

# A CULTURAL EXPLANATION FOR THE AGENCY MODEL OF DIVIDENDS

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# A CULTURAL EXPLANATION FOR THE AGENCY MODEL OF DIVIDENDS

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We present a culturally rooted agency cost explanation for differences in dividend payout strategies of firms around the world. Linking dividends to cultural differences across 6982 firms in 41 countries, our analysis reveals that high individualism, low power distance and low uncertainty avoidance are significantly associated with higher dividend payouts. Comparison of the explanatory power of these cultural dimensions with legal variables indicates that informal institutions of societies help explain the differences in dividend payout policies across countries above and beyond formal institutions of legal origin or investor protection.

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“If we learn anything from the history of economic development, it is that culture makes almost all of the difference.” (Weber, 1930)

## **1 Introduction**

Those who control a corporation, be they managers, controlling shareholders or both, can use their power to divert corporate wealth to themselves and to the detriment of other investors. This diversion can take a number of forms ranging from excessive perquisite consumption, to transfer pricing, tunneling or outright theft of corporate assets (Shleifer and Vishny, 1997). The agency approach to dividends (for example Gomes, 2000, Jensen, 1986, Myers, 2000, Zwiebel, 1996) builds on the idea that dividends reduce the discretionary funds available for managerial opportunism and therefore help address agency problems between corporate insiders and outside shareholders. In the hitherto closest attempt to empirically amalgamate this concept, La Porta, Lopez-de-Silanes, Shleifer and Vishny (2000) link the agency model of dividends to legal protection of shareholders. They propose that outside shareholders embedded with greater powers to protect their investment are able to secure higher dividends resulting in lower agency costs. Their results for a cross-section of firms from 33 countries show that firms in common law countries with better investor protection pay on average higher dividends relative to firms in civil law countries.

In this paper, we highlight cultural diversity as an additional explanation for cross-country differences in dividend payouts. This builds on the idea that cultural norms may significantly alter the basic nature of agency conflicts across countries (Bebchuk, Fried and Walker, 2002, Ekanayake, 2004; Johnson and Droege, 2004; Morris, Menon and Ames 2001). We believe that culture affects agency relationships in at least two respects: First, culture influences the a priori misalignment of interests between agents and principals. Second, and more subtly, culture also affects how principals perceive the severity of any given level of misalignment of interests. Naturally then, culture significantly affects also the role of dividends as disciplining means to reduce agency costs. In particular, we propose that shareholders in societies with cultural norms that intensify agency conflicts may require higher dividends to mitigate the higher agency costs. In contrast, dividends in societies with cultural norms that result in less severe agency conflicts may be lower, as shareholders in these countries are more lenient in using dividends to discipline managers.

For theoretical support we draw on ideas developed in new institutional economics (North, 1990, Williamson, 2000) which suggest that resource allocation on the micro-economic level has to be consistent with informal institutions, including culture, on the top level of an economic system. As a result, culture as “societal common knowledge” constrains economic interaction (Greif and Laitin, 2004). We measure culture’s consequences for corporate dividend payout decisions on the basis of national scores on Hofstede’s (1980) cultural dimensions *individualism*, *power distance* and *uncertainty avoidance*, and derive three central hypotheses. First, we postulate that agency relationships in individualist societies are naturally embedded with higher agency costs that result in shareholders demanding higher dividend payouts to discipline corporate insiders. This is because countries scoring high on individualism are characterized by pursuit of personal interests rather than deference to others’ decisions and interest. Second, we posit that shareholders in low power distance societies demand higher dividend payouts as these societies are averse to unequal distribution of power and wealth among its individual members. Investors in these countries are relatively more sensitive to any given level of managerial opportunism resulting in power and wealth differentials. Finally, we propose that dividends in high uncertainty avoidance cultures are lower. This follows from the fact that high uncertainty avoidance is associated with strong rule orientation at both the corporate and country level which is associated with managers more frequently undertaking investors’ best interests. As a result, high dividend payouts as means of disciplining corporate insiders are less relevant in these cultures.

Our analysis on a cross section of 6,982 firms from 41 countries shows that differences in dividend payout strategies have, in fact, strong cultural origins. In particular, we find that, all other things equal, firms in countries that score high on individualism, and low on power distance and uncertainty avoidance exhibit higher dividend payout ratios. Moreover, our analysis shows that the explanatory power of our cultural dimensions is higher relative to the investor protection variables put forward by La Porta et al. (2000). This indicates that culture as part of informal institutions underlying more specific formal institutions plays a very important role in determining dividend payouts across the world.

The remainder of this paper is organized as follows. Section 2 provides general theoretical background that explains culture’s consequences for economic outcomes and dividends. Section 3 introduces Hofstede’s (2001) cultural dimensions and derives our hypotheses. Section 4 describes the data and methodology. Section 5 discusses our results

and confirms the validity of our results through a series of robustness checks. We conclude in Section 6.

## **2 Culture's consequences for economic outcomes and dividends**

Over the past decade, an extensive body of empirical evidence has showed that law and finance are intertwined. That is, better minority shareholder protection is a statistically and economically significant predictor of a variety of measures of stock market development across countries (Djankov, La Porta, Lopez-de-Silanes, and Shleifer, 2008). Better investor protection is associated with wider stock markets, a greater number of IPOs, as well as with higher voting premiums, dividend payouts, firm valuations and ownership concentration.<sup>1</sup> The central idea of the legal origins school is that legal protection of outside investors limits managerial (insider) opportunism and thereby promotes financial and economic development (La Porta, Lopez-de-Silanes, and Shleifer, 2008).

In the light of this evidence, Stulz and Williamson (2003) pose a puzzling question: Given the overwhelming evidence that financial development is positively related to legal protection of investors, why is it that the degree of investor protection differs among countries? Why is it that in highly competitive international capital markets countries with poor protection of investor rights constantly lose out to countries with better protection of investor rights? Why do poor investor protection countries not simply improve their law to benefit from higher economic growth? Addressing these questions, Stulz and Williamson (2003) argue that differences in cultural values should be taken seriously as a possible explanation for differences in investor protection.

A similarly puzzling empirical observation is that changing the law on books in a country does not generally guarantee corporate governance and economic improvements (Licht, Goldschmidt and Schwartz, 2005). Rather, the same formal rules and/or constitutions imposed on different societies produce different outcomes (North, 1990). Interesting in this context are the astonishingly poor outcomes of some of the legal reforms undertaken in several post-communist countries during the 1990s. Legal reforms in these newly established market economies were designed to enhance investor protection but too

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<sup>1</sup> See for example La Porta et al. (1997) for financial development, Dyck and Zingales (2004) for voting premiums, La Porta et al. (2000) for dividend policies, La Porta et al. (2002) for firm valuation and La Porta et al. (1999) for ownership concentration.

often fell significantly short of expected economic outcomes (Berkowitz, Pistor and Richard, 2002). In other countries, reforms towards curbing corruption and strengthening of rule of law also resulted in mixed outcomes (Kaufman, 2004). It appears that an answer to these puzzling observations could well lie in a better understanding of the relationship between culture and law.

New institutional economics (North, 1990, Williamson, 2000, amongst others) provides a theoretical background for understanding the culture-law link. It views customs, traditions, norms and religion as the informal rules of the game (informal institutions) that are located at the top level (Level 1) of a stratified system of social analysis (Williamson, 2000). These informal institutions at the top level constrain the development of more specific institutions at lower levels: Level 2 represents formal rules of the game such as property rights and contract laws. Level 3 pertains to governance of contractual relations including, for example, the definition and enforcement of legal rights. Finally, we find resource allocation at the lowest Level 4 of Williamson's stratified system of social analysis. This hierarchy implies that the prevailing informal institutions in a society serve as sources of motivation and justification for economic interaction (Greif, 1994). As a consequence, the more specific social institutions at the bottom have to be aligned with more general institutions at the top to be accepted by the society. Similarly, changes of the lower level institutions that are usually faster and more frequent have to be consistent with slowly changing more informal institutions at the top (Roland, 2004).

The general idea of deeper cultural roots of economic interaction is supported in several recent papers. Guiso, Sapienza and Zingales (2008) summarize the potential of the culturally based explanations and their contribution to our understanding of economic phenomena. They document that cultural hypotheses are important for fundamental economic phenomena like rates of savings or international trade. Cultural norms have recently begun to appear also in finance literature. For example, Chui, Titman and Wei (2008) show a strong link between individualism and returns on momentum strategies. Huang (2008) shows that countries scoring high on uncertainty avoidance are associated with slower growth of informationally opaque industries. Stulz and Williamson (2003), and Licht et al. (2005, 2007) point to cultural roots of legal protection. They show that investor protection (as well as rule of law, corruption, and democratic accountability) in different countries reflects values prevailing in these cultures.

In this paper, we link culture to dividend policies and their agency explanation. We perceive dividend payments as commitments that reduce discretionary funds available to self-interested corporate managers and force firms to interact more frequently with the capital market (La Porta et al., 2000). In this sense, higher dividend payouts mitigate agency costs and serve as disciplining tools. At the same time, we suggest that if culture formulates expectations of what is acceptable in a society and affects behavior of economic agents (March and Olsen, 1989), then culture must also affect the behavior of principals and agents in agency relations and, ultimately, agency costs (Bebchuk et al., 2002, Ekanayake, 2004; Johnson and Droege, 2004; Morris et al., 2001). Cultural orientations represent general societal emphases that are deeply ingrained in the mindsets of individual economic actors. So, culture formulates expectations of what is acceptable in a society and clearly also has an impact on what is appropriate in agency relationships. We posit that cultural norms across countries affect the severity of agency conflicts in at least two ways: First, culture affects the a priori relative misalignment of principals' and agents' interests. Second, for any given level of divergence of principals' and agents' interests, culture also affects principals' perceptions of the relative severity of the agency conflict resulting from this interest misalignment.

Accordingly, we hypothesize that differing cultural norms result in differing motivations and expectations of both managers and shareholders. Cultural norms therefore affect the relative costs and benefits of managerial opportunism reflected in shirking and excessive perk consumption. In societies with cultural norms and values that amplify misalignment of interests between principals and agents, shareholders require managers to pay out higher dividends to minimize the more pronounced agency costs. In contrast, in societies with cultural characteristics that encourage greater alignment of shareholders' and management's interests, be it through acceptance of rules or personal power, or through group coordination, managers are allowed to pay lower dividends.

In short, we suggest that culture affects agency relations and therefore also dividend payouts that serve as disciplining tools mitigating agency costs. Relative to the dividend outcome model of La Porta et al. (2000) we recognize culture as an additional source of explanatory power for dividend policies across the world. North (1990, p.36) provides a compelling rationale for our general hypothesis that cultural dimensions help explain the differences in dividend payouts across countries above and beyond that of such formal institutions as legal origin or the quality of investor protection: “[i]n our daily interactions

with others, whether within the family, in external social relations, or in business activities, the governing structure is overwhelmingly defined by codes of conduct, norms of behavior, and conventions. Underlying these informal constraints are formal rules, but these are seldom the obvious and immediate source in daily interactions.”

### 3 Cultural Dimensions

Definitions of culture abound, but the common denominator of all the definitions is that culture represents shared values and beliefs (Licht et al., 2007). The important question, however, is how to measure cultural differences among countries. Here, we follow Licht et al. (2005) and borrow measures of cultural norms and values developed in cross-cultural psychology. These cultural measures build on a common postulate that all societies confront similar basic issues or problems when they come to regulate human activity. Each society’s preferred ways of dealing with the basic issues lie at the essence of its culture and naturally point to its key cultural dimensions (Kluckhohn, 1962). It is thus possible to characterize cultures of different societies by measuring the prevailing value emphases on the key dimensions (Licht et al., 2007).

We opt for the cultural dimensions defined by Hofstede (1980). On the basis of an extensive research project on differences in national culture among matched samples of business employees of IBM across more than 50 countries, Hofstede (1980) develops a pioneering dimensional framework for characterizing culture. He identifies five independent dimensions of national culture differences that are empirically validated and widely acknowledged: *Individualism* versus *collectivism*, which is related to the integration of individuals into primary groups, *power distance*, which refers to the different solutions to the basic problems of human inequality, *uncertainty avoidance*, which is related to the level of stress in a society in the face of an unknown future, *masculinity* versus *femininity*, which relates to the division of emotional roles between men and women, and finally, *long-term* versus *short-term orientation*, which is related to the choice of focus for people’s efforts – the future or the present. For future reference, Table 1 provides a short summary of Hofstede’s cultural dimensions. Figure 1 illustrates cultural dimensions for a selected number of countries. It shows that the US, UK on the one hand, and China on the other hand are typical examples of individualist and collectivist societies, respectively. Power distance is particularly high in China and shows interesting variation across European

countries. France and Italy score relatively high on power distance whereas Germany, the US and UK are low power distance countries. Finally, uncertainty avoidance is the highest in France and very low in China.

Intuition suggests – and our empirical analysis confirms – that three of the Hofstede’s five dimensions, namely individualism, power distance and uncertainty avoidance, are particularly relevant for agency relationships and dividend payout strategies across countries. In what follows, we therefore focus on these three dimensions.

*[Please insert Table 1 about here]*

*Individualism* versus *collectivism* describes the degree to which individuals are supposed to look after themselves as opposed to remain integrated into groups. High individualism scores indicate a society in which the ties between individuals are loose and decisions are taken based on individual needs. For example, in an individualist society such as the United States, people tend to shirk responsibility when tasks are assigned to a group but are quite assertive in achieving their own individual goals (Grabrenya, Wang and Latane, 1985). Conversely, low individualism scores (for example in China) typify societies of a more collectivist nature that are characterized by closer ties between individuals, mutual responsibility, and decision-making based on what is best for the group. As a reward for unquestioning loyalty individuals in collectivist societies can expect their wider in-group to look after them.

Individualism legitimizes the vigorous pursuit of personal interests as opposed to deference to others’ decisions and interests. This cultural dimension is therefore compatible with a greater risk of managers pursuing their own interests and maximizing their private benefits. We expect a society’s inclination to individualism to exacerbate agency conflicts which, in turn, increases the necessity for disciplining mechanisms as for example high dividend payouts. At the same time, individualism is compatible with giving power to investors and encouraging them to stand up and fight for their rights (Licht et al., 2005). As a result, investors are more likely to demand disciplining mechanisms to restrict managerial self-dealing and expropriation which results in higher dividend payouts.

On the other side of the spectrum, in *collectivist* societies, collective interests prevail over individual interests of group members (Hofstede, 2001) or, put differently, the ego is inseparable from its social context. As a result, managers more readily assume a

broad responsibility for all stakeholders in their firm and so the misalignment between managers' and investors' interests is less severe. Therefore, in collectivist societies, investors find the disciplining function of high dividend payouts comparably less essential. Accordingly, we propose that firms in countries that score high on individualism tend to have higher dividend payouts than their counterparts in collectivist countries.

*Power distance* measures the extent to which the less powerful members of a society expect and accept that power is distributed unequally. Low power distance societies like Israel, Sweden or Ireland stress equality in power and wealth, and opportunity for everyone. In contrast, high power distance countries (Mexico, the Arab countries and India) comprehend inequality as the basis of societal order where those in power are deemed to emphasize their position and accentuate authority.

Power distance has important agency cost implications. In countries that score low on power distance, status symbols and enjoying privileges are generally more suspicious. Shareholders are particularly sensitive to excessive managerial privileges and therefore perceive given levels of interest misalignment as comparably more severe than their counterparts in high power distance cultures. We posit that in low power distance countries shareholders consequently demand higher dividend payouts. On the contrary, high power distance societies accredit those in power the rights to enjoy the benefits of being in power. The powerful are entitled to privileges and it is generally accepted that they use their power to increase personal wealth. As a consequence, shareholders perceive managerial opportunism as less severe in high relative to low power distance countries and therefore do not demand as high dividends. So, we expect that firms in countries that score high on power distance tend to pay lower dividends than firms in countries that score low on this cultural dimension.

*Uncertainty avoidance* refers to the level of anxiety in a country and measures the extent to which members of a culture feel threatened by uncertain or unknown situations. Central to Hofstede's (2001) uncertainty avoidance dimensions are questions dealing with rule orientation, employment stability and stress. Every society has developed ways to cope with the inherent uncertainty of living on the brink of an uncertain future. For example, members of high uncertainty avoidance societies are subject to stronger systems of rules and norms, and more often feel guilty and sinful. Greece, Portugal and Japan are good examples of countries with high scores on uncertainty avoidance.

Rule orientation is the most important element of uncertainty avoidance from our agency cost perspective. Members of a high uncertainty avoiding culture agree that rules should not be broken even when individuals think it is in the society's best interests. They avoid the uncertainty of deciding for themselves whether or not to follow a rule. Clearly, in high uncertainty avoidance cultures where rule orientation is high shareholders anticipate that managers follow preset rules and undertake activities in shareholders' best interests. As a result, use of high dividend payouts as means of disciplining managers is less relevant.

Low uncertainty avoidance cultures are different in that their members are more comfortable with uncertain and ambiguous situations and prospects, and more readily accept that individuals break rules if they believe this is in their group's best interests. In an agency relationship, investors therefore find it relatively more necessary to install disciplining mechanisms as dividend payouts that supplement less adhered-to rules. In sum, we expect higher dividends payouts in low uncertainty avoiding societies.

## **4 Data**

Our main source of data is the COMPUSTAT Global Industrial/Commercial database, which provides data covering 24,764 publicly traded companies in 83 countries. Since accounting data are often reported and collected with a delay, our analysis uses data through 2004. Table 2, Panel A summarizes the construction of our sample. We restrict our sample to non-financial and non-utility firms, defined as firms with SIC codes outside the intervals of 4,900-4,949 and 6,000-6,999, and we exclude firms without a SIC code. We further restrict our sample to firms with non-missing values for dividends to common and preferred shareholders and net income for 2004, as well as available sales and exchange rate data for the period from 1999 to 2004. From the original set of firms, we finally eliminate the following firms: firms trading in Luxembourg, firms listed in countries with mandatory dividend policies,<sup>2</sup> firms with negative net income or missing net income data, firms with negative dividends or whose dividends exceed sales, and finally, firms from countries for which we do not have scores on Hofstede's culture dimensions. This returns our basic sample of 6,982 companies from 41 countries. Panel B of Table 2 shows how we get from 83 to 41 countries.

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<sup>2</sup> These countries have legal requirements that a certain fraction of net income is paid out as dividends and they include Chile, Colombia, Brazil, Philippines, Ecuador, Uruguay, Peru, and Venezuela.

*[Please insert Table 2 about here]*

Compared to the sample of 33 countries in La Porta et al. (2000), our empirical analysis covers a substantial set of additional data for transition economies (Czech Republic, Estonia, Hungary, Poland and Russia), China and India. These countries are not only of substantial relevance to the global economy but also add variety in terms of legal protection and cultural values.<sup>3</sup>

Table 3 provides definitions and summarizes the construction of the variables. Most of the variables are defined as in La Porta et al. (2000) to ensure comparability of our regressions that scrutinize legal variables. Our main variable of interest is the dividend payout ratio. Since our analysis involves cross-country comparisons with accounting data adhering to different accounting standards, we opt to use two alternative measures of the dividend payout ratio: dividend-to-earnings and dividends-to-sales ratio. The numerator of both measures is the total cash dividend paid to common and preferred shareholders. The denominator is net earnings and sales, respectively.

*[Please insert Table 3 about here]*

The dividend-to-earnings ratio is a more commonly used measure (La Porta et al., 2000). It captures the essence of the payout policy in that it expresses relative distribution of net income between dividends and retained earnings. The dividend-to-earnings measure has several problems, however: First, net earnings may depend on a country's accounting conventions. Second, net earnings can easily be manipulated which significantly impedes on the measure's comparability across countries. Third, diversion of resources may occur before earnings are reported and thus the dividend-to-earnings ratio may overestimate the share of true earnings that is paid out in form of dividends. As sales are far harder to manipulate or smooth through accounting practices and less likely subject to theft, the dividend-to-sales employed in our empirical analysis serves as a guard against a bias in our dividend-to-earnings ratio. The trade-off, however, is that sales is a very rough measure of

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<sup>3</sup> The inclusion of China into the sample is particularly interesting. Neither its legal nor financial system is well developed by existing standards, yet China has one of the fastest growing economies. Similarly, transition economies add an interesting angle to our analysis. These countries have in very short time imposed varying sets of legal rules on societies that for decades have been under communist rule. We expect therefore that in these countries formal and informal institutions are less well aligned creating worthwhile investigating dynamics for such microeconomic phenomena as agency relationships.

funds available for distribution to equity holders. In fact, sales should be viewed as just a deflator with no transparent economic interpretation attached (La Porta et al. 2000).

From an agency perspective, investors are concerned with excess cash at management discretion rather than with dividend payout levels per se. As low dividends may be a result of a pipeline of profitable investment opportunities, we need to control for investment opportunities of firms in our sample. As with net earnings, capturing investment opportunities across firms in a way that is consistent across countries is relatively tricky. Our principal measure of investment opportunities is the growth in annual real sales of each firm over the five-year period from 1999 to 2004, which has the advantage of being roughly independent of accounting practices around the world. To compute annual real sales growth we first convert individual yearly firm sales figures to US dollars using average annual exchange rates. Second, using the US GDP deflator we obtain real sales figures and compute real sales growth adjusted for inflation and comparable across countries.

We rely on industry-adjusted measures of the two dividend payout ratios and the sales growth rate. We take out worldwide industry effects rather than country-industry effects to ensure that stronger presence of a particular industry in one country does not bias country average payout ratios. Table 3 presents a detailed account of how these industry-adjusted measures are computed. As La Porta et al. (2000), we also include a measure of the tax disadvantage of dividends based on Poterba and Summers (1984, 1985) to control for the effect of taxes on dividend policies. Appendix A1 summarizes in detail our treatment of the tax effects of dividends.

To assess our central claim that cultural dimensions provide important additional explanatory power relative to legal origins, our analysis includes a number of proxies for the protection of minority shareholders around the world. A detailed definition of these proxies is provided in Table 3. As previous research has shown legal origin is an important determinant of countries' strategies for investor protection (Djankov et al. 2008; La Porta et al., 1997, 1998; La Porta et al., 2008). Consequently, the first variable is a common law dummy. Our second measure of investor protection is the revised index of anti-director rights due to Djankov et al. (2008). The revised anti-director rights index is based on laws and regulations applicable to publicly-traded firms and accounts for several conceptual ambiguities and outright mistakes in La Porta et al.'s (1997, 1998) original index. The third measure, the new anti-self-dealing index due to Djankov et al. (2008), reflects protection

against the ability of corporate insiders to divert corporate wealth for themselves. We perceive this measure as a very important alternative to our cultural dimensions for explaining the effect insider opportunism has on dividend policies because the anti self-dealing index accounts for minority shareholder protection against self-dealing by controlling shareholders. We also consider the rule of law due to Kaufmann et al. (2007) which measures law enforcement across countries. This ensures that we capture both the richness of legal protection on the books as well as their enforcement by court. Finally, we include country scores on Hofstede's (1980, 2001) cultural dimensions individualism vs. collectivism, power distance, and uncertainty avoidance.

Panel A in Table 4 summarizes the data by presenting the number of observations for each country as well as country medians and means of the variables outlined above. Panel B provides correlation coefficients for all the variables. It shows that on a country level common law, anti-director index and anti-self-dealing index are mutually highly correlated. Rule of law, however, is not significantly correlated with any of these three measures of investor protection. Among our cultural dimensions, individualism and power distance are negatively related, while uncertainty avoidance is orthogonal to both individualism and power distance. Interestingly, uncertainty avoidance is negatively related to all three investor protection measures and to lesser extent to rule of law. Hofstede (2001) provides a hint for this phenomenon: Individuals in high uncertainty avoidance cultures are less likely to break rules because of their low tolerance for uncertainty. Their stronger rule orientation may then allow for a looser regulatory framework in these societies. Finally, our two measures of dividend pay-out are correlated with both legal measures as well as cultural dimensions.

*[Please insert Table 4 about here]*

## **5 Results**

Table 5 shows results for our cultural origins hypothesis with industry-adjusted dividend-to-earnings ratio as the dependent variable. The regression set up is very similar to La Porta et al. (2000) but we explain dividends using cultural dimensions rather than legal variables. We employ a random effects specification to explicitly account for the cross-correlation between error terms for firms in the same country. We control for the country-specific tax advantage of dividends, growth prospects and industry effects. We report results for our cultural origins hypotheses using dividend-to-earnings and dividend-to-sales ratio as

dependent variables in Tables 5 and 8, respectively. In these tables, Panel A shows results for raw cultural dimensions whereas Panel B for dummy variables that take the value of one in case a country scores above the sample country median and zero otherwise. The dummy variables serve as a sensitivity check for the fact that a marginal impact of a dimension value on dividends may not be the same for low versus high values of the index. This should not matter so much when we use dummy variables.

In Table 5, when included as separate regressors, all three cultural dimensions have the predicted sign and are significant at the one percent level except for high individualism in Panel B that is significant at the five percent level. This is in line with our hypotheses. First, firms in countries that score higher on individualism tend to pay higher dividends (Model 1) which confirms our conjecture that more assertive investors in individualistic cultures demand higher dividends to limit managerial opportunism. Second, higher power distance is associated with lower dividend payouts (Model 2). We propose that this is because investors in countries which accept inequalities between society members also accept that managers distribute dividends to their liking. Shareholders in high power distance countries do not probe these decisions by higher dividends. Finally, Model 3 shows that higher uncertainty avoidance is associated with lower dividend payments. This is in line with our hypothesis that stronger rule orientation in high uncertainty avoidance cultures reduces the severity of agency conflicts and, as a result, the necessity of using high dividends to discipline corporate insiders.

Model 4 includes all three cultural dimensions together. In interpreting these results, we have to acknowledge correlations among the cultural variables. Panel B of Table 4 shows that individualism and power distance are highly negatively correlated (countries that score higher on individualism tend to score lower on power distance) whereas uncertainty avoidance is orthogonal to both individualism and power distance. This is also reflected in the results of Model 4: individualism becomes statistically insignificant and power distance loses some significance while uncertainty avoidance remains significant at the one percent level. If we drop individualism, the statistical significance of power distance increases to the one percent level but its economic significance is still lower relative to uncertainty avoidance. In short, the results indicate that individualism, power distance and uncertainty avoidance are all significantly correlated with dividend payouts across countries in our data set. The results also show that among our cultural variables uncertainty avoidance has the highest explanatory power while individualism the lowest.

*[Please insert Table 5 about here]*

In a second step, we compare the explanatory power of the cultural origins versus legal origins of dividends. Table 6 replicates La Porta et al.'s (2000) results with common law dummy, revised anti-director rights index, anti-self-dealing index, and rule of law as explanatory variables. Again, Panel A uses the raw indices whereas Panel B relies on dummy variables for high index scores. All control variables are as in Table 5. The results are mixed. They show that the coefficients for revised anti-director rights index and rule of law in Models 6 and 8 are positive and statistically significant at the ten and one percent level, respectively. This is in line with the dividend outcome model: higher protection of minority shareholders and higher enforcement of law are associated with higher dividend payments. The explanatory power of anti-director rights index and rule of law remains unchanged in Model 9 when they are combined to explain dividend payouts. Note that the correlation coefficient between these two variables is relatively small and insignificant (see Panel B of Table 4). In contrast, the coefficients for common law and the new anti-self-dealing index in Models 5 and 7 are not significant. Interestingly, additional inclusion of common law in Model 10 indicates that the positive effect of anti-director rights index is mitigated substantially in common law countries.

*[Please insert Table 6 about here]*

Once we analyze both *legal* and *cultural* origins together in Table 7, the explanatory power of the legal indices becomes weaker while the explanatory power of the cultural dimension remains high and relatively unchanged. In Models 11 to 14, we include all three cultural dimensions and one legal protection variable at a time. Model 15 then combines common law legal origin, anti-director index and rule of law together with the three cultural dimensions. The explanatory power of all the legal measures suffers quite significantly once we control for the cultural dimensions. In Panel A, both the anti-director index and rule of law become insignificant. Moreover, the common law dummy and self-dealing index show signs opposite to the La Porta et al.'s (2000) assertion that firms in common law countries and/or countries that protect investors against self-dealing of insiders pay lower dividends. The results in Panel B are slightly more favorable for the anti-director index that is positive and significant at the one percent level. However, the common law and self-dealing dummies are still negative and highly statistically significant.

In summary, these results indicate that the explanatory power of legal variables drops significantly once we control for the effect of informal institutions of societal interaction as expressed by our cultural dimensions. In particular, rule of law loses all its explanatory power once we control for culture. Anti-director rights index remains significant in Model 15, but the common law dummy becomes more negative and significant. In fact, the positive effect of anti-director rights is fully negated in common law countries. It is only the civil law countries that increase dividends with higher anti-director rights. In this context, it is perhaps important to note that rule of law is highly correlated with individualism and power distance. The other three legal origin variables (common law dummy, anti-director rights index and anti-self-dealing index) are highly correlated with uncertainty avoidance.

The explanatory power of cultural dimensions remains relatively unchanged. The coefficient for uncertainty avoidance is persistently negative and statistically significant at the one percent level. The results for power distance are slightly weaker in Panel A but more encouraging for the dummy variable specifications in Panel B. Individualism with the lowest predictive power of the three cultural measures, is significant with the predicted sign only in Model 11 and 15 in Panel A of Table 7.

*[Please insert Table 7 about here]*

In Table 8, we show results for the industry-adjusted dividends-to-sales ratio. They are slightly less significant, especially for individualism and power distance. Nevertheless, uncertainty avoidance remains a persistently significant predictor of dividend strategies around the world despite dividend-to-sales' being a noisier measure of dividend payouts. The anti-director rights index is significant when included separately but its impact is again reduced by the common law dummy when all variables are included together.

*[Please insert Table 8 about here]*

### *5.1 Robustness checks*

One immediate concern about our sample is that the regression results are driven by firms from Japan and the US that comprise the majority in our sample. Re-estimating all regressions without firms from Japan and the US, our results are an even more impressive account in favor of our hypotheses.

A second and related concern is that we might have selected a particular year during national or international business cycles that is in some sense special but the results would not hold for other years. So, we re-estimate all regressions using 2002 and 2003 values. Additionally, we re-estimate the 2002, 2003 and 2004 results using growth rates in assets and earnings to check for robustness of our growth measure based on sales. The results using these alternative specification strategies are very similar in both sign and significance to the results reported in Tables 5 to 8.

The third point is that our cultural dimensions might simply proxy for some other yet unobserved country-specific heterogeneity. For example, lower dividend payout ratios of firms in some countries may simply reflect these countries' greater reliance on debt financing. We control for this possibility by including the ratio of credit from deposit taking financial institutions to private sector relative to GDP (due to Djankov, McLiesh and Shleifer, 2007), in all our regressions. Private credit enters insignificantly in most specifications and does not materially affect the statistical significance of the cultural dimensions.

Alternatively, differences in dividend payout ratios may simply reflect cross-country variation in the prevalence of stock repurchases that also help reduce funds at managerial discretion. Stock repurchases are, however, often announced very irregularly and in no correspondence with retained earnings. Moreover, stock repurchases are generally unanticipated from the investor perspective and tend to reflect management's reaction to perceptions of relative stock mispricing. Corporate outsiders do not generally have ex ante knowledge of any stock repurchases. Hence, ex ante, investors cannot consider stock repurchases valuable disciplining tools and valid substitutes to dividend payouts. Ideally, we would like to control for stock repurchase programs across firms in our data set. Unfortunately, this data is not available.

Our final concern is that of reverse causality between cultural dimensions and legal measures, and between cultural dimensions and dividends. In order for such variables as investor protection rules or dividend payouts to affect widespread beliefs about what is right and desirable (culture), these variables must either be central and salient or, alternatively, they must influence people's day-to-day lives. Given the way we operationalize culture, only a negligible influence from La Porta et al.'s (2000) indices to cultural orientations seems plausible. The reasons are twofold: First, Hofstede collects work

related values of IBM employees as opposed to value determinants of investment professionals. The data on culture value dimensions therefore originate from respondents who are unlikely to be particularly familiar with investor protection legislation and whose daily practices are unlikely to be affected by such rules. Second, several scholars (Hofstede, 2001:145, Licht et al., 2005; North, 1990) underpin the persistence of national cultural fundamentals even amid frequent changes in legal rules and regulation. With regard to our uncertainty avoidance index which proved most significant for the determination of dividend payout strategies across countries Hofstede (2001:145) concludes: “The index has been remarkably stable over the past decades: Although uncertainty avoidance levels do fluctuate over time, the differences between countries on which the index was based are robust. Uncertainty avoidance differences are not expected to disappear in the foreseeable future.” This persistency of cultural dimensions leads us to believe that source of causality for our correlations is embedded in culture which then influences both legal rules and dividend policies.

## **6 Conclusions**

In this paper, we propose that culture is an important determinant of dividend payouts of firms across the world. Taking an agency approach to dividends, we argue that cultural norms and values affect agency costs and therefore also affect the role of dividends as disciplining tools. We postulate that societies characterized by cultural norms that ease the (perceived) severity of agency conflicts tend to pay lower dividends as there is lower need for the disciplining function of dividends. This is in line with new institutional economics theory that suggests that informal institutions including culture affect other levels of economic and social interaction including formal institutions of law and resource allocation.

Our main results based on a data set of 6,982 firms in 41 countries are twofold. First, we show that culture indeed matters for explaining dividend policies of firms around the world. Firms in countries that score high on individualism and low on power distance and uncertainty avoidance pay relatively higher dividends. The effect of uncertainty avoidance seems to be the highest whereas individualism has the lowest effect among our three cultural dimensions. Second, in our regressions *cultural* origins have higher explanatory power relative to *legal* origins which underpins the importance of culture as a

determinant of agency costs and therefore also corporate governance and capital markets across the world. Not controlling for the impact of informal institutions in general may significantly bias any analysis of governance mechanisms around the world. Also, our findings enrich understanding of the effectiveness of new legal initiatives and add to the ongoing discussion on global convergence in corporate governance systems (Coffee, 1999). Our results suggest that the potential of new legal initiatives to reduce agency costs are at least partly determined and therefore limited by country-specific cultural fundamentals. Politicians, therefore, should be aware that convergence of corporate governance practices across countries through legal and regulatory convergence is likely to be constrained by cross-country differences in deeper layers of the society.

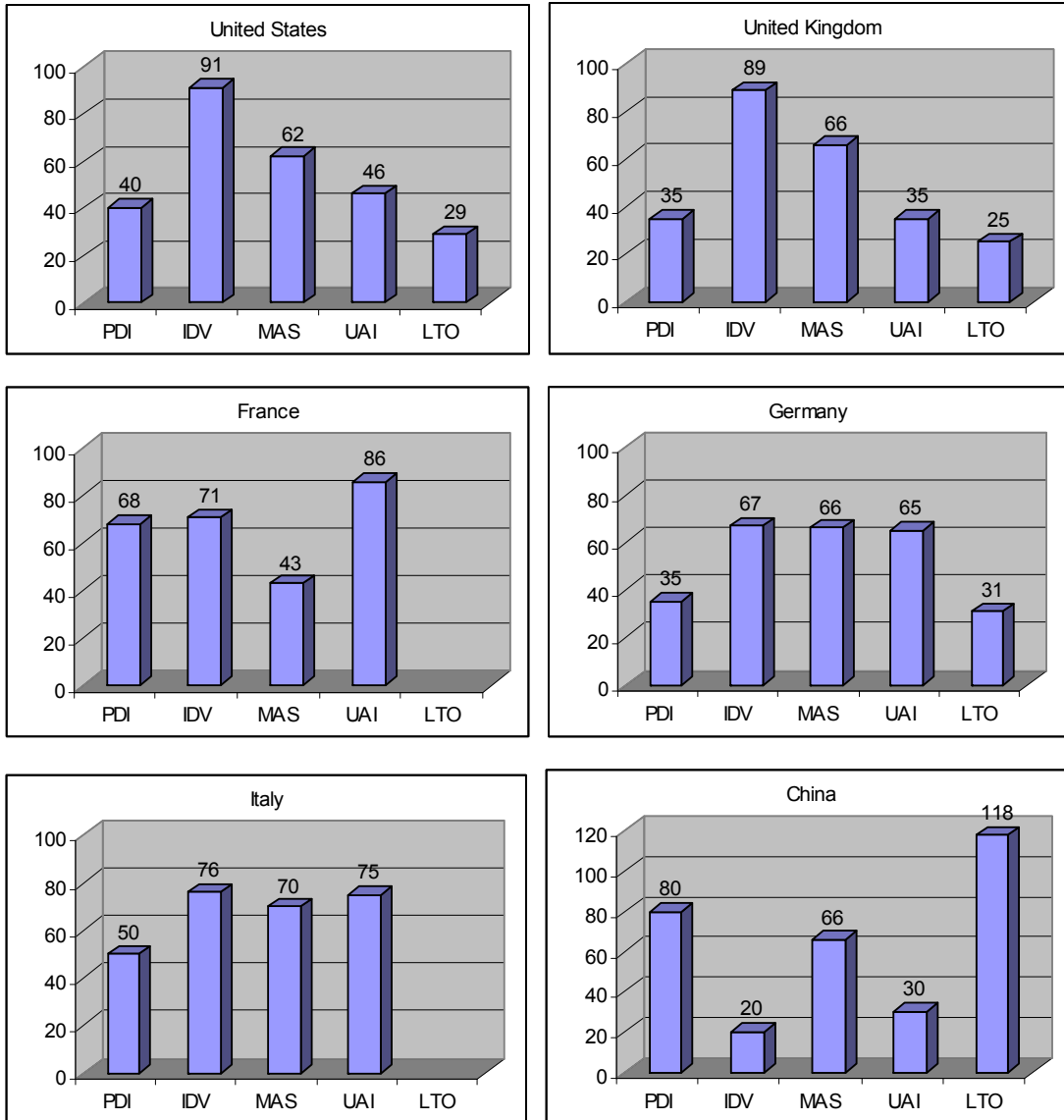
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FIGURE 1: CULTURAL DIMENSIONS ACROSS COUNTRIES



Note: PDI – Power Distance, IDV – Individualism vs. Collectivism, UAI – Uncertainty Avoidance, MAS – Masculinity vs. Femininity, LTO – Long-term vs. short-term orientation, Source: Hofstede (2001)

TABLE 1: CULTURAL DIMENSIONS

| Dimension                                      | Definition   |
|--|--|
| <i>Individualism vs. collectivism</i>          | Relates to the integration of individuals into primary groups                  |
| <i>Power distance</i>                          | Refers to the different solutions to the basic problems of human inequality    |
| <i>Uncertainty avoidance</i>                   | Relates to the level of stress in a society in the face of an unknown future   |
| <i>Masculinity vs. femininity</i>              | Relates to the division of emotional roles between men and women               |
| <i>Long-term versus short-term orientation</i> | Relates to the choice of focus for people's efforts: the future or the present |

TABLE 2: CONSTRUCTION OF THE SAMPLE

| Panel A: Firms in the Sample     |   |
|----------------------------------|---|
| 19,615                           | COMPUSTAT Global Industrial/ Commercial Sample (June 2006 version)            |
| -7,253                           | Missing dividend to common and preferred shareholder data for 2004            |
| -274                             | Financial firms (primary and/or secondary SIC between 6,000 and 6,999)        |
| -332                             | Utilities firms (primary and/or secondary SIC between 4,900 and 4,949)        |
| -2,310                           | Missing sales and/or exchange rate data for 1999-2004                         |
| -12                              | Firms listed in Luxembourg's stock exchange                                   |
| -246                             | Firms listed in stock exchanges of countries with mandatory dividend policies |
| -1,978                           | Negative and missing net income before extraordinary items in 2004            |
| -18                              | Dividends exceed sales/ negative dividends                                    |
| -210                             | Firms from countries that do not meet data requirements                       |
| 6,982                            | Basic sample  |
| Panel B: Countries in the sample |   |
| 83                               | Countries in COMPUSTAT Global Industrial/ Commercial Sample                   |
| -20                              | Countries of which firms do not meet data requirements                        |
| -1                               | Luxembourg  |
| -9                               | Mandatory dividend countries  |
| -12                              | Countries that do no meet data requirements                                   |
| 41                               | Countries in sample   |

TABLE 3: VARIABLE DEFINITIONS

This table describes the variables collected for the 41 countries included in this study.

| Variable   | Description / Source   |
|--|--|
| Dividend-to-earnings   | Total cash dividends paid to common and preferred shareholders as a percentage of earnings in fiscal year 2004. Earnings are measured after taxes and interest but before extraordinary items. <i>Source:</i> COMPUSTAT Global Industrial/ Commercial database.  |
| Dividend-to-sales  | Total cash dividends paid to common and preferred shareholders as a percentage of sales in fiscal year 2004. Sales are net sales. <i>Source:</i> COMPUSTAT Global Industrial/ Commercial database.   |
| industry adjustment for dividend-to-earnings and dividend-to-sales | We first find for each industry in each country the median of the dividend-to-earnings (dividend-to-sales) ratio. Then for each industry in the sample we define the world median as the median of industry country medians. Finally, we calculate the difference between the firm's dividend-to-earnings (dividend-to-sales) and the world median dividend-to-earnings (dividend-to-sales) for the firm's industry. The SIC division structure holds as reference to derive the following seven broad industries: (1) agriculture, (2) mining, (3) construction, (4) manufacturing, (5) transportation and communications, (6) wholesale and retail trade, (7) services and miscellaneous. <i>Source:</i> COMPUSTAT Global Industrial/ Commercial database. |
| Sales growth   | Average annual percentage growth in real (net) sales over the period 1999-2004. Before computing sales growth, we translate net sales in local currency into U.S. dollars using the average annual exchange rates for individual years and currencies. Net sales in U.S. dollars are translated into real terms using the U.S. GNP deflator. <i>Source:</i> COMPUSTAT Global Industrial/ Commercial, COMPUSTAT Global Currency, and U.S. Department of Commerce, Bureau of Economic Analysis.  |
| industry adjustment for sales growth                               | We first find for each industry in each country the median of sales growth. Then for each industry in the sample we define the world median as the median of industry-country medians. Finally, we industry adjusted sales growth as the difference between the firm's sales growth and the world median for the firm's corresponding industry. The SIC division structure holds as reference to derive the following seven broad industries: (1) agriculture, (2) mining, (3) construction, (4) manufacturing, (5) transportation and communications, (6) wholesale and retail trade, (7) services and miscellaneous. <i>Source:</i> COMPUSTAT Global Industrial/ Commercial.   |
| Sales growth decile  | Rank of decile for industry adjusted sales growth. Firms are ranked into 10 equal-size groups. Ranges from 1-10 in ascending order.  |
| Dividend tax advantage   | The ratio of the value, to an outside investor, of US\$1 distributed as dividend income to the value of US\$1 received in the form of capital gains when kept inside the firm as retained earnings. The computation of this ratio is detailed in Appendix A1. <i>Source:</i> OECD Tax Database, Organisation for Economic Co-operation and Development, 2000-2007, Worldwide Tax Summaries, PriceWaterhouseCoopers, 2006, Corporate Tax Rates Survey, KPMG, 2004, Tax Guides, Deloitte, 2004-2007, Internationale Steuern im Vergleich, Monatsbericht des BMF, January 2005.   |
| Common law   | Equals one if the origin of the Company Law or Commercial Code of the country is the English Common Law and zero otherwise. <i>Source:</i> Djankov et al. (2008).  |
| Anti-director rights index (revised)                               | It is formed by adding one when: (1) the law explicitly mandates or sets as a default rule that: (a) proxy solicitations paid by the company include a proxy form allowing shareholders to vote on the items on the agenda; or (b) a proxy form to vote on the items on the agenda accompanies notice to the meeting; or (c) shareholders vote by mail on the items on the agenda; (2) shareholders  |

can not be required to deposit with the company or another firm any of their shares prior to a general shareholders meeting; (3) if the law explicitly mandates or sets as a default rule cumulative voting for candidates to the board of directors or supervisory boards and a mechanism of proportional representation; (4) if minority shareholders may challenge a resolution of both the shareholders and the board if it is unfair, prejudicial, oppressive, or abusive; (5) when the law or listing rules explicitly mandate or set as a default rule that shareholders hold the first opportunity to buy new issues of stock; and (6) when minimum percentage of share capital [or voting power] that the law mandates or sets as a default rule as entitling a single shareholder to call a shareholders' meeting is less than or equal to 10 percent. *Source:* Djankov et al. (2008).

|                            |   |
|----------------------------|---|
| High anti-director rights  | Equals one if the revised anti-director rights index is larger than 3.5 (the sample country median) and zero otherwise.   |
| Anti-self-dealing index    | Numerical measure of legal protection of minority shareholders against self-dealing by corporate insiders. Average of ex-ante and ex-post private control of self-dealing. Considers a fixed self-dealing transaction, and then measure the hurdles that the controlling shareholder must jump in order to get away with this transaction. Measures the intensity of regulation of self-dealing along a variety of dimensions, covering both public and private enforcement mechanisms, such as disclosure, approval, and litigation. <i>Source:</i> Djankov et al. (2008).   |
| High anti-self-dealing     | Equals one if the anti-self-dealing index is larger than 0.46 (the sample country median) and zero otherwise.   |
| Rule of law                | Measures the extent to which governmental authority is legitimately exercised only in accordance with written, publicly disclosed laws adopted and enforced in accordance with established procedure. The principle is intended to be a safeguard against arbitrary governance. Rule of law includes agents' perceptions of the incidence of both violent and non-violent crime, the effectiveness and predictability of the judiciary, and the enforceability of contracts. The data averages rule of law estimates for the year 2004. <i>Source:</i> Kaufmann, D., Kraay, A., and Mastruzzi M. (2007) "Governance Matters VI: Governance Indicators for 1996-2006", World Bank Policy Research. |
| High rule of law           | Equals one if rule of law is larger than 1.19 (the sample country median) and zero otherwise.   |
| High individualism         | Equals one if a firm's country of origin scores above 54 (the sample median) on the individualism/ collectivism dimension, and zero otherwise. <i>Source:</i> Hofstede (1980, 2001).  |
| High power distance        | Equals one if a firm's country of origin scores above 55 (the sample median) on the power distance dimension, and zero otherwise. <i>Source:</i> Hofstede (1980, 2001).   |
| High uncertainty avoidance | Equals one if a firm's country of origin scores above 64 (the sample median) on the uncertainty avoidance dimension, and zero otherwise. <i>Source:</i> Hofstede (1980, 2001).  |

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TABLE 4: DESCRIPTIVE STATISTICS

Panel A presents number of observations, legal indices values, cultural value dimension scores, and mean dividend-to-earnings and dividend-to-sales ratios for each country in our sample. Panel B reports country level correlation coefficients among all variables. For variable definitions please refer to Table 3. \*\*\*, \*\*, and \* refer to significance at the one, five and ten percent level.

| <b>Panel A: country level data</b> | Number of firms | Common law | Anti-director rights index | Anti-self-dealing index | Rule of law | Individualism | Power distance | Uncertainty avoidance | Mean dividend-to-earnings ratio | Mean dividend-to-sales ratio |
|------------------------------------|-----------------|------------|----------------------------|-------------------------|-------------|---------------|----------------|-----------------------|---------------------------------|------------------------------|
| Argentina                          | 11              | 0          | 2.0                        | 0.34                    | -0.71       | 46            | 49             | 86                    | 0.023                           | 0.002                        |
| Australia                          | 152             | 1          | 4.0                        | 0.76                    | 1.82        | 90            | 36             | 51                    | 0.160                           | 0.013                        |
| Austria                            | 8               | 0          | 2.5                        | 0.21                    | 1.81        | 55            | 11             | 70                    | 0.056                           | 0.006                        |
| Belgium                            | 23              | 0          | 3.0                        | 0.54                    | 1.51        | 75            | 65             | 94                    | 0.052                           | 0.012                        |
| Canada                             | 211             | 1          | 4.0                        | 0.64                    | 1.80        | 80            | 39             | 48                    | 0.239                           | 0.018                        |
| China                              | 59              | 0          | 1.0                        | 0.76                    | -0.39       | 20            | 80             | 30                    | 0.259                           | 0.036                        |
| Czech Republic                     | 2               | 0          | 4.0                        | 0.33                    | 0.70        | 58            | 35             | 74                    | 0.000                           | 0.000                        |
| Denmark                            | 70              | 0          | 4.0                        | 0.46                    | 1.97        | 74            | 18             | 23                    | 0.539                           | 0.022                        |
| Egypt                              | 1               | 0          | 2.0                        | 0.20                    | -0.02       | 27            | 64             | 52                    | 0.000                           | 0.000                        |
| Finland                            | 39              | 0          | 3.5                        | 0.46                    | 1.93        | 63            | 33             | 59                    | 0.549                           | 0.028                        |
| France                             | 56              | 0          | 3.5                        | 0.38                    | 1.41        | 71            | 68             | 86                    | 0.021                           | 0.001                        |
| Germany                            | 73              | 0          | 3.5                        | 0.28                    | 1.73        | 67            | 35             | 65                    | 0.427                           | 0.008                        |
| Hong Kong                          | 79              | 1          | 5.0                        | 0.96                    | 1.37        | 25            | 68             | 29                    | 0.250                           | 0.044                        |
| Hungary                            | 1               | 0          | 2.0                        | 0.18                    | 0.83        | 80            | 46             | 82                    | 0.000                           | 0.000                        |
| India                              | 80              | 1          | 5.0                        | 0.58                    | 0.00        | 48            | 77             | 40                    | 0.312                           | 0.030                        |
| Indonesia                          | 91              | 0          | 4.0                        | 0.65                    | -0.84       | 14            | 78             | 48                    | 0.163                           | 0.015                        |
| Ireland                            | 14              | 1          | 5.0                        | 0.79                    | 1.58        | 70            | 28             | 35                    | 0.317                           | 0.016                        |
| Israel                             | 14              | 1          | 4.0                        | 0.73                    | 0.75        | 54            | 13             | 81                    | 0.274                           | 0.020                        |
| Italy                              | 6               | 0          | 2.0                        | 0.42                    | 0.65        | 76            | 50             | 75                    | 0.251                           | 0.005                        |
| Japan                              | 2,518           | 0          | 4.5                        | 0.50                    | 1.34        | 46            | 54             | 92                    | 0.457                           | 0.009                        |
| Korea                              | 135             | 0          | 4.5                        | 0.47                    | 0.70        | 18            | 60             | 85                    | 0.215                           | 0.011                        |
| Malaysia                           | 312             | 1          | 5.0                        | 0.95                    | 0.55        | 26            | 104            | 36                    | 0.272                           | 0.031                        |
| Mexico                             | 48              | 0          | 3.0                        | 0.17                    | -0.40       | 30            | 81             | 82                    | 0.087                           | 0.008                        |
| Morocco                            | 3               | 0          | 2.0                        | 0.56                    | 0.04        | 46            | 70             | 68                    | 0.000                           | 0.000                        |

|                |       |      |     |      |       |    |    |     |       |       |
|----------------|-------|------|-----|------|-------|----|----|-----|-------|-------|
| Netherlands    | 61    | 0    | 2.5 | 0.20 | 1.77  | 80 | 38 | 53  | 0.739 | 0.022 |
| New Zealand    | 33    | 1    | 4.0 | 0.95 | 1.92  | 79 | 22 | 49  | 0.059 | 0.005 |
| Norway         | 44    | 0    | 3.5 | 0.42 | 1.97  | 69 | 31 | 50  | 0.599 | 0.058 |
| Pakistan       | 5     | 1    | 4.0 | 0.41 | -0.86 | 14 | 55 | 70  | 0.244 | 0.019 |
| Panama         | 2     | 0    | 2.0 | 0.16 | -0.09 | 11 | 95 | 86  | 0.114 | 0.022 |
| Poland         | 5     | 0    | 2.0 | 0.29 | 0.42  | 60 | 68 | 93  | 0.058 | 0.005 |
| Portugal       | 3     | 0    | 2.5 | 0.44 | 1.19  | 27 | 63 | 104 | 0.254 | 0.031 |
| Singapore      | 161   | 1    | 5.0 | 1.00 | 1.82  | 20 | 74 | 8   | 0.206 | 0.017 |
| South Africa   | 43    | 1    | 5.0 | 0.81 | 0.15  | 65 | 49 | 49  | 0.271 | 0.026 |
| Spain          | 4     | 0    | 5.0 | 0.37 | 1.20  | 51 | 57 | 86  | 0.111 | 0.007 |
| Sweden         | 139   | 0    | 3.5 | 0.33 | 1.87  | 71 | 31 | 29  | 0.491 | 0.030 |
| Switzerland    | 52    | 0    | 3.0 | 0.27 | 1.98  | 68 | 34 | 58  | 0.245 | 0.018 |
| Taiwan         | 130   | 0    | 3.0 | 0.56 | 0.81  | 17 | 58 | 69  | 0.001 | 0.000 |
| Thailand       | 188   | 1    | 4.0 | 0.81 | 0.05  | 20 | 64 | 64  | 0.045 | 0.004 |
| Turkey         | 4     | 0    | 3.0 | 0.43 | 0.09  | 37 | 66 | 85  | 0.000 | 0.000 |
| United Kingdom | 415   | 1    | 5.0 | 0.95 | 1.73  | 89 | 35 | 35  | 1.467 | 0.034 |
| United States  | 1,687 | 1    | 3.0 | 0.65 | 1.48  | 91 | 40 | 46  | 0.234 | 0.012 |
| Average:       |       | 0.34 | 3.5 | 0.52 | 0.92  | 52 | 52 | 62  | 0.245 | 0.016 |
| Median         |       | 0.00 | 3.5 | 0.46 | 1.19  | 54 | 55 | 64  | 0.234 | 0.013 |

| <b>Panel B: correlation coefficients</b> | Common law | Anti-director index | Anti-self-dealing index | Rule of law | Individualism | Power distance | Uncertainty avoidance | Mean dividend-to- earnings ratio | Mean dividend-to- sales ratio |
|--|------------|---------------------|-------------------------|-------------|---------------|----------------|-----------------------|----------------------------------|-------------------------------|
| Common law                               |            | 0.621***            | 0.734***                | 0.043       | 0.093         | -0.065         | -0.498***             | 0.142                            | 0.219                         |
| Anti-director rights index               |            |                     | 0.574***                | 0.253       | 0.030         | -0.092         | -0.385**              | 0.304**                          | 0.268*                        |
| Anti-self-dealing index                  |            |                     |                         | 0.129       | -0.036        | 0.072          | -0.565***             | 0.220                            | 0.342**                       |
| Rule of law                              |            |                     |                         |             | 0.646***      | -0.611***      | -0.271*               | 0.422***                         | 0.251                         |
| Individualism                            |            |                     |                         |             |               | -0.669***      | -0.104                | 0.355**                          | -0.007                        |
| Power distance                           |            |                     |                         |             |               |                | 0.115                 | -0.317**                         | -0.001                        |
| Uncertainty avoidance                    |            |                     |                         |             |               |                |                       | -0.407***                        | -0.498***                     |
| Mean dividend-to- earnings ratio         |            |                     |                         |             |               |                |                       |                                  | 0.614***                      |

TABLE 5: CULTURAL DETERMINANTS OF DIVIDENDS

This table presents firm level regression results for the cross section of 41 countries. The dependent variable is the industry-adjusted dividend-to-earnings ratio. We include country random effects and correct for outliers by dropping the highest and lowest 1% of observations of the dependent variable. In Panel A, we use raw indices for individualism, power distance and uncertainty avoidance, whereas in Panel B we transform the indices into dummy variables that are set to one in case the individual index is above the sample world median and zero otherwise. All variables are described in Table 3. Standard errors are shown in parentheses. \*\*\*, \*\*, and \* denote significance at the one, five and ten percent level.

| Variable                   | Model 1              | Model 2              | Model 3              | Model 4              |
|----------------------------|----------------------|----------------------|----------------------|----------------------|
| <b>Panel A</b>             |                      |                      |                      |                      |
| Individualism              | 0.002***<br>(0.001)  |                      |                      | 0.001<br>(0.001)     |
| Power distance             |                      | -0.002***<br>(0.001) |                      | -0.002*<br>(0.001)   |
| Uncertainty avoidance      |                      |                      | -0.003***<br>(0.001) | -0.003***<br>(0.001) |
| Sales growth decile        | -0.015***<br>(0.001) | -0.015***<br>(0.001) | -0.015***<br>(0.001) | -0.015***<br>(0.001) |
| Tax advantage              | 0.107<br>(0.140)     | 0.112<br>(0.134)     | 0.033<br>(0.117)     | 0.110<br>(0.111)     |
| Constant                   | 0.108<br>(0.131)     | 0.326***<br>(0.113)  | 0.420***<br>(0.105)  | 0.406***<br>(0.131)  |
| $\chi^2$                   | 112.44               | 115.05               | 123.37               | 139.68               |
| <b>Panel B</b>             |                      |                      |                      |                      |
| High individualism         | 0.093**<br>(0.037)   |                      |                      | -0.043<br>(0.046)    |
| High power distance        |                      | -0.130***<br>(0.033) |                      | -0.112**<br>(0.047)  |
| High uncertainty avoidance |                      |                      | -0.161***<br>(0.026) | -0.126***<br>(0.028) |
| Sales growth decile        | -0.015***<br>(0.001) | -0.015***<br>(0.001) | -0.016***<br>(0.001) | -0.016***<br>(0.001) |
| Tax advantage              | 0.112<br>(0.141)     | 0.134<br>(0.129)     | 0.061<br>(0.099)     | 0.107<br>(0.099)     |
| Constant                   | 0.151<br>(0.124)     | 0.118<br>(0.114)     | 0.146*<br>(0.087)    | 0.097***<br>(0.089)  |
| $\chi^2$                   | 112.25               | 121.47               | 145.35               | 156.59               |

TABLE 6: LEGAL DETERMINANTS OF DIVIDENDS: DIVIDEND-TO-EARNINGS RATIO

This table presents firm level regression results for the cross section of 41 countries. The dependent variable is the industry-adjusted dividend-to-earnings ratio. We include country random effects and correct for outliers by dropping the highest and lowest 1% of observations of the dependent variable. In Panel A, we use raw indices for revised anti-director index, anti-self-dealing index and rule of law, whereas in Panel B we transform the indices into dummy variables that are set to one in case the individual index is above the sample world median and zero otherwise. All variables are described in Table 3. Standard errors are shown in parentheses. \*\*\*, \*\*, and \* refer to significance at the one, five and ten percent level.

| Variable                   | Model 5              | Model 6              | Model 7              | Model 8              | Model 9              | Model 10             |
|----------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| <b>Panel A</b>             |                      |                      |                      |                      |                      |                      |
| Common law                 | -0.013<br>(0.039)    |                      |                      |                      |                      | -0.080**<br>(0.036)  |
| Anti-director rights index |                      | 0.032*<br>(0.017)    |                      |                      | 0.024*<br>(0.014)    | 0.047***<br>(0.018)  |
| Anti-self-dealing index    |                      |                      | 0.007<br>(0.076)     |                      |                      |                      |
| Rule of law                |                      |                      |                      | 0.062***<br>(0.017)  | 0.058***<br>(0.016)  | 0.057***<br>(0.017)  |
| Sales growth decile        | -0.015***<br>(0.001) | -0.015***<br>(0.001) | -0.015***<br>(0.001) | -0.015***<br>(0.001) | -0.015***<br>(0.001) | -0.015***<br>(0.001) |
| Tax advantage              | 0.060<br>(0.146)     | 0.023<br>(0.131)     | 0.048<br>(0.143)     | 0.085<br>(0.114)     | 0.059<br>(0.111)     | 0.101<br>(0.115)     |
| Constant                   | 0.248**<br>(0.121)   | 0.154<br>(0.122)     | 0.249**<br>(0.120)   | 0.159<br>(0.100)     | 0.094<br>(0.105)     | 0.009<br>(0.114)     |
| X <sup>2</sup>             | 105.81               | 109.65               | 105.78               | 120.26               | 124.11               | 128.26               |
| <b>Panel B</b>             |                      |                      |                      |                      |                      |                      |
| Common law                 |                      |                      |                      |                      |                      | -0.058*<br>(0.030)   |
| High anti-director rights  |                      | 0.105***<br>(0.035)  |                      |                      | 0.090***<br>(0.030)  | 0.112***<br>(0.033)  |
| High anti-self-dealing     |                      |                      | -0.027<br>(0.039)    |                      |                      |                      |
| High rule of law           |                      |                      |                      | 0.096***<br>(0.031)  | 0.084***<br>(0.028)  | 0.082***<br>(0.029)  |
| Sales growth decile        |                      | -0.015***<br>(0.001) | -0.015***<br>(0.001) | -0.015***<br>(0.001) | -0.015***<br>(0.001) | -0.015***<br>(0.001) |
| Tax advantage              |                      | 0.011<br>(0.122)     | 0.050<br>(0.143)     | 0.040<br>(0.118)     | 0.002<br>(0.106)     | 0.040<br>(0.109)     |
| Constant                   |                      | 0.212**<br>(0.104)   | 0.269**<br>(0.124)   | 0.204**<br>(0.102)   | 0.180**<br>(0.092)   | 0.159<br>(0.094)*    |
| X <sup>2</sup>             |                      | 115.50               | 106.21               | 116.10               | 128.04               | 130.94               |

TABLE 7: THE ADDITIONAL EXPLANATORY POWER OF CULTURAL DETERMINANTS

This table presents firm level regression results for the cross section of 41 countries. The dependent variable is the industry-adjusted dividend-to-earnings ratio. We include country random effects and correct for outliers by dropping the highest and lowest 1% of observations of the dependent variable. In Panel A, we use raw legal indices and cultural value dimensions, whereas in Panel B we transform the indices into dummy variables that are set to one in case the individual index is above the sample world median and zero otherwise. All variables are described in Table 3. Standard errors are shown in parentheses. \*\*\*, \*\*, and \* denote significance at the one, five and ten percent level.

| Variable                | Model 11             | Model 12             | Model 13             | Model 14             | Model 15             |
|-------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| Panel A                 |                      |                      |                      |                      |                      |
| Common law              | -0.112***<br>(0.034) |                      |                      |                      | -0.217***<br>(0.038) |
| Anti-dir. rights index  |                      | 0.021<br>(0.015)     |                      |                      | 0.079***<br>(0.017)  |
| Anti-self-dealing index |                      |                      | -0.153**<br>(0.075)  |                      |                      |
| Rule of law             |                      |                      |                      | 0.011<br>(0.023)     | -0.036<br>(0.023)    |
| Individualism           | 0.001*<br>(0.001)    | 0.001<br>(0.001)     | 0.001<br>(0.001)     | 0.000<br>(0.001)     | 0.003***<br>(0.001)  |
| Power distance          | -0.001<br>(0.001)    | -0.002**<br>(0.001)  | -0.001<br>(0.001)    | -0.002*<br>(0.001)   | -0.001<br>(0.001)    |
| Uncertainty avoidance   | -0.004***<br>(0.001) | -0.002***<br>(0.001) | -0.004***<br>(0.001) | -0.003***<br>(0.001) | -0.004***<br>(0.001) |
| Sales growth decile     | -0.015***<br>(0.001) | -0.015***<br>(0.001) | -0.015***<br>(0.001) | -0.015***<br>(0.001) | -0.015***<br>(0.001) |
| Tax advantage           | 0.206*<br>(0.115)    | 0.095<br>(0.110)     | 0.164<br>(0.117)     | 0.108<br>(0.110)     | 0.251**<br>(0.107)   |
| Constant                | 0.364***<br>(0.132)  | 0.326**<br>(0.141)   | 0.483***<br>(0.140)  | 0.390***<br>(0.135)  | 0.066<br>(0.141)     |
| $\chi^2$                | 150.33               | 142.52               | 141.61               | 140.02               | 180.13               |
| Panel B                 |                      |                      |                      |                      |                      |
| Common law              | -0.118***<br>(0.028) |                      |                      |                      | -0.152***<br>(0.018) |
| High anti-dir. rights   |                      | 0.087***<br>(0.024)  |                      |                      | 0.138***<br>(0.017)  |
| High anti-self-dealing  |                      |                      | -0.072**<br>(0.031)  |                      |                      |
| Rule of law             |                      |                      |                      | 0.046<br>(0.032)     | 0.019<br>(0.022)     |
| High individualism      | -0.073<br>(0.047)    | -0.046<br>(0.042)    | -0.067<br>(0.049)    | -0.080<br>(0.051)    | -0.106***<br>(0.040) |
| High power distance     | -0.133***<br>(0.048) | -0.119***<br>(0.044) | -0.103**<br>(0.049)  | -0.119***<br>(0.046) | -0.166***<br>(0.038) |
| High uncertainty avoid. | -0.182***<br>(0.031) | -0.105***<br>(0.025) | -0.153***<br>(0.031) | -0.119***<br>(0.027) | -0.168***<br>(0.021) |
| Sales growth decile     | -0.015***<br>(0.001) | -0.016***<br>(0.002) | -0.015***<br>(0.001) | -0.015***<br>(0.002) | -0.016***<br>(0.002) |
| Tax advantage           | 0.210**<br>(0.102)   | 0.076<br>(0.087)     | 0.089<br>(0.103)     | 0.073<br>(0.097)     | 0.213***<br>(0.075)  |
| Constant                | 0.034<br>(0.090)     | 0.071<br>(0.079)     | 0.161*<br>(0.097)    | 0.117<br>(0.086)     | -0.043<br>(0.067)    |
| $\chi^2$                | 175.00               | 183.66               | 158.42               | 163.26               | 324.32               |

TABLE 8: RESULTS FOR DIVIDEND-TO-SALES RATIO

This table presents firm level regression results for the cross section of 41 countries. The dependent variable is the industry-adjusted dividend-to-sales ratio multiplied by 100. We include country random effects and correct for outliers by dropping the highest and lowest 1% of observations of the dependent variable. In Panel A, we use raw legal indices and cultural value dimensions, whereas in Panel B we transform the indices into dummy variables that are set to one in case the individual index is above the sample world median and zero otherwise. All variables are described in Table 3. Standard errors are shown in parentheses. \*\*\*, \*\*, and \* denote significance at the one, five and ten percent level.

| Variable                | Model 16             | Model 17             | Model 18             | Model 19             | Model 20             | Model 22             | Model 23             | Model 24             | Model 26             |
|-------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| Panel A                 |                      |                      |                      |                      |                      |                      |                      |                      |                      |
| Common law              | 0.226<br>(0.255)     |                      |                      |                      |                      |                      |                      |                      | -0.710**<br>(0.321)  |
| Anti-dir. rights index  |                      | 0.231**<br>(0.117)   |                      |                      |                      |                      |                      |                      | 0.266*<br>(0.144)    |
| Anti-self-dealing index |                      |                      | 0.658<br>(0.499)     |                      |                      |                      |                      |                      |                      |
| Rule of law             |                      |                      |                      | 0.204<br>(0.135)     |                      |                      |                      |                      | -0.106<br>(0.192)    |
| Individualism           |                      |                      |                      |                      | 0.002<br>(0.005)     |                      |                      | 0.003<br>(0.006)     | 0.008<br>(0.007)     |
| Power distance          |                      |                      |                      |                      |                      | -0.001<br>(0.006)    |                      | 0.002<br>(0.007)     | 0.003<br>(0.007)     |
| Uncertainty avoidance   |                      |                      |                      |                      |                      |                      | -0.022***<br>(0.004) | -0.022***<br>(0.005) | -0.026***<br>(0.006) |
| Sales growth decile     | -0.026***<br>(0.008) | -0.026***<br>(0.008) | -0.027***<br>(0.008) | -0.026***<br>(0.008) | -0.026***<br>(0.008) | -0.026***<br>(0.008) | -0.026***<br>(0.008) | -0.026***<br>(0.008) | -0.026***<br>(0.008) |
| Tax advantage           | 0.717<br>(0.950)     | 0.683<br>(0.902)     | 0.609<br>(0.928)     | 0.993<br>(0.909)     | 0.817<br>(0.985)     | 0.767<br>(0.985)     | 0.700<br>(0.771)     | 0.750<br>(0.825)     | 1.085<br>(0.856)     |
| Constant                | 0.677<br>(0.790)     | -0.050<br>(0.843)    | 0.488<br>(0.781)     | 0.334<br>(0.793)     | 0.565<br>(0.918)     | 0.799<br>(0.828)     | 2.073***<br>(0.694)  | 1.793*<br>(0.964)    | 0.851<br>(1.122)     |
| $\chi^2$                | 12.84                | 16.00                | 13.82                | 14.37                | 12.04                | 11.85                | 37.66                | 35.36                | 40.11                |

Table 8 continued...

|                            | Model 16 | Model 17             | Model 18             | Model 19             | Model 20             | Model 22             | Model 23             | Model 24             | Model 26             |
|----------------------------|----------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| Panel B                    |          |                      |                      |                      |                      |                      |                      |                      |                      |
| Common law                 |          |                      |                      |                      |                      |                      |                      |                      | -0.561***<br>(0.196) |
| High anti-dir. index       |          | 0.536**<br>(0.255)   |                      |                      |                      |                      |                      |                      | 0.426**<br>(0.195)   |
| High self-deal. index      |          |                      | 0.067<br>(0.256)     |                      |                      |                      |                      |                      |                      |
| Rule of law                |          |                      |                      | 0.400*<br>(0.229)    |                      |                      |                      |                      | -0.080<br>(0.228)    |
| High individualism         |          |                      |                      |                      | 0.209<br>(0.260)     |                      |                      | -0.193<br>(0.289)    | -0.264<br>(0.328)    |
| High power distance        |          |                      |                      |                      |                      | -0.326<br>(0.257)    |                      | -0.014<br>(0.297)    | -0.108<br>(0.292)    |
| High uncertainty avoidance |          |                      |                      |                      |                      |                      | -1.262***<br>(0.166) | -1.317***<br>(0.188) | -1.490***<br>(0.203) |
| Sales growth               |          | -0.026***<br>(0.008) | -0.026***<br>(0.008) | -0.026***<br>(0.008) | -0.026***<br>(0.008) | -0.026***<br>(0.008) | -0.026***<br>(0.008) | -0.026***<br>(0.008) | -0.026***<br>(0.008) |
| Tax advantage              |          | 0.673<br>(0.904)     | 0.846<br>(0.943)     | 0.818<br>(0.858)     | 0.879<br>(0.983)     | 0.947<br>(0.975)     | 0.842<br>(0.624)     | 0.697<br>(0.662)     | 1.020<br>(0.667)     |
| Constant                   |          | 0.447<br>(0.766)     | 0.621<br>(0.813)     | 0.461<br>(0.735)     | 0.532<br>(0.863)     | 0.422<br>(0.852)     | -0.076<br>(0.544)    | 0.107<br>(0.591)     | -0.291<br>(0.590)    |
| $\chi^2$                   |          | 16.51                | 12.11                | 15.20                | 12.46                | 13.43                | 69.94                | 67.10                | 81.09                |

TABLE A1: CONSTRUCTION OF THE TAX ADVANTAGE OF DIVIDENDS

This table gives a fiscal year 2004 overview of the raw data and the calculations employed to derive the dividend tax advantage variable. Dividend tax advantage is the ratio of the value, to an outside investor, of US\$1 distributed as dividend income to the value of US\$1 received in the form of capital gains when kept inside the firm as retained earnings. For countries with no explicit 2004 tax data, we use most recent tax information. Consistent with La Porta et al. (2000) we use the tax rates faced by local residents who acquire minority stakes in publicly traded securities and hold their investments long enough to qualify for long-term capital gains tax. We combine federal and local taxes whenever possible. Furthermore, we follow Poterba's (1987) assumption that the effective rate on capital gains is equivalent to one-fourth of the nominal rate. In order to compute the tax parameter, we follow La Porta et al. (2000) and use the criteria proposed by King (1977) to group the tax systems of the countries in the sample in three broad categories: the Classical System, the Two-Rate System, and the Imputation system (see La Porta et al. (2000) and the OECD Tax Database for a more detailed description).

| Country                | (A)                   | (B)                 | (C)           | (D)       | (E)             | (G)                                     | (H)  | Dividend Tax Preference (G/H) |
|------------------------|-----------------------|---------------------|---------------|-----------|-----------------|---|--|-------------------------------|
|                        | Corporate Tax         |                     | Personal Tax  |           | Imputation Rate | Value of \$1 in Dividends (1-B+E)*(1-D) | Value of \$1 in Capital Gains (1-A)* (1-C/4) |                               |
|                        | Undistributed Profits | Distributed Profits | Capital Gains | Dividends |                 |   |  |                               |
| Argentina              | 0.35                  | 0.35                | 0.00          | 0.00      | 0.00            | 0.65                                    | 0.65   | 1.00                          |
| Australia <sup>1</sup> | 0.30                  | 0.30                | 0.24          | 0.49      | 0.30            | 0.52                                    | 0.66   | 0.78                          |
| Austria                | 0.34                  | 0.34                | 0.00          | 0.25      | 0.00            | 0.50                                    | 0.66   | 0.75                          |
| Belgium <sup>2</sup>   | 0.34                  | 0.34                | 0.00          | 0.15      | 0.00            | 0.56                                    | 0.66   | 0.85                          |
| Canada <sup>3</sup>    | 0.36                  | 0.36                | 0.24          | 0.46      | 0.21            | 0.46                                    | 0.60   | 0.76                          |
| China <sup>4</sup>     | 0.33                  | 0.33                | 0.20          | 0.20      | 0.00            | 0.54                                    | 0.64   | 0.84                          |
| Czech Republic         | 0.28                  | 0.28                | 0.00          | 0.15      | 0.00            | 0.61                                    | 0.72   | 0.85                          |
| Denmark                | 0.30                  | 0.30                | 0.43          | 0.43      | 0.00            | 0.40                                    | 0.62   | 0.64                          |
| Egypt                  | 0.40                  | 0.40                | 0.00          | 0.00      | 0.00            | 0.60                                    | 0.60   | 1.00                          |
| Finland                | 0.29                  | 0.29                | 0.29          | 0.29      | 0.29            | 0.71                                    | 0.66   | 1.08                          |
| France <sup>5</sup>    | 0.35                  | 0.35                | 0.27          | 0.56      | 0.33            | 0.43                                    | 0.60   | 0.72                          |
| Germany <sup>6</sup>   | 0.40                  | 0.40                | 0.00          | 0.24      | 0.00            | 0.46                                    | 0.60   | 0.76                          |
| Hong Kong              | 0.18                  | 0.18                | 0.00          | 0.00      | 0.00            | 0.83                                    | 0.83   | 1.00                          |
| Hungary <sup>7</sup>   | 0.16                  | 0.16                | 0.00          | 0.35      | 0.00            | 0.55                                    | 0.84   | 0.65                          |
| India <sup>8</sup>     | 0.36                  | 0.44                | 0.00          | 0.00      | 0.00            | 0.56                                    | 0.64   | 0.87                          |
| Indonesia <sup>9</sup> | 0.30                  | 0.30                | 0.35          | 0.35      | 0.00            | 0.46                                    | 0.64   | 0.71                          |
| Ireland                | 0.13                  | 0.13                | 0.20          | 0.42      | 0.00            | 0.51                                    | 0.83   | 0.61                          |

|                              |      |      |      |      |      |      |      |      |
|------------------------------|------|------|------|------|------|------|------|------|
| Israel                       | 0.36 | 0.52 | 0.20 | 0.25 | 0.00 | 0.36 | 0.61 | 0.59 |
| Italy <sup>10</sup>          | 0.33 | 0.33 | 0.13 | 0.13 | 0.00 | 0.59 | 0.65 | 0.90 |
| Japan <sup>11</sup>          | 0.41 | 0.41 | 0.20 | 0.10 | 0.00 | 0.53 | 0.56 | 0.95 |
| Korea <sup>12</sup>          | 0.30 | 0.30 | 0.00 | 0.40 | 0.19 | 0.54 | 0.70 | 0.77 |
| Malaysia                     | 0.28 | 0.28 | 0.00 | 0.28 | 0.00 | 0.52 | 0.72 | 0.72 |
| Mexico                       | 0.33 | 0.33 | 0.00 | 0.33 | 0.33 | 0.67 | 0.67 | 1.00 |
| Morocco <sup>13</sup>        | 0.35 | 0.42 | 0.44 | 0.44 | 0.00 | 0.33 | 0.58 | 0.57 |
| Netherlands                  | 0.35 | 0.35 | 0.00 | 0.25 | 0.00 | 0.49 | 0.66 | 0.75 |
| New Zealand                  | 0.33 | 0.33 | 0.00 | 0.39 | 0.33 | 0.61 | 0.67 | 0.91 |
| Norway <sup>14</sup>         | 0.28 | 0.28 | 0.28 | 0.28 | 0.28 | 0.72 | 0.72 | 1.00 |
| Pakistan <sup>15</sup>       | 0.35 | 0.42 | 0.26 | 0.00 | 0.00 | 0.59 | 0.61 | 0.96 |
| Panama <sup>13</sup>         | 0.30 | 0.37 | 0.27 | 0.37 | 0.00 | 0.40 | 0.65 | 0.61 |
| Poland                       | 0.19 | 0.19 | 0.19 | 0.19 | 0.00 | 0.66 | 0.77 | 0.85 |
| Portugal <sup>16</sup>       | 0.28 | 0.28 | 0.00 | 0.20 | 0.00 | 0.58 | 0.73 | 0.80 |
| Singapore                    | 0.22 | 0.22 | 0.00 | 0.00 | 0.00 | 0.78 | 0.78 | 1.00 |
| South Africa <sup>17</sup>   | 0.30 | 0.38 | 0.10 | 0.00 | 0.00 | 0.62 | 0.68 | 0.91 |
| Spain <sup>18</sup>          | 0.35 | 0.35 | 0.15 | 0.45 | 0.29 | 0.51 | 0.63 | 0.82 |
| Sri Lanka <sup>19</sup>      | 0.35 | 0.35 | 0.00 | 0.35 | 0.00 | 0.42 | 0.65 | 0.65 |
| Sweden                       | 0.28 | 0.28 | 0.30 | 0.30 | 0.00 | 0.50 | 0.67 | 0.76 |
| Switzerland <sup>20</sup>    | 0.25 | 0.25 | 0.00 | 0.40 | 0.00 | 0.45 | 0.75 | 0.60 |
| Taiwan                       | 0.25 | 0.25 | 0.40 | 0.40 | 0.10 | 0.51 | 0.68 | 0.76 |
| Thailand <sup>21</sup>       | 0.30 | 0.30 | 0.00 | 0.10 | 0.10 | 0.72 | 0.70 | 1.03 |
| Turkey                       | 0.33 | 0.33 | 0.00 | 0.23 | 0.00 | 0.52 | 0.67 | 0.78 |
| United Kingdom <sup>22</sup> | 0.30 | 0.30 | 0.40 | 0.35 | 0.10 | 0.52 | 0.63 | 0.83 |
| United States <sup>23</sup>  | 0.40 | 0.40 | 0.15 | 0.15 | 0.00 | 0.51 | 0.58 | 0.88 |

*Notes:*

<sup>1</sup>If the asset was acquired on or after 11:45 a.m. AEST on September 21, 1999 and has been held for at least 12 months, 50 percent of the nominal gain (with no indexing of costs for inflation) is included in the individual's taxable income.

<sup>2</sup>The corporate tax is levied at a rate of 33 percent, increased by a 3 percent crisis tax, which leads to a 33.99 percent rate.

<sup>3</sup>The 36.1 percent corporate tax rate in Canada is computed as follows: 38 percent basic rate less 10 percent provincial abatement equals to 28 percent federal rate before surtax. A federal surtax of 4 percent is levied on this rate resulting in a 29 percent tax rate. Depending on the firm's industry, a 7 percent general rate reduction or profits reduction applies. The resulting net federal tax rate of 22.1 percent is added to a "Typical provincial rate" of 12-14 percent. Capital gains tax is the highest federal/provincial tax rate as applies in Newfoundland and Labrador at 24.3 percent. Gross-up provisions for dividends apply (Gross-up dividend rate 125 percent).

<sup>4</sup>The standard corporate income tax and local corporate income tax rates are 30 percent and 3 percent respectively.

<sup>5</sup>These rates apply to income earned in 2004, to be paid in 2005. For companies not paying the CSB (*Contribution Sociale sur les Bénéficiaires*), the corporate income tax rates are 1.1 percentage points lower. The rate in column 2 shows the rate as from 1 July 2004 when the total *prélèvement sociaux* was increased from 10.0 to 10.3 per cent. Capital gains arising from the sale of quoted or unquoted securities, as well as of shares in SICAV and FCP, are subject to a 16 percent rate (plus 11 percent social surcharges) where the proceeds of such sales exceed €15,000 (2005 income).

<sup>6</sup>German business profits are subject to two taxes, corporation tax and trade tax. Corporation tax is levied at a uniform rate of 25 percent and is then subject to a surcharge of 5.5 percent (the "solidarity levy"). The effective trade tax rate varies by location from - generally - just under 12 percent to just under 20 percent (around 18 percent for most larger cities). This tax is deductible as an expense for corporation tax. From January 1, 2002, only 50 percent of dividend income is taxable under German income tax law. The total tax burden is calculated as follows:  $0.18 + (0.25 - 0.25 * 0.18) * 1.055 = 0.396275$

<sup>7</sup>Distributed dividends that exceed a threshold equal to 30 percent of the value of the share are taxed at the shareholder level at a personal income tax rate of 35 percent. For dividends below this threshold, the rate is 20 percent.

<sup>8</sup>Dividend Distribution Tax is levied at the rate of 12.8125% (12.5% plus surcharge of 2.5% of the tax) on the dividends distributed by the domestic Company.

<sup>9</sup>Capital gains as well as investment income are taxable as income at the individual income tax rates (max 35 percent). Dividends received by individuals from Indonesian companies are subject to a 15% withholding tax. In calculating tax liability, gross dividends are combined with other income received and the tax on the total income received is calculated using the progressive tax rates to 35%. The 15% withholding tax is credited against the total income tax due.

<sup>10</sup>The rate of tax payable on capital gains from shareholding is 12.5 percent for non-qualifying shareholding in a company. An individual having qualifying shareholding or receiving dividends pays usual progressive tax rates on 40 percent of the capital gain.

<sup>11</sup>Dividends distributed by listed corporations are withheld at a rate of 20% (10% for dividends distributed during the period between April 2003 and March 2009), and the taxpayer can choose not to include the dividend income in the tax return. On the other hand, if dividends are subject to an aggregate tax, the Credit for Dividends (to deduct 6.4%-12.8% of dividend income from income tax and local inhabitants tax) is applicable.

<sup>12</sup>Gross-up provisions apply (Gross-up dividend rate 119 percent)

<sup>13</sup>Dividends are subject to a 10% withholding tax.

<sup>14</sup>Note the different calculation of the Value of \$1 in Capital Gains in (H): (1-A), in accordance with the Norwegian "RISK-Method". *Source*: Christiansen, V. (2004) Norwegian Income Tax Reforms, *CESifo Dice Report*, Vol. 3, pp. 9-14.

<sup>15</sup>Capital gains, realized within one year of acquisition are fully taxable; after one year, 75% of such gains are taxable and 25% are exempt. Dividend payment to a public company or an insurance company is subject to withholding tax rate of 5%. In all other cases withholding tax rate on dividend is 10%. The withholding of tax on dividend payment is considered as full and final discharge of tax liability.

<sup>16</sup>The corporate tax rate is 25 percent, increased to 27.5 percent in most cases by a municipal surcharge (*derrama*) of 10 percent. Capital gains derived from the sale of shares held for more than 12 months are exempt from personal income tax. Only 50 percent of dividend income is taxable. Lisbon rates apply.

<sup>17</sup>The corporate tax rate applicable to companies in 2004 is 30%. However South Africa imposes an additional 'Secondary Tax on Companies' at the rate of 12.5% on any net dividends declared. The effect of this additional tax is that if a company distributes 100% of its retained earnings as a dividend, then an effective tax rate of 37.78% will apply. This does not apply to gold mining companies, which are taxed on a formula basis. Capital gains tax is charged at individual tax rates (40%) on 25% of the gain realized by an individual.

<sup>18</sup>Capital gains from assets held for more than one year are included in the "special part" of the taxable base and are taxed at 15%.

<sup>19</sup>A withholding tax of 15% on dividends applies to all companies other than quoted public companies. This can be credited against the individual income tax of the shareholders. Quoted public companies have to deduct the 15% withholding tax on dividends paid to non-resident shareholders.

<sup>20</sup>The corporate income tax rate includes the church tax, while the personal income tax rates excludes it. The tax burden of income (and capital) varies from canton to canton. As a general rule, the approximate range of the maximum effective income tax rate on profit for federal, cantonal, and communal taxes is between 16.4% and 29.2%, depending on the company's place of residence. The average tax rate is approx. 25%.

<sup>21</sup>The withholding tax rate on dividends is 10% for individuals. However, individuals resident in Thailand are better off paying the normal progressive income-tax rates on dividends and claiming the credit, since the credit for those who earn more than Bt4m reduces the effective rate of taxation on dividends to below 10%.

<sup>22</sup>Gross-up provisions apply (Gross-up dividend rate 111.1 percent)

<sup>23</sup>The U.S. corporate tax rate includes a 6.6 percent (average) local tax rate on top of the adjusted central government corporate income tax rate of 32.7 tax rate. New York rates apply.

*Sources:* *OECD Tax Database*, Organisation for Economic Co-operation and Development, 2000-2007  
*Worldwide Tax Summaries*, PriceWaterhouseCoopers, 2006  
*Corporate Tax Rates Survey*, KPMG, 2004  
*Tax Guides*, Deloitte, 2004-2007  
*Internationale Steuern im Vergleich*, Monatsbericht des BMF, January 2005