EARNINGS MANAGEMENT
AND CULTURAL VALUES

Kurt A. Desender
Christian E. Castro
Sergio A. Escamilla de León

Departament d'Economia de l'Empresa
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Document de Treball núm. 08/1

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next page.
We appreciate the helpful comments of Stefan Van Hemmen and Frank Stephen, on a prior draft of this paper. We also thank participants at the 6th ARNN Accounting symposium at Leuven and the participants at the UAB workshop. The ideas expressed in this paper do not necessarily reflect those of the institutions the authors represent.
ABSTRACT

Using theory and empirical data from social psychology to measure for cultural differences between countries, we study the effect of individualism as defined by Hofstede (1980) and egalitarianism as defined by Schwartz (1994, 1999, 2004) on earnings management. We find a significant influence of both cultural measures. In line with Licht et al. (2004), who argue that individualistic societies may be less susceptible to corruption, we find that countries scoring high on individualism tend to have lower levels of earnings management. In addition, we find that egalitarianism, defined as a society's cultural orientation with respect to intolerance for abuses of market and political power, is negatively related with earnings management. Our results are robust to different specifications and controls. The main message of this paper is that besides formal institutions, cultural differences are relevant to explain earnings management behaviour. We think that our work adds to the understanding of the importance of cultural values in managerial behaviour across countries contributing to the literature on earnings management and law and institutions.

Keywords: Culture, Earnings Management, Informal Institutions, quality of financial information, Individualism, Egalitarianism

JEL Classifications: G32, G34, K22, K4, Z13
I. INTRODUCTION

National culture has long been recognized as important in explaining behaviour. Aspects of national culture have been related to many areas of organizational behaviour, such as foreign investment decisions (Tahir and Larimo, 2004), entry mode decisions (Arora and Fosturi, 2000) and research and development decisions (Muralidharan and Phatak, 1999) and negotiation behaviour (Leung, 1988). However, determining the influence of culture on behaviour is not easy, as culture is a complex and broad construct that is difficult to accurately measure.

Theorists, policy-makers, and practitioners share the intuition that corporate governance reflects national culture (Bebchuk and Roe, 1999). Shleifer (2002) posited that the practice of justice and the ‘structure’ of society rather than the law itself are what matters for investor protection – that legal rules are just a reflection of a broader societal stance. Until recently, however, commentators treated culture either anecdotally or as a black box. The challenge for economic analysis is to operationalize culture in ways that permit developing and investigating testable hypotheses (Siegel et al., 2006). The paucity of studies on the determinants of culture and its economic consequences has occurred in part because of the belief that culture does not matter or because of the belief that culture cannot be suitably decomposed and measured (Guiso et al. 2005). Recent studies, (e.g. Stulz and Williamson, 2003 and Beck et al., 2003) use countries’ predominant religion as a proxy for their national culture. Religion is a convenient proxy for culture. Classifying countries by religion, however, fails to capture the richness of cultural differences (Licht et al, 2004). Siegel et al. (2006) are the first to apply a theoretical framework from social psychology that explains what beliefs constitute a culture to economic outcomes like foreign trade and foreign direct investments.

In this study we seek to make the following contributions to the study of culture, and the effect of formal institutions on managerial practices. This study is the first to apply a theoretical framework about culture to explain managerial misbehaviour and link specific cultural dimensions of a society to explain differences in earnings discretion. To operationalize nations’ cultural profiles, we draw from the theoretical frameworks from both Hofstede (1980) and Schwartz (1994, 1999, 2004). We link earnings discretion with cultural values Individualism defined by Hofstede (1980) as well as Egalitarianism defined by Schwartz (1994, 1999, 2004).
Here, we will briefly explain why Individualism and egalitarianism are relevant for managerial behaviour. Individualism reflects the emotional independence of the person with respect to groups and organizations, while its absence would be similar to an emotional dependence and a feeling of “us” (Hofstede, 1980). Individualism is inversely related to the power distance dimension, which is -.64 in Hofstede’s original study, and -.70 in the sample of teachers and -.75 in that of students used in Schwartz’s cross-cultural study (Schwartz, 1994). Therefore, at least at a cultural level, individualism is the opposite of the acceptance of hierarchy and of social inequality. We hypothesize that greater individualism could lead to lower levels of earnings management since societies with high degree of individualism put emphasis on respecting individual (property) rights. Licht et al. (2004) found that individualist countries emphasize much more the enforcement of laws. We believe that individualism will not only be reflected in formal institutions but also in informal settings.

Egalitarianism relates to a society’s intolerance for abuses of market and political power inequality. It is reflected in a society’s choices about how much to control market abuses by monopolists; about how much financial transparency to expect from large firms; and about how much to limit political corruption. Managers from egalitarian societies are less willing to tolerate the use of status or power as a substitute for information disclosure and evidence needed to calculate mutual gains. Egalitarianism has been found to correlate negatively with corruption (Siegel et al. 2006). Our argument is that differences in egalitarianism between countries influence the managerial behaviour in earnings discretion.

We find evidence that individualism and egalitarianism are robust determinants of earnings discretion even after controlling for a wide-ranging set of competing explanations. The paper is organized as follows. Section II briefly reviews the earnings management literature and discusses how this study contributes to this literature. Section III articulates the theory for why individualism and egalitarianism exercise a significant impact on earnings discretion. Section IV reviews the data gathered on individualism and egalitarianism, earnings discretion, and other variables. Section V reports on how cultural values exercise a direct effect on earnings discretion even after controlling for a wide array of other influences. Section VI concludes.

II. LITERATURE REVIEW

Earnings management is the act of obfuscating financial reports made to external stakeholders. Healy and Wahlen (1999) define earnings management as the alteration of firms’ reported economic performance by insiders to either “mislead some stakeholders” or to
“influence contractual outcomes.” The disclosure of “true and fair” financial earnings is crucial to corporate governance because it provides outsiders with a basis to monitor their claims and exercise their rights (see, for example, OECD Principles of Corporate Governance, 1999). The incentives to misrepresent firm performance through earnings management arise from the conflict of interest between the firms’ insiders and outsiders. As Jensen and Meckling (1976) point out, insiders have an incentive to use the firm’s resources in a way that benefits them, but not outsiders (i.e. private control benefits). In the presence of extensive earnings management, financial reports inaccurately reflect firm performance and consequently weaken outsiders’ ability to govern the firm. Insiders’ ability to acquire private control benefits is limited by an explicit institutional framework, through corporate governance mechanisms and the legal system in protecting the interests of outside minority shareholders (e.g., Shleifer and Vishny, 1997; La Porta et al., 2000).

The majority of studies on earnings management are performed at firm level, within one country. Typically, research (e.g. Peasnell et al., 2000; Beasley, 1996; Klein, 2002; DeFond and Jiambalvo, 1991) investigates the relationship between corporate governance settings and earnings management. Recently, several studies have compared corporate governance settings and management practices across countries studies. Prior research suggests that greater legal protection of outside investors increases insiders’ costs of diverting firm profits or assets (e.g., Shleifer and Wolfenzon, 2000; Claessens et al., 2000a; Nenova, 2000). Consistently, Leuz et al. (2002) find a significant negative relationship between outside minority protection and earnings management. Although there is some intuition that corporate governance reflects national culture (Bechuck and Roe, 1999), cultural values have rarely been used as explanatory variables in accounting research. This study is the first to investigate how culture affects earnings management behaviour.

III. THEORETICAL FRAMEWORK

Culture refers to the complex of meanings, symbols, and assumptions about what is good or bad, legitimate or illegitimate that underlie the prevailing practices and norms in a society (Bourdieu, 1977). Value emphases are the essence of culture seen this way. They are the implicitly or explicitly shared, abstract ideas about what is good, right, and desirable in a society (Williams, 1970). They justify and guide the ways that social institutions (e.g., the family, education, economic, political, religious systems) function, their goals and modes of operation. Social actors (e.g., organizational leaders, policy-makers, firm managers) draw on
these cultural value emphases to select actions, evaluate people and events, and explain or justify their actions and evaluations.

**III.A. Informal social Institutions**

Institutions are widely understood to be the “humanly devised constraints that structure human interaction” (see North, 1990). They are composed of formal rules, informal constraints, and the enforcement characteristics of both. If institutions are understood to be “the rules of the game,” then informal institutions are the unwritten, unspoken rules of the game, the collection of beliefs, values, and social norms that constrain the behaviour of individuals and organizations often lumped together as “culture.”

In one view informal institutions are simply treated as exogenous factors – they are “taken as given by most institutional economists” (Williamson, 2000). Alternatively, informal institutions are modelled as endogenously-appearing self-enforcing rules that are the equilibrium of a repeated game (Aoki 2001). The latter view considers the content of such institutions to be common knowledge (Greif and Laitin 2004). Sociology and psychology view a society’s prevailing values and norms as motivators of and justification for action (Nee 2005). The cognitive (knowing) element of values is augmented, at the individual level, by an affective (feeling) element that influences motivations and guides actions (Schwartz and Bilsky 1987). Behaviour that is consistent with values engenders a positive feeling and vice versa. At the societal level, psychologists view value preferences as an interconnected system, a “social mind” (e.g., Hofstede, 2001) and Oyserman, 2002), much in line with the economic conception of societal common knowledge.

Consistent with the view of informal institutions as societal equilibria, recent work has found cultural orientations to be relatively stable and to exert their influence over long periods of time (e.g., Guiso et al., 2005a and b and Tabellini, 2005). Psychologists tend to agree that, once adopted; value preferences remain relatively fixed over time (e.g., Rokeach, 1973; Schwartz, 1992; and Oyserman, 2002). The upshot is that societies’ informal institutions affect a vast array of factors that evolve as a system in which specific components are compatible with one another. The resulting institutions “have a lasting grip on the way a society conducts itself” (Williamson, 2000).

**III.B. Comparing Cultures**

The inclination to treat informal institutions as black boxes is responsible for the paucity of analyses of their content and structure. Theoretical models of the content of cultural orientations are few and incomplete (Siegel et al., 2006). Many studies account for culture by
focusing exclusively on the dominant religion or percentage of followers of each religion (e.g., La Porta et al., 1999). Dominant religion is a valid proxy for culture because religions are a primary source of moral injunctions and beliefs. But the approach nevertheless fails to capture the richness of cultural differences (Licht et al, 2004).

Both Hofstede (1980) and Schwartz (1994) attempted to identify national cultural dimensions that could be used to compare cultures. Hofstede derived his framework empirically, while Schwartz developed his framework theoretically. Both scholars have empirically examined their frameworks using large-scale multi-country samples. They found greater cultural differences between countries than within countries, suggesting the frameworks could be used to compare countries. Hofstede's (1980) original research focused on IBM employees in 72 nations and two period of time (1967-1969 and 1971-1973). Schwartz's (1992, 1994) original research focused on teacher and student samples in 38 nations that included 41 cultural groups, collected between 1988 and 1992.

Hofstede (1980) collected responses to 32 values statements from more than 117,000 IBM employees in 40 nations between 1967 and 1969. The following four cultural dimensions were derived from this data (Hofstede, 1983) and remain at the heart of much cultural research: Individualism, Power distance, Uncertainty avoidance and Masculinity. Only two dimensions exhibit a clear relationship with managerial behaviour. Individualism is inversely related to the power distance dimension (-0.64) and most studies have focused on individualism to explain the importance of cultural differences. In addition, Vandello and Cohen (1999) concur that "one of the most useful and actively researched constructs to emerge from cultural social psychology has been the dimension of individualism". Therefore, we focus on the relationship between individualism and managerial misbehaviour.

Although Hofstede’s dimensions for assessing cultural distance are extensively used in the literature, several researchers (McSweeney, 2002; Shenkar, 2001; Smith et al., 2002) have criticized Hofstede's dimensions as being derived from old data, lacking generalisability and being too condensed to capture culture. In their review of culture and international business scholarship, Leung et al. (2005) call for implementing more recent models of cultural dimensions. Previous research suggests that Schwartz's cultural values capture more aspects of culture than those of Hofstede's (Kagitcibasi, 1997; Schwartz and Ros, 1995; Steenkamp, 2001).

However, it would be hasty to dismiss the use of Hofstede’s cultural scores as they have been found to be useful in many instances. Hofstede (2001) noted 140 non-IBM data studies that
validated his cultural indexes. For example, Best and Williams (1998) found that an "individualistic" psychological trait correlated significantly with Hofstede's individualism index (0.41), while Van Oudenhoven (2001) found that company bureaucracy correlated significantly with power distance index (0.66) and uncertainty avoidance index (0.63). Thus, it may be that there are specific contexts in which cultural distance scores based on Hofstede's dimensions are appropriate and other contexts in which other forms of cultural distance may be more appropriate. We therefore consider cultural values from both Hofstede (1980) and Schwartz (1994, 1999, 2004).

To operationalize nations' cultural profiles, Schwartz analyzes differences in how national populations prioritize 45 universally recognized values. Schwartz’s model is currently considered the most advanced in social psychology for a number of reasons. First, the model is theory-driven, its central elements having been derived from earlier work in the social sciences. Second, and most important, the model uses value measures shown to have cross-culturally equivalent meanings at the individual level to operationalize the cultural dimensions. Finally, validating data for this model was collected relatively recently (see Smith, Bond, and Kagitcibasi (2006), Brett and Okumura (1998), and Mezias et al. (2002)). Schwartz (1994, 1999, 2004) identifies three key issues societies must address and derives three corresponding dimensions for cross-cultural analysis: Egalitarianism versus hierarchy, Embeddedness versus autonomy and Mastery versus harmony. The social psychological framework enables us to be specific about which factors might be critical for deterring earnings manipulation. Only one of the latter, egalitarianism vs. hierarchy, exhibits a clear connection with earnings manipulation.

As part of a series of robustness checks, we test and control for the other cultural dimensions and find that individualism and egalitarianism are both the theoretically relevant and statistically robust predictor of earnings manipulation.

**III.C. Individualism and Earnings Management**

Individualism is the one side versus its opposite, collectivism, that is the degree to which individuals are integrated into groups. On the individualist side we find societies in which the ties between individuals are loose: everyone is expected to look after him/herself and his/her immediate family. On the collectivist side, we find societies in which people from birth onwards are integrated into strong, cohesive in-groups, often extended families which continue protecting them in exchange for unquestioning loyalty.
Individualistic cultures have favourable responses to items such as: “Have a job which leaves you sufficient time for your personal or family life”, “Have considerable freedom to adapt your own approach to the job”, and “Have challenging work to do – work from which you can get a personal sense of accomplishment.” A country with a high score in collectivism gives more importance to factors such as: “Have training opportunities (to improve your skills or learn new skills)” and “Have good physical working conditions (good ventilation and lighting, adequate work space, etc.).” In other words, they value more what the organization can do for the individual.

According to Hofstede (1980), individualism reflects the emotional independence of the person with respect to groups and organizations, while its absence would be similar to an emotional dependence and a feeling of “us”. Individualism is inversely related to the power distance dimension, which is -.64 in Hofstede’s original study, and -.70 in the sample of teachers and -.75 in that of students used in Schwartz’s cross-cultural study (Schwartz, 1994). Therefore, at least at a cultural level, individualism is the opposite of the acceptance of hierarchy and of social inequality.

By identifying related theories and constructs, Waterman (1984) put the definition of individualism into a larger psychological context. He found individualism to share four features: (i) being true to one’s self; (ii) freedom of choice within the constraints of the like freedom of others; (iii) personal responsibility which accompanies a sense of being a causally effective agent; and (iv) universality, which involves respect for the integrity of others.

In individualistic cultures, where individual rights are paramount, equitable administration of justice becomes a central ethical theme. Because the individual is motivated by his personal goals and interests in individualistic cultures, cooperation and conspiracy, which are often necessary for widespread corruption, can be more difficult in individualistic cultures than in collective cultures. In addition, Licht et al. (2004) argue that societies high on individualism may be less susceptible to corruption because corruption signals disrespect for individual persons’ property and independent discretion. Furthermore, Hofstede (2001) and Davis and Ruhe (2003) find a negative relationship between individualism and corruption.

In addition, Licht et al. (2004) present evidence on relations between statutory law and culture, in the context of corporate governance. They demonstrate that corporate governance laws relate systematically to the prevailing culture. They find that investor legal rights are stronger in nations high on the Hofstede Individualism dimension. These findings support the notion that laws on the books reflect similar cultural orientations.
We hypothesize that greater individualism could lead to lower levels of earnings management since societies with high degree of individualism put emphasis on respecting individual rights. Managers from individualist societies may be more aware of the consequences of disrespecting individual property rights of the shareholders. Licht et al. (2004) found that individualist countries emphasize much more the enforcement of laws. We believe that individualism will not only be reflected in formal institutions but also in informal settings:

**H1: Countries with higher levels of individualism have lower levels of earnings management.**

### III.D Egalitarianism and Earnings management

Egalitarianism is “the belief that all people are of equal worth and should be treated equally in society” (Schwartz, 2001). Egalitarianism also stands for the corresponding cultural orientation in the Schwartz model. Societal stances on this issue vary along a continuum between the two polar positions of egalitarianism versus hierarchy. Such stances are the institutional responses every society must develop to address the key challenge of eliciting cooperative, productive activity in society. Important values in egalitarian cultures include equality, social justice, responsibility, helpfulness, and honesty. In other words, highly egalitarian societies are ones whose citizens say that these and other compatible values do relatively more to guide their everyday conduct than values reflecting cultural hierarchy such as social power, authority, and wealth.

Egalitarianism matters because it influences policymaking at the macro level and everyday business conduct at the individual manager level. This business conduct includes a company’s belief in the need for revealing sensitive information about its financial condition, a company’s decision not to exploit its monopoly position in an anti-competitive fashion, a company’s practices of dealing with workers, including the provision of job protection and employment benefits, and a company’s decision not to engage in corrupt political activity. At the macro level, egalitarianism influences legislators, executive officials, prosecutors, and regulators who enact and enforce laws dealing with antitrust, labour protections, financial transparency, and anti-corruption.

Siegel et al. (2006) show that societal stances that emphasize egalitarianism are reflected primarily in a society’s lack of tolerance for abuses of power, whether market or political, but also in a wide range of social and economic policy choices including distributions and regulations that protect the indigent, the unemployed, the retired, and the elderly. Cultural
preference for hierarchy, in contrast, legitimizes unequal distribution of power, roles, and resources on the basis of attributes such as wealth, gender, age, and caste. Using all three widely known indices for freedom from corruption Siegel et al. (2006), find that egalitarianism is highly correlated with freedom from corruption even after controlling for income inequality, religious composition, legal origin, federalism, natural resource abundance, and constructed trade openness. We hypothesize that greater egalitarianism could lead to lower levels of earnings management:

\[ H2: \text{Countries with higher levels of egalitarianism have lower levels of earnings management.} \]

**IV. DATA SPECIFICATION**

**IV.A. Dependent Variables: Earnings Discretion**

Leuz et al. (2002) compute two measures for earnings smoothing and two measures for earnings discretion from 70,955 firm-year observations for fiscal years 1990-99 across 31 countries and 8,616 non-financial firms. They propose an aggregate measure of earnings management based on two measures of earnings smoothing and two measures of earnings discretion. Since earnings discretion is a stronger indicator of earnings manipulation we choose to test our hypotheses against earnings discretion rather than earnings smoothing or an aggregate measure. As part of a series of robustness checks, we repeat our analysis for the aggregate measure of all four variables and find consistent results.

Managers may use their reporting discretion to misstate the firm’s actual economic performance. For instance, they can manage earnings to report extraordinary performance in specific instances such as an equity issuance. As the accounting component of earnings (i.e. accruals) inherently involves judgment on the part of managers, the magnitude of accruals can be used as a proxy for the amount of discretion insiders use to influence disclosed firm performance. Scaling the variable by the absolute value of the firm’s cash flow from operations controls for firm performance. The first measure for earnings discretion is calculated as the country’s median ratio of the absolute value of accruals and the absolute value of the cash flow from operations. Extreme observations of this measure are indicative of large-scale use of discretion to manipulate reported accounting earnings. This earnings management measure is calculated at the country level as the median ratio of the absolute value of accruals to the absolute value of the operating cash flow.
The second measure is the number of “small profits” divided by the number of “small losses” for each country. DeGeorge et al. (1999) and Burgstahler and Dichev (1997) present evidence that managers of US firms use accounting discretion to avoid reporting small losses. While it may be argued that managers have incentive to avoid losses of any size, they have limited reporting discretion and hence are unable to report profits in the presence of large losses. Small losses, however, are more likely to lie within the bounds of insiders’ reporting discretion and consequently can be avoided through earnings management. Thus, for each country, the incidence of small profits compared to the incidence of small losses measures the extent to which firm insiders exercise discretion to avoid reporting losses. A higher ratio indicates greater loss avoidance activity and earnings management. A firm-year observation is classified as a “small profit” if net earnings (scaled by lagged total assets) are in the range (0,0.01). A firm-year observation is classified as a “small loss” if net earnings (scaled by lagged total assets) are in the range (-0.01,0). Net earnings are bottom-line reported income after interest, taxes, special items, extraordinary items, reserves and any other items included in bottom-line net income.

IV.B. Culture

Hofstede (1980) collected responses to 32 values statements from more than 117,000 IBM employees across the world around 1968 and around 1972. Factor analysis of country mean scores in 50 countries and three regions produced four dimensions: Individualism, Power distance, Uncertainty avoidance and Masculinity. Hofstede argued against the criticism that “IBMers are not at all representative for our country”, that the crucial requirement is that samples be well matched across countries, not that they be representative. He asserted that comparing IBM subsidiaries shows national culture differences with unusual clarity because the samples are so homogeneous in terms of employer, kind of work, and education level.

Schwartz analyzes differences in how national populations prioritize 45 value items that have equivalent meaning across cultures 45 using a large-scale value survey of over 15,000 urban teachers who teach the full range of subjects in grades 3-12 in the most common type of school system in countries on every inhabited continent. We utilize the 2005 release of the data set for the 55 countries surveyed during the years 1988-2004. The mean importance of a particular cultural orientation in a country was computed as the average of the importance individual respondents attributed to the set of value items that represent the orientation. For cross-national comparisons, sample differences in scale use were eliminated by centering the importance ratings of all cultural orientations within each sample around their mean. Focusing on teachers allows samples to be matched on critical characteristics (e.g., distributions of age, education, and occupation) largely from the dominant cultural group in each nation. The
robustness of national cultural profiles obtained from the teacher sample was separately confirmed with data separately obtained from samples of undergraduate students in most of these same countries. While the Schwartz survey has yet to be directly conducted on a pure sample of managers, the egalitarianism variable itself is positively correlated to various corruption indices. Treisman (2000) found that samples of the business community and samples of the general population were highly correlated in their views towards corruption.

**IV.C. Control variables**

Recent corporate governance research suggests that the legal protection of outside investors is a key determinant of financial market development, capital and ownership structures, dividend policies, and private control benefits around the world (for surveys see Shleifer and Vishny, 1997 and La Porta et al, 2000). La Porta et al. (2000) later advanced the “legal approach”—namely, classifying legal regimes by a country’s legal origin affiliation—as the preferred way to understand corporate governance. We control for of legal tradition since legal tradition has been shown to be a powerful predictor of financial development. Leuz et al. (2002) present a cluster analysis using nine institutional variables used in La Porta et al. (1997 and 1998). The groups they obtain are very similar to the simple code-law and common-law categorizations.

Ownership structure is both related with the incentives for management to manipulate earnings as with the internal corporate governance setting. Loebbecke et al. (1989) report that charges of fraudulent reporting are more frequent against closely held firms. We measure ownership concentration as the median percentage of common shares owned by the largest three shareholders in the 10 largest privately owned non-financial firms (La Porta et al., 1998).

As additional control variables, we consider a range of economic and institutional variables. In prior work, per-capita GDP is an overwhelmingly influential variable in explaining the differences in observed financing, ownership and payout policies around the world. We also control for the importance of the capital market since it may influence the behaviour of the manager. Studies found indicate that firms report positive unexpected accruals prior to seasoned equity offers and initial public offers (Teoh, Welch, and Wong, 1998 and Teoh, Wong, and Rao, 1998), and stock-financed acquisitions (Erickson and Wang (1998)). Other studies of earnings management for capital market reasons have shown that earnings are managed to meet the expectations of financial analysts or management (e.g. Payne et al., 1997 and Burgstahler and Eames, 1998). The “importance of the equity markets” is measured by the mean rank across three variables used in La Porta et al. (1997): (1) the ratio of the
aggregate stock market capitalization held by minorities to gross national product, (2) the number of listed domestic firms relative to the population, and (3) the number of IPOs relative to the population. Each variable is ranked such that higher scores indicate a greater importance of the stock market. To account for formal institutions, Leuz et al. (2002) consider outside investor rights and legal enforcement and find that both are important to explain earnings management. The outside investor rights variable is the “anti-director rights” index created by La Porta et al. (1998). It is an aggregate measure of minority shareholder rights and ranges from zero to six. Legal enforcement is measured as the mean score across three legal variables used in La Porta et al. (1998): (1) the efficiency of the judicial system, (2) an assessment of rule of law, and (3) the corruption index. All three variables range from zero to ten.

We also run robustness checks in which we test for the potential importance of other cultural dimensions. For those robustness checks, we add the Uncertainty avoidance, power distance and masculinity for the analysis on the relationship between individualism and earnings discretion and we add harmony and embeddedness to check the robustness of the relationship between egalitarianism and earnings discretion. We show that our results for individualism and egalitarianism are robust to inclusion of the other culture factors.

V. RESULTS

V.A. Descriptive analysis

We first describe the variables of interest we consider, which are presented in table 4. We consider data from 31 different countries, 39% of which have a common-law tradition and 61% a code-law tradition. It is interesting to see that, as defined in EM discretion 2, the average number of “small profits” is three times the number of “small losses”. The data also reflects that the average firm in the average country has an ownership concentration of 41%.

Table 5 presents the correlation matrix for the considered variables. We observe a high correlation between the two cultural variables and legal enforcement. Societies where individualism and egalitarianism is high tend to have high legal enforcement. The more important personal values are, the more important it will be to provide protection. On the other hand, only individualism is correlated with ownership concentration. In addition, we observe that outside investor protection is highly correlated with ownership concentration,
capital market importance, and legal tradition. Countries with better minority shareholders rights, typically common-law countries, have more dispersed ownership and more developed capital markets.

In order to motivate some of our findings of section V.B we present here the results of an exploratory analysis of the main variables that we are studying in this paper. It is important to remember that the main point we want to make with our work relies on the inclusion of cultural variables in the explanation of Earning Management (EM) behaviour under a set of given controls.

Our first step in the analysis consists in performing a mean-based partition cluster analysis of the two cultural variables we are considering (Individualism and Egalitarianism). With this partition we obtain two sets of countries distinguished by their cultural characteristics. In graph 1 we plot the countries in our sample against Individualism and Egalitarianism in order to visualize the different grouping-patterns that we have generated with the cluster analysis. The point labels show the name of the country followed by the associated cluster number. In cluster 2 we basically have Asian countries with the inclusion of Greece, Portugal and Spain, this last one very close to the border-line with cluster 1. In cluster 1 we find European countries jointly with USA, Canada and Australia.

On the one hand, cluster 1 is collecting highly individualist countries with an elevated recognition of the equality of treatment. On the other hand, cluster 2 represents countries with opposite characteristics (low levels of Individualism and Egalitarianism). It is worthy to notice how clear the grouping pattern is between both groups of countries with the apparent exemption of Greece, Portugal and Spain. Even so, the location of these three countries into the graph is not so surprising. Leuz et al. (2002) cluster for institutional setting and find similar results with respect to Spain, Portugal and Greece.

The next step consists in the study of the EM measures associated to the two groups of countries we have found in the analysis of the cultural dimensions. For this purpose we perform a Principal Component Analysis (PCA) of the two Earning Discretion variables in order to resume them in a single component. In table 6 we present some descriptive statistics for the earnings discretion variable discriminated by the two groups of countries we have
found before. We also perform a test\(^1\) of means for the two groups of countries. As it can be seen the test rejects the null hypothesis of equal means at the 1% level of confidence. This provides evidence that the cultural groups we have found are also implying some significant difference in the behaviour of the earnings discretion variable.

------------------- Insert table 6 about here -------------------

Finally, in order to visualize the degree of correspondence between the cultural groups and EM behaviour we perform a mean-based cluster analysis of the earnings discretion component generating again two sets of countries with different EM characteristics. We find that the correspondence between the cultural clusters and the EM clusters is quite high, with 21 countries out of 27 associated to same groups. In graph 2 we plot again the countries against the two cultural variables but now we add the number of cluster accordingly to the earnings discretion partition. As it can be observed, the cultural partition is misleading in the cases of Malaysia and Philippines on one hand, and Austria, Germany, Italy and Switzerland on the other. These last four countries present relative high level of EM in comparison with other countries in the same cultural group, and the opposite is true for Malaysia and Philippines. Finally, the EM partition is successful in the classification of the problematic countries we have commented before (Greece, Portugal, Spain).

------------------- Insert graph 2 about here -------------------

\(V.B. \text{ The role of investor protection: Multiple regression analysis}\)

We next consider the multivariate regressions. Since we have substantial amount of correlation between the independent variables, we propose to start from a initial model capturing formal institutions and internal organization of the firm. Formal institutions reflect the institutional pressure to behave appropriately and have been shown to be link with earnings management. We initially proxy for institutional settings by legal tradition, afterwards we also consider legal enforcement and outside investor protection. Ownership concentration proxies for the internal corporate governance structure of the firm. We first estimate earnings management against legal tradition and ownership structure. Next, we also test for the robustness of our results by including other control variables used previously in

\(^1\) We previously run an Anova analysis and we found a significant difference in variances, therefore we perform a mean test with unequal variances.
literature. For each of the models presented, we show that the inclusion of the cultural variable is justified statistically.

From Model 1 in Table 7, we observe that ownership concentration and legal tradition explain a large proportion of the variance in earnings discretion. Managers from countries with a high ownership concentration and civil-law tend to misbehave more. Table 9 considers the relationship between individualism and earnings discretion, while the relationship between egalitarianism and earnings discretion is presented in Table 10. In Model 2, we include the Hofstede cultural value Individualism to the initial model. We find that individualism is highly significant and negative related with earnings discretion. This result is in line with our hypothesis. We also see a significant increase in the variance explained by the model from 47% to 58%.

Model 3 to 6 in Table 7 we add several economic and institutional variables to demonstrate the robustness of the relationship between individualism and earnings discretion. Model 3, Model 4 and Model 5 introduce GDP per-capita, Capital Market Importance, and Legal Enforcement respectively, none of which are significant. However, we confirm that Individualism is still highly significant; the variance explained by the model is still above 56%. Finally, in Model 6 we include Outside Investor Protection as a control variable instead of Legal Tradition. Outside investor protection correlates highly with legal tradition. The results are consistent and always in line with hypothesis one.

In order to test our second hypothesis we use the same methodology. The results are presented in Table 8. We start with the same initial model, only now for 27 observations instead of 31. For Belgium, Pakistan, South Africa and Thailand we were unable to obtain the Schwartz value. Similar to model 1 of Table 7, we find that legal tradition and ownership concentration explain a substantial amount of variance of the dependent variable. Model 8 includes Egalitarianism in the specification. We find that egalitarianism is negative related with earnings discretion. This is line with our hypothesis, since egalitarianism relates to a broad set of conceptually compatible policy choices that concern tolerance for abuses of market and political power. Our results are also in line with prior research finding that egalitarianism correlates positively with lower corruption and greater transparency in financial markets (Siegel et al., 2006).

In order to test our second hypothesis we use the same methodology. The results are presented in Table 8. We start with the same initial model, only now for 27 observations instead of 31. For Belgium, Pakistan, South Africa and Thailand we were unable to obtain the Schwartz value. Similar to model 1 of Table 7, we find that legal tradition and ownership concentration explain a substantial amount of variance of the dependent variable. Model 8 includes Egalitarianism in the specification. We find that egalitarianism is negative related with earnings discretion. This is line with our hypothesis, since egalitarianism relates to a broad set of conceptually compatible policy choices that concern tolerance for abuses of market and political power. Our results are also in line with prior research finding that egalitarianism correlates positively with lower corruption and greater transparency in financial markets (Siegel et al., 2006).

------------------- Insert table 7 about here -------------------

------------------- Insert table 8 about here -------------------
In addition, this model outperforms the initial model 7 as the explained variances jumps from 53% to 62%. The Models 9 to 12 check for sensitivity analyses incorporating new control variables as previously. Our results are consistent for all specifications.

We also run robustness checks in which we test for the potential importance of other cultural dimensions. For those robustness checks, we add uncertainty avoidance, power distance and masculinity for the analysis on the relationship between individualism and earnings discretion and we add harmony and embeddedness to check the robustness of the relationship between egalitarianism and earnings discretion. The results are presented in table 9. Model 13, 14 and 15 include uncertainty avoidance, power distance and masculinity respectively. In all models Individualism and legal tradition are always negative and Ownership Concentration is always positive and highly significant. From the new added variables, only Masculinity is significant and positively related with EM Discretion; however, when we include it in a specification with the other four Hofstede’s cultural dimensions, only Individualism remains significant.

For the case of Schwartz’s cultural dimensions, we proceeded in the same way. Models 17 and 18 include the variables embeddedness and Harmony respectively, besides Egalitarianism. Model 19 include the three variables together. We observe that the relationship between individualism and earnings discretion is significant and very stable. The results for Harmony are not consistent and although we find a significant negative relationship between embeddedness in models 17 and 19, the relationship is not robust. If we run model 17 without egalitarianism we find no significant relationship between embeddedness and earnings discretion. This robustness analysis confirms that the results obtained previously relating Individualism and Egalitarianism are not only in line with our hypothesis but also are consistent to different model specifications.

In summary, our empirical findings show that while a number of institutional factors appear to be correlated with earnings management activities around the world, the cultural values Individualism and Egalitarianism are robust determinants of earnings discretion. While we do not rule out the complementary role of the formal institutional variables, specific informal institutional variables (individualism and egalitarianism) seem to be a key primitive that drives differences in earnings management across countries.
VI. CONCLUSIONS AND LIMITATIONS

The disclosure of “true and fair” financial earnings is crucial to corporate governance because it provides outsiders with a basis to monitor their claims and exercise their rights (see, for example, OECD Principles of Corporate Governance, 1999). Using theory and empirical data from social psychology to measure for cultural differences between countries, we hypothesize that earnings management is lower in cultures with high levels of individualism and high levels of egalitarianism.

We test this hypothesis using financial accounting data for companies from 31 countries. We first perform a descriptive cluster analysis between the two cultural values and the measures of earnings discretion. The cluster analysis indicates that countries with low levels of individualism and low levels of egalitarianism have significantly higher levels of earnings discretion.

We undertake a multiple regression analysis to further quantify the impact of cultural values on firms’ earnings management practices. The regression results show that earnings management is negatively associated with individualism and egalitarianism after controlling for other important factors such as ownership concentration, legal tradition, GDP per capita, outside investor protection, legal enforcement and capital market importance. The results complement the findings of Leuz et al. (2002) who finds that earnings management tend to be higher when legal protection is low. Our empirical findings point to an important link between informal institutions and the quality of financial information provided to market participants around the world.

Our results show that besides formal institutions it is relevant to consider cultural differences to explain earnings management behaviour. For policy making it may be important to consider the interaction between informal institutions and formal institutions.

When interpreting our results, one should bear in mind a least two limitations: First, we work with a limited number of observations. This is however a common limitation for cross-country studies. Furthermore, our analysis is using proxies to measure earnings management, cultural dimensions and institutional settings. However, we try to reduce the risk of having inadequate proxies by using only variables used in high-quality published papers.
References


Table 1
The Hofstede Cultural Value Dimensions

<table>
<thead>
<tr>
<th>Variable</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individualism</td>
<td>A preference for a loosely knit social framework in which individuals take care of themselves and their immediate families. Collectivism is the alternative and is a preference for a tightly knit social framework in which individuals expect relatives, clan, or other in-group to look after them, in exchange for loyalty. Hofstede, G. (1980)</td>
</tr>
<tr>
<td>Power Distance Index</td>
<td>The extent to which people accept that power in institutions and organizations is distributed unequally. Hofstede, G. (1980)</td>
</tr>
<tr>
<td>Masculinity</td>
<td>A preference for achievement, heroism, assertiveness, and material success rather than femininity, which is a preference for relationships, modesty, caring for the weak, and quality of life. Hofstede, G. (1980)</td>
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</table>

Table 2
The Schwartz Cultural Value Dimensions

<table>
<thead>
<tr>
<th>Variable</th>
<th>Description</th>
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</thead>
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<tr>
<td>Egalitarianism/Hierarchy</td>
<td>Concerns guaranteeing responsible behavior that will preserve the social fabric. Hierarchy refers to a cultural emphasis on obeying role obligations within a legitimately unequal distribution of power, roles, and resources. Egalitarianism refers to an emphasis on transcendence of selfish interests in favor of voluntary commitment to promoting the welfare of others. Schwartz, S H, (1992)</td>
</tr>
<tr>
<td>Embeddedness/Autonomy</td>
<td>Concerns the desirable relationship between the individual and the group. Embeddedness represents a cultural emphasis on maintenance of the status quo, propriety, and restraint of actions or inclinations that might disrupt group solidarity or the traditional order. Autonomy describes cultures in which the person is viewed as an autonomous, bounded entity who finds meaning in his or her own uniqueness. Intellectual Autonomy refers to a cultural emphasis on the desirability of individuals independently pursuing their own ideas and intellectual directions; Affective Autonomy to a cultural emphasis on the desirability of individuals independently pursuing affectively positive experience. Schwartz, S H, (1992)</td>
</tr>
<tr>
<td>Mastery/Harmony</td>
<td>Concerns the relation of humankind to the natural and social world. Mastery refers to a cultural emphasis on getting ahead through active self-assertion. Harmony refers to an emphasis on fitting harmoniously into the social and natural environment. Schwartz, S H, (1992)</td>
</tr>
<tr>
<td>Variable</td>
<td>Description</td>
</tr>
<tr>
<td>---------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
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<tr>
<td>EM_Disc</td>
<td>Is the principal component score for earnings discretion. This variable was constructed using principal components analysis of two earnings discretion proxies (1) the country’s median ratio of the absolute value of accruals and the absolute value of the cash flow from operations, and (2) the number of “small profits” divided by the number of “small losses” for each country. A firm-year observation is classified as a “small profit” if net earnings (scaled by lagged total assets) are in the range (0,0.01). A firm-year observation is classified as a “small loss” if net earnings (scaled by lagged total assets) are in the range (-0.01,0). Net earnings are bottom-line reported income after interest, taxes, special items, extraordinary items, reserves and any other items included in bottom-line net income. Leuz, C, (2002).</td>
</tr>
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<td>Ownership Concentration</td>
<td>Ownership concentration is measured as the median percentage of common shares owned by the largest three shareholders in the 10 largest privately owned non-financial firms (La Porta et al., 1998).</td>
</tr>
<tr>
<td>Legal Tradition</td>
<td>Legal tradition is based on La Porta et al. (1998). Dummy variable taking a value of 1 if the country has a common-law tradition and zero if the country has a code-law tradition.</td>
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<tr>
<td>GDP Per Capita</td>
<td>Averaged per-capita GDP, in constant 1995 US dollars, from 1990 to 1999.</td>
</tr>
<tr>
<td>Capital Market Importance</td>
<td>Capital market importance is measured by the mean rank across three variables used in La Porta et al. (1997): (1) the ratio of the aggregate stock market capitalization held by minorities to gross national product, (2) the number of listed domestic firms relative to the population, and (3) the number of IPOs relative to the population. Each variable is ranked such that higher scores indicate a greater importance of the stock market.</td>
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<tr>
<td>Legal Enforcement</td>
<td>Legal enforcement is measured as the mean score across three legal variables used in La Porta et al. (1998): (1) the efficiency of the judicial system, (2) an assessment of rule of law, and (3) the corruption index. All three variables range from zero to 10.</td>
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<tr>
<td>Outside Investor Protection</td>
<td>The outside investor protection variable is the “anti-director rights” index created by La Porta et al. (1998). It is an aggregate measure of minority shareholder rights and ranges from zero to six.</td>
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Table 4
Descriptive statistics

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<th>St dev</th>
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Table 5
Correlation matrix

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Significance level of 0.10: *; Significance level of 0.05: **

Table 6
Two-Sample “t” test with unequal variances

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Significance level of 0.10: *; Significance level of 0.05: **
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<th>Dependent Variable: EM_Disc</th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
<th>Model 5</th>
<th>Model 6</th>
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<td>(0.005)</td>
<td>(0.007)</td>
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<td>1.18</td>
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<td>(0.78)</td>
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Significance level of 0.10: *; Significance level of 0.05: **
Table 8
OLS Regression results for Earnings Discretion against Egalitarianism

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<tr>
<th>Dependent Variable:</th>
<th>Model 7</th>
<th>Model 8</th>
<th>Model 9</th>
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<tr>
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<td>0.622</td>
<td>0.608</td>
<td>0.619</td>
<td>0.607</td>
<td>0.538</td>
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<td>F</td>
<td>15.61</td>
<td>15.29</td>
<td>11.10</td>
<td>11.56</td>
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<td>Prob. &gt; F</td>
<td>0.000</td>
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Significance level of 0.10: *; Significance level of 0.05: **
### Table 9
OLS Regression results for Earnings Discretion against Cultural values

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<thead>
<tr>
<th>Dependent Variable: EM_Disc</th>
<th>Model 13</th>
<th>Model 14</th>
<th>Model 15</th>
<th>Model 16</th>
<th>Model 17</th>
<th>Model 18</th>
<th>Model 19</th>
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</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>-0.37</td>
<td>-0.21</td>
<td>0.39</td>
<td>-0.28</td>
<td>11.88**</td>
<td>3.14</td>
<td>10.40**</td>
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<td></td>
<td>(0.82)</td>
<td>(0.81)</td>
<td>(0.63)</td>
<td>(0.79)</td>
<td>(4.13)</td>
<td>(1.99)</td>
<td>(4.22)</td>
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<td>Individualism</td>
<td>-0.013**</td>
<td>-0.014**</td>
<td>-0.015**</td>
<td>-0.015**</td>
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<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>(0.005)</td>
<td>(0.006)</td>
<td>(0.005)</td>
<td>(0.006)</td>
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<td></td>
<td></td>
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<tr>
<td>Egalitarianism</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-1.15**</td>
<td>-1.64**</td>
<td>-2.34**</td>
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<tr>
<td>Ownership concentration</td>
<td>2.22**</td>
<td>2.24**</td>
<td>2.07**</td>
<td>2.11**</td>
<td>4.23**</td>
<td>3.26**</td>
<td>3.93**</td>
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<tr>
<td></td>
<td>(0.78)</td>
<td>(0.81)</td>
<td>(0.75)</td>
<td>(0.79)</td>
<td>(0.75)</td>
<td>(0.73)</td>
<td>(0.77)</td>
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<tr>
<td>Legal tradition</td>
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<td>-0.96**</td>
<td>-1.07**</td>
<td>-0.95**</td>
<td>-0.78**</td>
<td>-0.64*</td>
<td>-0.50</td>
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<td>(0.28)</td>
<td>(0.25)</td>
<td>(0.24)</td>
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<td>(0.26)</td>
<td>(0.35)</td>
<td>(0.34)</td>
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<tr>
<td>Uncertainty Avoidance</td>
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<td>-</td>
<td>0.004</td>
<td>-</td>
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<td>(0.006)</td>
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<td>(0.006)</td>
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<td>Power Distance</td>
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<td>(0.007)</td>
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<td>Masculinity</td>
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<td>0.011**</td>
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<td>(0.006)</td>
<td>(0.006)</td>
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<tr>
<td>Embeddedness</td>
<td>-</td>
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<td>-</td>
<td>-1.05**</td>
<td>-</td>
<td>-0.96*</td>
<td>-0.75**</td>
</tr>
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<td></td>
<td>(0.05)</td>
<td></td>
<td>(0.48)</td>
<td>(0.57)</td>
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<td>Harmony</td>
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<td>-</td>
<td>-</td>
<td>-0.91</td>
<td>-0.75**</td>
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<tr>
<td>N° Observations</td>
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<td>0.000</td>
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</tbody>
</table>

Significance level of 0.10: *; Significance level of 0.05: **
Graph 1

Cultural dimensions

Graph 2

Cultural dimensions and EM
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