0.089	-0.372	-0.076	0.087	-0.085	0.195	0.210	-0.175	0.077	-0.087	1.000		
(16) Ln GNP per capita	-0.120	0.066	0.070	0.055	-0.118	0.108	-0.318	-0.094	0.121	-0.281	-0.392	0.213	-0.204	-0.048	-0.123	1.000	
(17) Interest rate	0.049	0.109	0.087	-0.168	-0.301	0.024	0.011	0.089	-0.110	0.341	0.466	-0.201	0.145	-0.004	0.367	-0.067	1.000

Panel B : Difference testing between IPO and M&A samples

	IPO sample	M&A sample	IPO Sample Mean	M&A Sample Mean	Difference in Means	Standard error	t value	Parametric *p*-value	Wilcoxon *p*-value
Power distance index (PDI)	26,207	43,867	57.994	42.86	15.135	0.119	127	0.000	0.000
Uncertainty avoidance index (UAI)	26,207	43,867	51.374	48.458	2.916	0.139	21	0.000	0.001
Masculinity (MAS)	26,207	43,867	59.273	59.57	-.296	0.108	-2.75	0.006	0.000
Individualism (IND)	26,207	43,867	55.774	79.672	-23.898	0.184	-129.65	0.000	0.000
Long-term orientation (LTO)	26,207	43,867	55.041	40.084	14.956	0.174	85.95	0.000	0.000
Indulgence vs. Restraint (IVR)	26,207	43,867	47.080	63.435	-16.355	0.122	-133.6	0.000	0.000

Table 6. Exit mechanisms and Hofstede's cultural degree (continuous variables)

Table 6 presents a logit model regression of the choice of exit mechanisms for private firms (IPO vs. M&A) on Hofstede's national culture degree. All regression models in Table 6 include all control variables considered in Table 6. P-values in parentheses. ***, **, and * denote a significance at the 1%, 5%, and 10% levels, respectively.

Variables	Model 1 Baseline	Model 2 H1	Model 3 H2	Model 4 H3	Model 5 H4	Model 6 H5	Model 7 H6
Uncertainty avoidance		0.004*** (0.001)					
Power distance			-0.076*** (0.000)				
Masculinity				0.031*** (0.000)			
Individualism					0.060*** (0.000)		
Long term orientation						-0.041*** (0.000)	
Indulgence vs restraint							0.089*** (0.000)
Constant	3.599*** (0.000)	3.481*** (0.000)	5.773*** (0.000)	3.692*** (0.000)	-1.471*** (0.000)	4.044*** (0.000)	-1.095*** (0.000)
Observations	55,858	55,858	55,858	55,858	55,858	55,858	55,858
Control variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Legal origin dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Weighted by country	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Newly-West robust SE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Chi-squared	13,783	13,794	19,509	14,221	19,108	14,796	19,263
Pseudo-R-squared	0.200	0.200	0.282	0.206	0.277	0.214	0.279

Table 7. Exit mechanisms and Hofstede's national culture dimensions

Table 7 presents a logit model regression of the choice of exit mechanisms for private firms (IPO vs. M&A) on Hofstede's national culture degree. The dependent variable is the dummy variable *Exit mechanisms* that equals one if a private firm chooses to exit via a takeover by publicly traded firms and zero if private firms choose to exit through an IPO. All variable definitions are in Table 3. All regression models include year dummy variables to control for the economic cycle, industry and legal origin dummy variable. P-value in parentheses. ***, **, and * denote a significance at the 1%, 5%, and 10% levels, respectively.

Variables	Model 1 Baseline	Model 2 H1	Model 3 H2	Model 4 H3	Model 5 H4	Model 6 H5	Model 7 H6
High uncertainty avoidance		0.990***					
		(0.000)					
High power distance			-2.181***				
			(0.000)				
High masculinity				2.132***			
				(0.000)			
High individualism					3.560***		
					(0.000)		
High long term orientation						-0.877***	
						(0.000)	
High indulgence vs restraint							2.673***
							(0.000)
Ln Deal value	-0.038***	-0.045***	-0.055***	-0.093***	-0.098***	-0.045***	-0.044***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
High-tech indicator	-0.669***	-0.665***	-0.682***	-0.724***	-0.707***	-0.660***	-0.656***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Revised anti-director Index	-0.352***	-0.275***	-0.564***	-0.021	0.112***	-0.165***	-0.552***
	(0.000)	(0.000)	(0.000)	(0.114)	(0.000)	(0.000)	(0.000)
Anti-self-dealing index	1.171***	2.644***	0.113	0.911***	0.564***	1.770***	-1.444***
	(0.000)	(0.000)	(0.219)	(0.000)	(0.000)	(0.000)	(0.000)
HH market concentration index	-1.706***	-1.975***	-4.524***	0.789***	3.320***	-0.741***	-5.940***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
IPOs/M&As	-1.164***	-0.790***	-1.324***	-1.385***	-1.396***	-0.986***	-1.249***
	(0.000)	(0.002)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Market return $_{t}$	0.017**	0.024***	0.004	0.020**	0.015*	0.022***	0.005
	(0.033)	(0.002)	(0.664)	(0.013)	(0.068)	(0.006)	(0.519)
Market return $_{t-1}$	0.015	0.031***	0.006	0.024**	0.031***	0.024**	0.005
	(0.199)	(0.007)	(0.632)	(0.036)	(0.008)	(0.032)	(0.677)
Market return $_{t-2}$	0.014***	0.020***	0.007	0.013**	0.012**	0.018***	0.008
	(0.009)	(0.000)	(0.191)	(0.016)	(0.033)	(0.001)	(0.141)
RF $_{t}$	-0.037***	-0.025*	-0.037***	-0.011	0.016	-0.028**	-0.027**
	(0.004)	(0.053)	(0.006)	(0.392)	(0.228)	(0.029)	(0.042)
RF_{t-1}	-0.008	-0.042	0.004	-0.042	-0.075**	-0.030	-0.002
	(0.802)	(0.180)	(0.894)	(0.184)	(0.021)	(0.350)	(0.939)
RF_{t-2}	-0.026**	-0.029***	-0.013	-0.013	-0.006	-0.027***	-0.010
	(0.012)	(0.005)	(0.202)	(0.198)	(0.569)	(0.007)	(0.315)
SMB $_{t}$	0.006	0.000	0.004	0.009	0.004	0.005	0.006
	(0.314)	(0.948)	(0.490)	(0.136)	(0.555)	(0.442)	(0.326)
SMB $_{t-1}$	0.003	-0.010	0.016*	-0.010	-0.021**	-0.005	0.006
	(0.715)	(0.267)	(0.098)	(0.299)	(0.029)	(0.559)	(0.523)
SMB $_{t-2}$	0.008	-0.003	0.012**	0.000	-0.008	0.002	0.011**
	(0.104)	(0.579)	(0.023)	(0.923)	(0.136)	(0.697)	(0.034)
HML $_{t}$	0.012***	0.005	0.013***	-0.000	-0.011**	0.008*	0.012***

	(0.010)	(0.250)	(0.006)	(0.967)	(0.027)	(0.098)	(0.009)
HML $_{t-1}$	-0.015*	-0.026***	-0.002	-0.026***	-0.027***	-0.023***	-0.005
	(0.074)	(0.003)	(0.789)	(0.003)	(0.003)	(0.009)	(0.562)
HML $_{t-2}$	0.008	-0.010	0.012	-0.011	-0.027***	-0.002	0.012
	(0.368)	(0.295)	(0.198)	(0.225)	(0.004)	(0.790)	(0.211)
MRKTCAPGDP	0.000***	-0.000**	0.000***	0.000***	0.000***	-0.000	0.000***
	(0.002)	(0.030)	(0.000)	(0.000)	(0.000)	(0.215)	(0.000)
GDP growth	-0.000***	-0.000***	-0.000***	-0.000***	-0.000***	-0.000***	-0.000***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Ln GNP per capita	0.000***	-0.000***	0.000***	0.000***	-0.000***	-0.000	0.000***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.002)	(0.348)	(0.000)
Interest rate	0.000	-0.000	0.000***	-0.000***	-0.000***	-0.000***	0.000***
	(0.535)	(0.214)	(0.000)	(0.000)	(0.000)	(0.001)	(0.000)
Constant	3.599***	2.960***	4.440***	2.480***	3.107***	3.607***	3.633***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Observations	55,858	55,858	55,858	55,858	55,858	55,858	55,858
Year dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Legal origin dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Chi-squared	13,783	14,311	17,118	16,783	19,225	14,180	17,118
Pseudo-R-squared	0.200	0.207	0.248	0.243	0.278	0.205	0.248

Table 8. Exit mechanisms and national culture dimensions by M&A payment method.

Table 8 presents logit model regression of the choice of exit mechanisms for private firms (IPO vs. M&A) on Hofstede's national culture by payment method. In Panel A, the dependent variable represented by the dummy variable *Exit mechanisms* equals one when the private firm is taken over by a public firm with a 100% cash offer and zero if private firms choose to exit through an IPO. In Panel B, the dependent variable *Exit mechanisms* equals one if the private firm chooses M&A with a mixed offer and zero if private firms choose to exit through an IPO. In Panel C, the dependent variable *Exit mechanisms* equals one if the private firm chooses M&A with 100% of the stock offer and zero if private firms choose to exit through an IPO. All regression models of Table 7 include all control variables used in Table 6. We only report results related to national cultural dimensions and the exit mechanisms. P-value in parentheses. ***, **, and * denote a significance at the 1%, 5%, and 10% levels, respectively.

Variables	Model 1 H1	Model 2 H2	Model 3 H3	Model 4 H4	Model 5 H5	Model 6 H6
Panel A: M&A 100% cash =1 and IPO=0						
High uncertainty avoidance	0.634*** (0.000)					
High power distance		-2.494*** (0.000)				
High masculinity			2.351*** (0.000)			
High individualism				3.813*** (0.000)		
High long term orientation					-0.476*** (0.000)	
High indulgence vs restraint						2.839*** (0.000)
Panel B: M&A mixed =1 and IPO=0						
High uncertainty avoidance	0.201*** (0.001)					
High power distance		-3.379*** (0.000)				
High masculinity			2.157*** (0.000)			
High individualism				3.760*** (0.000)		
High long term orientation					0.075 (0.261)	
High indulgence vs restraint						3.000*** (0.000)
Panel C : M&A 100% stock =1 and IPO=0						
High uncertainty avoidance	1.081*** (0.000)					
High power distance		-1.899*** (0.000)				
High masculinity			1.845*** (0.000)			
High individualism				3.391*** (0.000)		
High long term orientation					-1.093*** (0.000)	
High indulgence vs restraint						2.260*** (0.000)

Table 9. Exit mechanisms and national culture dimensions by sub-periods

Table 9 presents a logit model regression of the choice of exit mechanisms for private firms (IPO vs. M&A) on Hofstede's national culture by sub-periods. The dependent variable is the dummy variable *Exit mechanisms,* which equals one if a private firm chooses to exit via a takeover by publicly traded firms and zero if private firms choose to exit through an IPO. All regression models of Table 8 include all control variables used in Table 6. We only report national cultural dimensions and exit mechanisms findings to save space. P-values in parentheses. ***, **, and * denote a significance at the 1%, 5%, and 10% levels, respectively.

Variables	Model 1 H1	Model 2 H2	Model 3 H3	Model 4 H4	Model 5 H5	Model 6 H6
Panel A: 1985 to 1995						
High uncertainty avoidance	3.087*** (0.000)					
High power distance		-5.570*** (0.000)				
High masculinity			2.888*** (0.000)			
High individualism				6.406*** (0.000)		
High long term orientation					-2.528*** (0.000)	
High indulgence vs restraint						5.543*** (0.000)
Panel B: 1996 to 2006						
High uncertainty avoidance	0.792*** (0.000)					
High power distance		-2.639*** (0.000)				
High masculinity			2.273*** (0.000)			
High individualism				4.309*** (0.000)		
High long term orientation					-0.932*** (0.000)	
High indulgence vs restraint						3.225*** (0.000)
Panel C: 2007 to 2019.						
High uncertainty avoidance	0.123* (0.067)					
High power distance		-1.340*** (0.000)				
High masculinity			1.306*** (0.000)			
High individualism				2.085*** (0.000)		
High long term orientation					-0.480*** (0.000)	
High indulgence vs restraint						1.463*** (0.000)

Table 10. Exit mechanisms and Schwartz's national culture.

Table 10 presents logit model regression of the choice of exit mechanisms for private firms (initial public offering, mergers and acquisitions) on Schwartz's national culture dimensions. All regression models of the Table 10 include all control variables used in Table 6. P-values in parentheses. ***, **, and * denote a significance at the 1%, 5%, and 10% levels, respectively.

Variables	Model 1 Baseline	Model 2 Exit mechanisms	Model 3 Exit mechanisms	Model 4 Exit mechanisms
High conservatism		1.422*** (0.0000)		
High mastery			1.451*** (0.000)	
High egalitarianism				2.695*** (0.000)
Constant	3.599*** (0.000)	3.088*** (0.000)	3.202*** (0.000)	-0.316 (0.224)
Observations	55,858	55,858	55,858	55,858
Control variables	Yes	Yes	Yes	Yes
Year dummy	Yes	Yes	Yes	Yes
Industry dummy	Yes	Yes	Yes	Yes
Legal origin dummy	Yes	Yes	Yes	Yes
Chi-squared	13,783	14,467	14,649	16,248
Pseudo-R-squared	0.200	0.209	0.212	0.235

Table 11. Exit mechanisms, national culture dimensions and democracy

Table 11 presents regression results of the choice of exit mechanisms for private firms (IPO vs. M&A) on Hofstede's national culture and democracy index. *Democracy* represents the degree of democracy by country. The data are from Polity5 Project, Political Regime Characteristics and Transitions (Polity Project - Systemic Peace). All regression models of the Table 11 include all control variables used in the Table 6. P-values in parentheses. ***, **, and * denote a significance at the 1%, 5%, and 10% levels, respectively.

Variables	Model 1 Baseline	Model 2 H1	Model 3 H2	Model 4 H3	Model 5 H4	Model 6 H5	Model 7 H6
High uncertainty avoidance		0.028*** (0.000)					
High power distance			-0.235*** (0.000)				
High masculinity				0.229*** (0.000)			
High individualism					0.502*** (0.000)		
High long term orientation						-0.088*** (0.000)	
High indulgence vs restraint							0.233*** (0.000)
Democracy	0.073*** (0.000)	0.071*** (0.000)	0.055*** (0.000)	0.055*** (0.000)	0.029*** (0.000)	0.070*** (0.000)	0.055*** (0.000)
Constant	0.881*** (0.000)	0.867*** (0.000)	1.154*** (0.000)	0.701*** (0.000)	0.890*** (0.000)	0.886*** (0.000)	1.017*** (0.000)
Observations	54,906	54,906	54,906	54,906	54,906	54,906	54,906
Control variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Legal origin dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Pseudo-R-squared	0.292	0.292	0.312	0.307	0.328	0.294	0.307

Table 12. Exit mechanisms, national culture dimensions, deal value and premiums

Table 12 presents the results of difference tests (T-stat and Wilcoxon test) for deal value and the premium for IPOs and M&As by national culture dimensions. Deal value is measured by the principal amount for IPOs and value of transaction for M&As. The premium represents the ratio of offer price to book value for IPOs and M&As. Mean for firms in countries with high (low) uncertainty avoidance, power distance, masculinity, individualism, long-term orientation and indulgence vs. restraint.

	Mean for firms in countries with (Low)	Mean for firms in countries with (high)	Difference in Means	Parametric *p*-value	Wilcoxon *p*-value
Panel (A): Mergers and acquisition					
Deal value by national cultural dimensions					
Deal value by power distance index	24.823	53.151	-28.329	0.000	0.000
Deal value by uncertainty avoidance index	33.672	44.974	-11.303	0.000	0.000
Deal value by masculinity	28.421	47.98	-19.559	0.000	0.000
Deal value by individualism	36.773	45.075	-8.302	0.000	0.000
Deal value by long-term orientation	50.486	32.528	17.958	0.000	0.000
Deal value by indulgence vs restraint	52.639	23.534	29.105	0.000	0.000
Price to book ratio by national cultural dimensions					
Price to book ratio by power distance index	48.029	449.979	-401.95	0.030	0.000
Price to book ratio by uncertainty avoidance index	45.852	427.293	-381.44	0.040	0.000
Price to book ratio by masculinity	39.586	283.149	-243.563	0.356	0.000
Price to book ratio by individualism	31.231	305.257	-274.026	0.229	0.000
Price to book ratio by long-term orientation	570.669	42.203	528.466	0.005	0.000
Price to book ratio by indulgence vs restraint	424.84	49.578	375.262	0.043	0.000
Panel (B) initial public offerings					
Deal value by national cultural dimensions					
Deal value by power distance index	28.587	30.005	-1.418	0.240	0.392
Deal value by uncertainty avoidance index	21.185	35.905	-14.72	0,000	0.032
Deal value by masculinity	14.836	47.108	-32.272	0,000	0.001
Deal value by individualism	22.851	54.717	-31.866	0,000	0.000
Deal value by long-term orientation	50.596	23.029	27.566	0,000	0.000
Deal value by indulgence vs restraint	30.425	25.48	4.945	0,000	0.085
Price to book ratio by national cultural dimensions					
Price to book ratio by power distance index	-788.564	55.319	-843.884	0.001	0.001
Price to book ratio by uncertainty avoidance index	19.541	34.038	-14.497	0.949	0.053
Price to book ratio by masculinity 3580	134.23	26.791	107.439	0.480	0.000
Price to book ratio by individualism	60.644	5.546	55.098	0.459	0.012
Price to book ratio by long-term orientation	31.36	35.82	-4.46	0.952	0.034
Price to book ratio by indulgence vs restraint	19.761	681.941	-662.18	0.011	0.005

Table 13. Exit mechanisms and national culture dimensions (subsample)

Table 13 presents logit model regression of the choice of exit mechanisms for private firms (IPO vs. M&A) on Hofstede's national culture. We exclude observations from the U.S. P-values in parentheses. ***, **, and * denote a significance at the 1%, 5%, and 10% levels, respectively.

Variables	Model 1 Baseline	Model 2 H1	Model 3 H2	Model 4 H3	Model 5 H4	Model 6 H5	Model 7 H6
High uncertainty avoidance		0.652*** (0.000)					
High power distance			-3.413*** (0.000)				
High masculinity				3.158*** (0.000)			
High individualism					4.038*** (0.000)		
High long term orientation						-0.604*** (0.000)	
High indulgence vs. restraint							3.531*** (0.000)
Constant	2.430*** (0.000)	2.309*** (0.000)	1.651*** (0.000)	3.263*** (0.000)	3.551*** (0.000)	2.702*** (0.000)	1.460*** (0.000)
Observations	34,662	34,662	34,662	34,662	34,662	34,662	34,662
Control variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Legal origin dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Chi-squared	9657	9,834	15,610	12,653	14,651	9,816	14,797
Pseudo-R-squared	0.207	0.211	0.335	0.272	0.314	0.211	0.318

Table 14 : Exit mechanisms and Hofstede's cultural index profile

Table 14 presents logit model regression of the choice of exit mechanisms for private firms (IPO vs. M&A) on Hofstede's cultural composite index profile. All regression models of the Table 14 include all control variables used in the Table 6. P-value in parentheses. ***, **, and * denote a significance at the 1%, 5%, and 10% level, respectively.

Variables	Model H1 to H6
Cultural index profile	-0.0002***
	(0.0000)
Ln Deal value	-0.0810***
	(0.0000)
High-tech indicator	-0.6814***
	(0.0000)
Revised anti-director Index	-0.3020***
	(0.0000)
Anti-self-dealing index	4.7397***
	(0.0000)
HH market concentration index	-1.4255***
	(0.0000)
IPOs/M&As	-0.7899***
	(0.0028)
Market return $_{t}$	0.0219***
	(0.0070)
Market return $_{t-1}$	0.0460***
	(0.0001)
Market return $_{t-2}$	0.0190***
	(0.0007)
RF $_{t}$	0.0179
	(0.1809)
RF_{t-1}	-0.1010***
	(0.0017)
RF_{t-2}	-0.0086
	(0.4040)
SMB $_{t}$	-0.0052
	(0.4079)
SMB $_{t-1}$	-0.0281***
	(0.0035)
SMB $_{t-2}$	-0.0160***
	(0.0020)
HML $_{t}$	-0.0121**
	(0.0130)
HML $_{t-1}$	-0.0342***
	(0.0001)
HML $_{t-2}$	-0.0409***
	(0.0000)
MRKTCAPGDP	-0.0000
	(0.9076)
GDP growth	0.0000***
	(0.0004)
Ln GNP per capita	-0.0000***
	(0.0000)
Interest rate	0.0000*

	(0.0973)
Constant	6.4739***
	(0.0000)
Observations	55,858
Year dummy	Yes
Industry dummy	Yes
Legal origin dummy	Yes
Chi-squared	19,123
Pseudo R-squared	0.277

Table 15: Exit mechanisms and Hofstede's cultural weighted by country

Table 15 presents logit model regression of the choice of exit mechanisms for private firms (IPO vs. M&A) on Hofstede's national culture, weighted by country and include Newly-West robust standard errors (SE). All regression models of the Table 14 include all control variables used in the Table 6. P-values in parentheses. ***, **, and * denote a significance at the 1%, 5%, and 10% levels, respectively.

Variables	Model 1 Baseline	Model 2 H1	Model 3 H2	Model 4 H3	Model 5 H4	Model 6 H5	Model 7 H6
High uncertainty avoidance		0.220*** (0.000)					
High power distance			-2.559*** (0.000)				
High masculinity				3.086*** (0.000)			
High individualism					3.745*** (0.000)		
High long term orientation						-0.356*** (0.000)	
High indulgence vs restraint							3.010*** (0.000)
Constant	4.892*** (0.000)	4.688*** (0.000)	5.593*** (0.000)	2.951*** (0.000)	3.055*** (0.000)	4.822*** (0.000)	3.976*** (0.000)
Observations	55,858	55,858	55,858	55,858	55,858	55,858	55,858
Control variables (see Table 7)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Legal origin dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Weighted by country	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Newly-West robust SE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Chi-squared	9,744	9,767	10,588	10,885	10,919	9,793	10,284
Pseudo-R-squared	0.202	0.203	0.250	0.263	0.279	0.203	0.252

Table 16: Exit mechanisms and Hofstede's cultural dimensions (Excluding CB-M&As)

Table 16 presents logit model regression of the choice of exit mechanisms for private firms (IPO vs. M&A) on Hofstede's national culture, excluding cross-border mergers and acquisitions **(**CB-M&As), weighted by country. All regression models of Table 15 include all control variables used in Table 6. P-values in parentheses. ***, **, and * denote a significance at the 1%, 5%, and 10% levels, respectively.

Variables	Model 1 Baseline	Model 2 H1	Model 3 H2	Model 4 H3	Model 5 H4	Model 6 H5	Model 7 H6
High uncertainty avoidance		0.534*** (0.000)					
High power distance			-2.420*** (0.000)				
High masculinity				3.887*** (0.000)			
High individualism					4.777*** (0.000)		
High long term orientation						-0.703*** (0.000)	
High indulgence vs restraint							3.081*** (0.000)
Constant	4.416*** (0.000)	3.914*** (0.000)	5.242*** (0.000)	1.784*** (0.000)	2.141*** (0.000)	4.276*** (0.000)	3.343*** (0.000)
Observations	46,208	46,208	46,208	46,208	46,208	46,208	46,208
Control variables (as Table 7)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Legal origin dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Weighted by country	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Newly-West robust SE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Chi-squared	8,893	8,847	9,076	10,053	9,587	9,011	8,999
Pseudo-R-squared	0.234	0.235	0.267	0.313	0.331	0.236	0.279

Table 17 : Exit mechanisms and national culture dimensions by sub-periods

Table 17 presents a logit model regression of the choice of exit mechanisms for private firms (IPOs vs. M&As) on Hofstede's national culture by sub-periods. We only report national cultural dimensions and exit mechanisms findings to save space. P-values in parentheses. ***, **, and * denote a significance at the 1%, 5%, and 10% levels, respectively.

Panel A. The period between 1999-2002

Variables	Model 1 H1	Model 2 H2	Model 3 H3	Model 4 H4	Model 5 H5	Model 6 H6
High uncertainty avoidance	2.470*** (0.000)					
High power distance		-2.045*** (0.000)				
High masculinity			4.150*** (0.000)			
High individualism				5.100*** (0.000)		
High long term orientation					-3.644*** (0.000)	
High indulgence vs restraint						3.099*** (0.000)

Panel B. The period between 2007-2010

Variables	Model 1 H1	Model 2 H2	Model 3 H3	Model 4 H4	Model 5 H5	Model 6 H6
High uncertainty avoidance	0.703*** (0.001)					
High power distance		-1.551*** (0.000)				
High masculinity			3.199*** (0.000)			
High individualism				3.810*** (0.000)		
High long term orientation					-0.942*** (0.000)	
High indulgence vs restraint						1.950*** (0.000)

Panel C. The remaining years of the sample

Variables	Model 1 H1	Model 2 H2	Model 3 H3	Model 4 H4	Model 5 H5	Model 6 H6
High uncertainty avoidance	0.142 (0.120)					
High power distance		-2.795*** (0.000)				
High masculinity			3.950*** (0.000)			
High individualism				4.891*** (0.000)		
High long term orientation					-0.356*** (0.001)	
High indulgence vs restraint						3.329*** (0.000)