Why do national GAAP differ from IAS? The role of culture

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Why do national GAAP differ from IAS? The role of culture

Abstract

In this paper, we investigate the role of culture as an explanatory factor underlying differences between national GAAP and international accounting standards (IAS). National GAAP can differ from IAS in two ways: (1) divergence: both national GAAP and IAS cover a specific accounting topic but prescribe different methods; or (2) absence: national GAAP do not cover an accounting issue regulated by IAS. Based on Nobes' (2001) data, we construct a measure for the level of divergence of national GAAP benchmarked on IAS. We also create a measure (labeled absence) to assess the scope of national accounting rules compared to IAS. Our sample is made up of 52 countries. We show that culture matters more than legal origin (common law/civil law) in explaining divergences from IAS. This result is robust to two proxies for culture [Hofstede (2001) and Schwartz (1994)]. Our findings contribute to the ongoing debate on accounting harmonization. More specifically, they suggest that the technical and/or political dimensions of the debate, although essential, are not the only ones involved. Opposition to IAS is not exclusively driven by contractual motives, a claimed technical superiority or legal origin, but also by diversity in cultural factors. Another contribution of this paper is the development of a two-dimensional score to measure the differences between national GAAP and IAS.

Key words: International Accounting Harmonization – Culture – Hofstede - Schwartz

1. Introduction

The importance of international accounting harmonization is now widely accepted for several reasons. Firstly, the rapid development of international capital markets is strengthening their dominant role as economic resource distributor. How information is disclosed to the market is a central issue in ensuring market efficiency. Secondly, the increasingly frequent cross-listing of multinationals generates an urgent need for a single universal set of accounting standards for these firms, in order to reduce information production costs and send out a unified, reliable message to the market. Thirdly, the activities of institutional investors are becoming increasingly internationalized. Their presence in foreign markets is forcing domestic listed firms to play the accounting game by global rules.

As a legitimate pretender to the role of global GAAP, the International Accounting Standards (IAS in the rest of the paper) (renamed International Financial Reporting Standards – IFRS from 2001) have been growing in fame since the endorsement in 2000 of the Comparability Project by the IOSCO and the reform in 2001 that saw the IASC become the IASB. In June 2002, the European Union decided to make IAS compulsory for the consolidated accounts of all its listed companies from 2005 (European Union, 2002). This decision was followed by the introduction of similar policies in Russia, Australia and New Zealand. In October 2002, the FASB and IASB issued a memorandum of understanding, marking a significant step towards formalizing their commitment to the convergence of U.S. and international accounting standards. However, not all countries are traveling down the road of convergence towards IAS at the same speed. The domestic accounting standards of the "slower" countries often cover fewer issues than the IAS.

There are two ways that a national GAAP system can differ from IAS: (1) *divergence*: both national GAAP and IAS cover a specific accounting topic but prescribe different methods; or (2) *absence*: national GAAP does not cover an accounting issue regulated by IAS. Conformity is easily understood in this context, but how can we explain the remaining differences (i.e. divergence or absence), especially in 2001, after several decades of development of IAS? In this paper, we investigate the role of countries' cultural values and legal origin in explaining the differences between national GAAP and IAS as of 2001.

Based on the study of "GAAP 2001" (Nobes, 2001) conducted by several international accounting firms, 62 countries are attributed scores for their divergence from IAS and the

absence of national accounting standards on issues covered by IAS. Note that our measures are created on the basis of 2001 data. This allows us to analyze the "true" *divergence* and *absence* indexes, as these differences are observed before the date of mandatory application of International Accounting Standards in certain regions (e.g. 2005 for the European Union and Australia).

We then analyze the relationship between these accounting harmonization scores and culture values, as assessed with reference to the work of Hofstede (1980; 1991; 2001) and Schwartz (1994). Another possible approach would have been to investigate the influence of institutional/economic factors on our measures. However, recent literature in economics and finance (Greif, 1994; Landes, 2000; Stulz & Williamson, 2003) demonstrates that culture is a determinant of institutions, and for that reason, this article stresses the importance of culture rather than institutional factors.

For more comprehensive coverage of the issue, we also integrate institutional factors into our model, in the form of legal origin, which proxies for various economic/institutional factors (La Porta et al., 1998). In particular, as past research identified significant links between accounting disclosures and legal systems (Jaggi & Low, 2000; Hope, 2003), we hypothesize significant differences of approach to the IAS between two sub-samples: code law countries and common law countries.

We find that cultural values matter more than legal origin in explaining divergences from IAS. However, with regard to the absence index, we find no significant relationship, and legal origin does not appear to have any influence on divergence from IAS or absence of local standards. These results contribute to the existing literature in two ways: (1) the relationship between culture and international accounting harmonization has not been studied previously, and (2) although legal origin is usually considered as an explanatory variable for accounting information (Ball et al., 2000), this does not seem to be the case at the level of accounting regulation in the context of international accounting harmonization.

This research will be valuable not only in understanding the current differences between IAS and national GAAP, but also in predicting the potential difficulties facing various countries in the move towards future international accounting harmonization. The rest of the paper proceeds as follows. The next section provides a review of the literature on international accounting differences and describes the measurement tool we used. Section 3 analyzes the relationship

between culture and accounting, and lays out our hypotheses. Section 4 explains our research design and measurement of independent variables. Section 5 analyzes the empirical findings, section 6 presents the limitations of this study and section 7 concludes the paper.

2. International accounting differences

2.1. Past research on measurement of international accounting differences

In the literature, various data sources have been used to measure international accounting differences. During the 1970s, Price Waterhouse International (1973; 1975; 1979) published a series of studies on accounting principles and reporting practices worldwide. In 1973, the survey covered 233 principles and practices in 38 countries. The 1975 survey constitutes a better data source, with eight additional countries and 264 principles and practices covered. The samples of countries in both studies have a bias towards Western countries, and certain areas of the world are under-represented. The 1979 survey extended further to cover 64 countries. These surveys were used in several international accounting studies (e.g. Frank, 1979; Nair & Frank, 1980, 1981; McKinnon & Janell, 1984; Doupnik & Taylor, 1985), all of which focus on accounting requirements and standards.

Other studies (Evans & Taylor, 1982; Nobes, 1987; van der Tas, 1988; Emenyonu & Gray, 1996; Murphy, 2000) are more interested in company reporting practices. Tay and Parker (1990) review several of these studies (see also van der Tas, 1992).

In their study on the accounting disclosure requirements of 35 stock exchanges throughout the world, Adhikari and Tondkar (1992) developed another tool to measure international accounting differences. They developed a composite disclosure index to measure the overall quantity and intensity of compulsory disclosures (44 information items, financial and non-financial) in the listing and filing requirements of different stock exchanges. The main limitation of their index for measuring international differences is that it covers only disclosures in annual reports.

After summarizing the information on accounting practices in 15 countries (various European countries, the U.S., Canada, Australia and Japan) plus IAS, Ordelheide and Semler (1995) proposed the TRANSACC Reference Matrix. Each country's complete accounting rules are presented in tabular form and the rules on any particular accounting issue are shown for all the countries covered by TRANSACC. Accordingly, the matrix covers those rules that determine the

content of the balance sheet and the income statement, including recognition and valuation as well as consolidation methods applied in the respective countries. It provides information on each accounting method under review in the following form: R (required), A (allowed), F (forbidden). Ordelheide and Semler's study provides a comprehensive examination of different accounting methods, but is restricted to the most developed countries in the world. In subsequent literature, several studies have used this matrix to classify countries according to their accounting differences (e.g. d'Arcy, 2001).

More recently, Ashbaugh and Pincus (2001) sought to determine whether the variation in accounting standards across national boundaries relative to IAS had an impact on financial analysts' ability to forecast non-U.S. firms' earnings accurately. They analyzed accounting practices in 13 countries to identify differences in countries' accounting standards relative to IAS, covering both differences in disclosure requirements and measurement methods for IAS versus sample firms' domestic GAAP in 1993.

To conclude, there is room for improvement in the existing measurements for international accounting differences. Some of them are out of date (Price Waterhouse International, 1973, 1975, 1979); others concern only a limited number of countries (Ordelheide & Semler, 1995; Ashbaugh & Pincus, 2001), cover only a selection of accounting issues (Adhikari & Tondkar, 1992) or deal with measurement of accounting differences on a corporate reporting basis (Evans & Taylor, 1982; van der Tas, 1988; Emenyonu & Gray, 1996).

2.2. Measuring a country's accounting harmonization

We obtain our data on differences and similarities between national GAAP and IAS from "GAAP 2001: A Survey of National Accounting Rules Benchmarked against International Accounting Standards" published by Andersen, BDO, Deloitte Touche Tohmatsu, Ernst & Young, Grant Thornton, KPMG and PricewaterhouseCoopers (Nobes, 2001).

In this study, "partners in the large accountancy firms in more than 60 countries" [62 countries, to be precise] were asked to "benchmark their local written requirements against some 80 accounting measures, focusing on standards (both IAS and national) in force for the financial reporting period ending 31 December 2001. The resulting high level summaries were prepared by identifying, for the selected accounting measures, those instances in which a country would not allow (because of inconsistent requirements) or would not require (because of missing or

permissive requirements) the IAS treatment". Our measures are created on the basis of 2001 data. This allows us to analyze the "true" *divergence* and *absence* indexes, as these differences are observed before the date of mandatory application of International Accounting Standards in certain regions (e.g. 2005 for the European Union and Australia).

For each country, the accounting differences with IAS are listed in four categories:

(1) "accounting may differ from that required by IAS because of the absence of specific rules on recognition and measurement",

(2) "no specific rules requiring disclosures",

(3) "inconsistencies between" national "and IAS rules that could lead to differences for many enterprises in certain areas",

(4) "in certain enterprises, these other issues could lead to differences from IAS".

Appendix A shows the result of the survey concerning one sample-country: Australia. We found ourselves confronted by several methodological issues. The result of the survey is "negatively" organized in the sense that it only includes "absent" or "inconsistent" items. Items that are "in conformity" or "present" or "consistent" are not disclosed (see Appendix A). Because it was crucial to identify these items for the purposes of this paper, we referred to the Survey Questionnaire, presented in "GAAP 2001" (p. 149-161). Appendix B presents the first two questions as an illustration. This questionnaire has 79 questions. The only way to identify "in conformity" items was to take all the questions from the questionnaire and search for the related item and/or IAS paragraph in the survey's results (see appendix A). We then assumed that an item related to a question not covered in the results was an "in conformity" item. This brought us to realize that the order of questions in the questionnaire and the order of items mentioned in the results were not always consistent. Additionally, some topics listed in the results did not correspond exactly to a question: for instance, some questions were split into two items.

We therefore matched the questions and results country by country. It was then decided to create a comprehensive list of items, comprising all items found in both the results and the questions. We identified 111 items (starting from the initial 79 questions in the questionnaire).

With this list of items, for each country we were able to prepare the following codification, concentrating on differences:

Code	Meaning
A	Absence of specific rules on recognition and measurement
B	No specific rules requiring disclosures
C	Inconsistencies that could lead to differences for many enterprises
D	Differences in some enterprises

As we found the distinction was not always clear-cut between categories C (differences for many enterprises) and D (differences in certain enterprises), we merged these two categories. As categories A and B refer to the absence of rules (recognition/measurement or disclosures), we also merged these two categories.

Our final classifications were thus as follows:

Code	Meaning
1	"Divergence": inconsistencies that could lead to differences for many or some enterprises
2	"Absence": of specific rules on recognition/measurement or disclosure

The score per country for each category is determined by the number of accounting items included in the categories. In all, 62 countries' national GAAP were studied, but only a maximum of 52 are presented in this study due to the availability of data concerning our independent variables: Hofstede's cultural dimensions. Using Schwartz's (1994) value types (see below) leads to a restricted sample of 32 countries.

Table 1 presents the divergence/absence/conformity scores for the 52 countries studied (both present in our IAS database and in Hofstede's sample). Of the 111 items identified in the International Accounting Standards, on average, 21 are divergent from national rules, 24 are absent from national principles, and 66 are in conformity.

Insert Table 1 about here

We then conducted an analysis by IAS. For each item we compute the number of countries where local rules were divergent (divergence), less comprehensive (absence), different (absence or divergence) or equivalent to IASB rules. Since we have 52 countries in our sample, the total score for all three dimensions (divergence, absence, and conformity) equals 52. We then aggregate items for each IAS. For example, three items relate to IAS 1. The sum of the scores is thus 156 (=52*3). Since the number of items per IAS is not constant (three items for IAS 1, as mentioned, 5 items for IAS 2, etc.), we present the percentage of items divergent, absent, different or in conformity compared to IAS. Going back to the example of IAS 1, we found no countries with diverging standards, 29 with absent items and 127 with items in conformity (total: 156). The corresponding percentages are 0, 19% (= 29/156) and 81% (= 127/156). We interpret this percentage as an aggregate measure of divergence/absence/difference/conformity of local

standards with regard to a given IAS. For instance, national standards are 81% in conformity with IAS 1. Table 2 presents the results by IAS.

Insert Table 2 about here

Table 2 shows that the four most harmonized accounting standards are “inflation adjustment”, “associates”, “joint ventures” and “tangible assets”, while the four least harmonized accounting standards are “discontinuing operations”, “financial instruments: recognition and measurement”, “employee benefits” and “financial instruments”. Interestingly, these international accounting differences exist for various reasons. For “discontinuing operations” and “employee benefits”, the difference mainly arises from the lack of relevant accounting standards in many countries; financial instruments, on the other hand, are a major area of international divergence because many nations take different approaches from IAS.

3. How does culture influence accounting?

In this section, we briefly describe how cultural issues have been introduced into international accounting research, with reference first to Hofstede’s cultural dimensions model (Hofstede, 1980, 1991, 2001), then the conception of accounting values by Gray (1988). We also discuss the cultural dimensions of values, introduced more recently by Schwartz (1994). Finally, we present our hypotheses.

3.1. Hofstede’s cultural dimensions model

“Culture is defined as collective programming of the mind; it manifests itself not only in values, but in more superficial ways: in symbols, heroes, and rituals” (Hofstede, 2001, p. 1). Based on an attitude survey of IBM employees in 66 countries during the 1970s, Hofstede developed country-based indices corresponding to four dimensions of national culture for each country surveyed. With the help of this model, cultural differences and their consequences between nations, societies and regions can be described in detail. Here are the definitions of these key dimensions.

Power Distance: The extent to which the less powerful members of society accept that power is unequally distributed.
Individualism: In individualistic societies there are few ties beyond those of the nuclear family, whereas in collectivist societies people belong to strong, cohesive in-groups.
Masculinity: In ‘masculine’ societies men are assertive, tough, and concerned with material success, whereas women are more modest, tender, and interested in the quality of life. In ‘feminine’ societies, both are equally concerned with quality of life.

Uncertainty Avoidance: The extent to which people feel threatened by uncertain or unknown situations. This is expressed in a need for formality, predictability and clear rules.

This cultural dimensions model has been challenged by several researchers (Bond, 1988; Smith et al., 1996). For example, Smith, Dugan and Trompenaars (1996) examined the replicability of Hofstede's methodologies. They raised the following question: did Hofstede's measures reflect the Western values of those who designed them? Hofstede had addressed this issue by undertaking a Chinese Value Survey (Hofstede & Bond, 1988), subsequent to which a further dimension, "Long-Term Orientation" (also named "Confucian Dynamism"), was introduced.

Long-Term Orientation: The extent to which people favor a pragmatic, future-oriented perspective - fostering virtues like perseverance and thrift - over short-term thinking.

Appendix C shows the scores for the first four dimensions for the 52 countries surveyed, the "long-term orientation" dimension being disregarded in this study because data is only available for a limited number of countries (23). For example, the U.S. scores 91 on *Individualism* and Guatemala 6, reflecting the fact that the U.S. is highly individualistic and Guatemala very collectivist.

Although Hofstede's cultural dimensions model has been criticized in the literature (Gernon & Wallace, 1995; Hofstede, 2002; McSweeney, 2002b, 2002a; Baskerville, 2003; Hofstede, 2003), it is extensively used in business-related (including accounting) research and psychological research (Sondergaard, 1994). Gernon and Wallace (1995) reviewed issues and problems in the application of Hofstede's cultural dimensions. They described cultural studies in international accounting research as "trapped by a paradigm myopia by its reliance on the framework suggested by Hofstede" (p. 85), partly because his survey was of one organization and may not be applicable to other contexts. Baskerville (2003) argued that "the embeddedness of the four dimensions in the social, political or economic measures indicates that the dimensions identified by Hofstede describe characteristics of different nations, most of which could be identified as socio-economic in origin".

Another possible criticism of Hofstede's approach is that the IBM data are now old and therefore obsolete. However, in his new edition of "Culture's consequences", Hofstede (2001, p. 73) argued that the dimensions found were assumed to have centuries-old roots. Furthermore, only data that remained stable across his two subsequent surveys were retained. Since 1980, Hofstede's cultural dimensions have been validated against other external measurements and

recent replications show no loss of validity (Hoppe, 1990; Sondergaard, 1994; Barkema & Vermeulen, 1997; van Oudenhoven, 2001).

3.2. Gray's accounting values

It was Gray (1988) who made the major contribution of introducing Hofstede's cultural dimensions into accounting. Based on Hofstede's model, he developed four accounting values:

Professionalism versus Statutory Control: A preference for the exercise of individual professional judgment and the maintenance of professional self-regulation as opposed to compliance with prescriptive legal requirements and statutory control.
Uniformity versus Flexibility: A preference for the enforcement of uniform accounting practices between companies and for the consistent use of such practices over time as opposed to flexibility in accordance with the perceived circumstances of individual companies.
Conservatism versus Optimism: A preference for a cautious approach to measurement so as to cope with the uncertainty of future events as opposed to a more optimistic, laissez-faire, risk-taking approach.
Secrecy versus Transparency: A preference for confidentiality and the restriction of disclosure of information about the business only to those who are closely involved with its management and financing as opposed to a more transparent, open and publicly accountable approach.

Gray (1988) then set out to link his accounting values to Hofstede's cultural dimensions. Following this proposition, a number of empirical research papers attempted to find empirical evidence on this topic, and the Hofstede-Gray framework was strengthened or enhanced by other studies (Belkaoui, 1989; Perera, 1989; Perera & Mathews, 1990; Chow et al., 1995; Hussein, 1996; MacArthur, 1996; Roberts & Salter, 1999). A number of hypotheses relating societal values to accounting sub-cultural values have been proposed. In particular, Perera (1989) developed a useful explanation of cultural factors specifically for the context of developing countries' accounting systems. He argues that a combination of accounting sub-cultural dimensions have considerable influence on accounting practices.

3.3. Schwartz's cultural dimensions of values

On the basis of data gathered during the 1988-1992 period from 86 samples drawn from 41 cultural groups in 38 nations, Schwartz (1994, p. 102) and Schwartz and Bardi (1997, p. 396) divided national cultures into seven value types:

Conservatism: Emphasis on the status quo, propriety, and restraint of actions or inclinations that might disrupt the solidary group or the traditional order.
Autonomy: the person is viewed as an autonomous entity entitled to pursue his or her individual interests and desires. It can be split into two sub-dimensions:
- Intellectual autonomy: emphasis on self-direction and flexibility of thoughts.
- Affective autonomy: emphasis on stimulation and hedonism.

Hierarchy: emphasis on the legitimacy of hierarchical role and resource allocation.

Mastery: emphasis on active mastery of the social environment through self-assertion. Promotion of active efforts to modify one's surroundings and get ahead of other people.
Egalitarian commitment: emphasis on transcendence of selfish interests, voluntary commitment to promoting the welfare of other people.
Harmony: emphasis on fitting harmoniously into the environment – protecting the environment, unity with nature, world of beauty.

Appendix D shows the scores for these seven dimensions for the countries surveyed (based on Schwartz, 1994, p. 112-115; Schwartz & Bardi, 1997, p. 397, 399). Thirty-two countries are common to Schwartz's sample and our sample of IAS indexes.

These seven culture-level value types are condensed by Schwartz into two broad dimensions: (1) autonomy versus conservatism and (2) egalitarian commitment and harmony versus hierarchy and mastery. Schwartz's (1994) cultural dimensions of values have recently been used in international accounting (Hope, 2003) or finance (Chui et al., 2002) research as a useful complement to Hofstede's model.

3.4. Hypotheses

3.4.1. Culture

The theory behind our hypotheses is that culture plays an important role in shaping the accounting standards and practices of a particular country (Perera, 1994). We expect that the level of harmonization with the IAS will vary between countries, especially between those with different cultural dimensions.

As said earlier, this study concentrates on differences between IAS and national GAAP (see previous section for a description of the two categories below):

1. Divergence: the national GAAP cover the specific accounting field also regulated by IAS, however the two sets of accounting standards propose different solutions;
2. Absence: the national GAAP do not cover the specific accounting field regulated by IAS.

Our first hypothesis is formulated on the basis of the two models of culture described above: Hofstede (1980; 1991; 2001) and Schwartz (1994).

> H1: Culture matters in explaining divergence with IAS, and absence of local standards on topics covered by IAS.

3.4.2. Legal origin

This paper concentrates primarily on culture as an explanatory variable for two reasons: first, recent literature in economics and finance (Greif, 1994; Landes, 2000; Stulz & Williamson, 2003) demonstrates that culture is a determinant of economic institutions; second, culture has not yet been taken into consideration in explaining international accounting harmonization. But we also introduce the legal origin factor into our models. Several authors have examined the link between disclosure levels and culture and legal origin (Jaggi & Low, 2000; Hope, 2003), and legal origin emerged as a variable that could explain disclosure level. Moreover, La Porta et al. (1998; 2000) show that legal origin proxies for various institutional factors such as investor protection and ownership concentration.

If it is accepted that IAS represent a more uniform, less conservative and less secretive set of standards than most national GAAP in the world, and that common law countries are traditionally favourable to full disclosure (Ball et al., 2000), then common law countries can be expected to show less divergence from IAS. They are also likely to have more highly-developed regulation systems than code law countries.

H2: Common law countries are likely to have accounting standards that diverge less from IAS than those of code law countries.

H3: Common law countries are likely to have accounting standards that are more extensive than those of code law countries with regard to IAS.

4. Measurement of the independent variables

We apply first Hofstede's cultural dimensions, then Schwartz's value types.

4.1. Research design No. 1: Hofstede's cultural dimensions

Hofstede (1980; 1991; 2001) proposed a definition and scoring system for five cultural dimensions as summarized in section 3: *power distance index* (*pdi*), *masculinity* (*mas*), *individualism* (*ind*), *uncertainty avoidance* (*ua*), and *long-term orientation*. As mentioned above, this last dimension is disregarded in this study because data is only available for a limited number of countries. Hofstede's initial sample included 66 countries, 52 of which are in our sample of

IAS difference/absence/conformity indexes (appendix E lists the 52 countries included in our sample).

A brief examination of the correlation matrix (not tabulated) reveals a potential multicollinearity problem, since *power distance* and *individualism* are both negatively and significantly correlated (0.63 at the 0.01 level).

To avoid this multicollinearity problem, which threatens to affect interpretation of the regression results, we will run several variations of the same model, excluding some variables. Collinearity can also be diagnosed by evaluating the VIF (variance inflation factor) for each variable. The VIF measures the degree to which each explanatory variable is explained by the other explanatory variables. Traditionally, collinearity is not considered to be a problem when the VIF does not exceed 10 (Neter et al., 1983). We will compute the VIF.

4.2. Research design No. 2: Schwartz's value types

Schwartz (1994) proposed a definition and sourcing system for seven value types as summarized in section 3: conservatism, intellectual autonomy, affective autonomy, hierarchy, mastery, egalitarian commitment and harmony. 32 countries are common to Schwartz's and our sample of IAS indexes (Appendix F lists the 32 countries included in this sub-sample). We examine the correlation matrix between these seven variables (table 3). Multicollinearity can be diagnosed because conservatism is negatively and significantly correlated with affective autonomy, intellectual autonomy and egalitarian commitment, whereas hierarchy is negatively and significantly correlated with egalitarian commitment and harmony.

Insert Table 3 about here

To avoid this multicollinearity problem, which seems to be more serious than in the case of Hofstede's variables, we conduct a factor analysis of the seven Schwartz value type variables using a principal component extraction method with a varimax rotation.

The eigen values associated with each factor are reported in table 4. Consistent with Hair et al. (1998), we select factors only if their eigen value is greater than one. A two-factor solution clearly appears, explaining more than 70% of the variance.

Insert Table 4 about here

Using the rotated factor matrix, shown in table 4, taking into account the sign and magnitude of factor loading, factor 1 and factor 2 can be interpreted as follows:

- A high score on factor 1 means that the inhabitants of the country accept *harmony* but not *hierarchy* and *mastery*. To simplify, we will call this the "*no hierarchy*" factor.
- Factor 2 is mainly driven by *autonomy (*either *affective* or *intellectual)* as opposed to *conservatism*. To simplify, we will call this the "*autonomy*" factor.

Our results are similar to those of Schwartz (1994) and Schwartz and Bardi (1997). To measure culture, we will use the scores corresponding to the two factors which, by construction, are not correlated.

4.3. Legal origin

Legal origin is defined by the common law/code law distinction as used by La Porta et al. (1997). As certain countries (mainly former Eastern bloc countries) are not included in these authors' sample, we use the classification devised by the University of Ottawa[1] to extend our sample.

5. Statistical results

For each cultural model, we start with a brief presentation of univariate statistics. A multivariate analysis is then conducted and results are discussed.

5.1. Univariate results

Table 5 reports correlations between divergence/absence and our cultural (panels A and B) and institutional factor (panel C) proxies.

Panel A reports the Pearson's correlation between the four cultural dimensions identified by Hofstede (1980; 1991; 2001) and our divergence/absence scores.

Insert Table 5 about here

- The divergence index is significantly negatively correlated with *power distance index* and positively with *individualism*. This gives support to our first hypothesis H1.
- The absence index is significantly positively correlated with *uncertainty avoidance*, in accordance with the same hypothesis H1.

[1] This list can be downloaded at the following address: http://www.droitcivil.uottawa.ca/world-legal-systems/eng-tableau.html.

Overall, univariate results give support to our first hypothesis.

Panel B reports the Pearson's correlation between the two main cultural dimensions identified on the basis of Schwartz (1994) and our divergence/absence scores.

- The divergence index is significantly positively correlated with *no hierarchy* (Factor 1) and *autonomy* (Factor 2). This gives support to our first hypothesis H1.
- The absence index is not correlated with *either of the two factors,* which is not in accordance with H1.

Panel C exhibits no correlation between the level of divergence and legal origin. However, there is a negative correlation between the level of absence and legal origin, which seems to provide support for our hypothesis H3: code law countries have a less extensive set of standards, compared to IAS, than their common law counterparts.

5.2. Regression results: Hofstede's cultural dimensions

Multivariate analysis results are presented in table 6. Panel A presents the results for the divergence index, and panel B for the absence index . For each, we estimate alternative specifications for two basic models:

$$Divergence = \alpha_0 + \alpha_1 Power\ distance\ index + \alpha_2 Individualism + \alpha_3 Masculinity + \alpha_4 Uncertaint\ y\ avoidance + \alpha_5 Common\ law + \varepsilon \quad \text{(eq. 1)}$$

$$Absence = \beta_0 + \alpha_1 Power\ distance\ index + \beta_2 Individualism + \beta_3 Masculinity + \beta_4 Uncertaint\ y\ avoidance + \beta_5 Common\ law + \varepsilon \quad \text{(eq. 2)}$$

We tabulate two specifications for each equation:

- Model 1 and model 3: with the four cultural variables only (*power distance index*, *individualism*, *masculinity* and *uncertainty avoidance*);
- Model 2 and model 4: full models including cultural variables and legal origin (*common law*).

We computed the VIFs, which are all lower than 2.08. Multicollinearity does not thus appear to be a real problem.

Insert Table 6 about here

In model 1, divergence with IAS is apparently explained by differences in culture, particularly as adjusted R^2 is almost 27%. *Divergence* is significantly related to *individualism* and *uncertainty avoidance*.

Concerning *uncertainty avoidance*, our results demonstrate that countries with a higher level of *uncertainty avoidance* will not prefer uniformity and will thus be less inclined to conform with IAS. The IAS are known to require a high level of disclosure, to favor a "transparent" (less secretive) approach to financial reporting and to be less conservative (Ball et al., 2000). On this aspect, our result is consistent with Salter and Niswander (1995) who carried out one of the most comprehensive studies on the relationship between culture and international accounting differences. They find a negative relationship between uniformity and *uncertainty avoidance*, in contrast to Gray (1988)'s prediction. They even mention "other principles for which a market in information exists and for which Gray's proposition may not hold" (p. 389). Finally, Doupnik and Salter (1995) associate a set of environmental factors and cultural dimensions with international differences in accounting practices. They propose a general model of international accounting development and empirically test its explanatory power. They find that a higher level of disclosure is consistent with a lower level of *uncertainty avoidance* and that low *uncertainty avoidance* groups tend to be less conservative. Countries experiencing a higher level of *uncertainty avoidance* would thus be expected to try to diverge from IAS in order to avoid the high level of disclosure required.

In model 2, we added legal origin (*common law*) to cultural variables. This variable turns out to be unrelated to the level of divergence, which goes against our hypothesis H2. This is an interesting result, showing that legal origin, which has appeared to be a valuable explanatory factor in several studies (Hope, 2003), does not, in fact, play a significant role, probably because the common law/code law dichotomy covers a wide diversity of national systems. We also note that the coefficient on uncertainty avoidance becomes non-significant, which suggests that strong links exists between institutional and cultural factors.

As robustness checks, we also ran the regressions with other specifications (excluding *masculinity* and legal origin, excluding *power distance index*, *masculinity* and legal origin and excluding *power distance index*). In one of the specifications, we excluded *masculinity,* following the example of Hope (2003, p. 222, 238), who mentions that some authors consider the link

between this dimension and disclosures (the topic studied by Hope) to be more questionable or less important (Gray, 1988; Haskins et al., 2000). Results (not tabulated) are similar.

The absence index (absence of national accounting rules on an issue covered by IAS) is not explained by cultural variables, since the F statistic is not significant at 5% in model 3. This result can be explained as follows. An analysis of the most frequent items covered by an IAS but not by national rules shows that they relate to IAS 14 (segment information), 19 (employee benefits), 22 (business combinations), 33 (earnings per share computation), 35 (discontinuing operations), 32 and 39 (financial instruments), and 40 (specifically, the fair value of property investments). These standards depend more on the level of economic development and the size of the capital market than national culture. To proxy for these two variables, we also added legal origin to the research design for measurement of absence (see table 5, panel B, model 4). La Porta et al. (1997) show that in common law countries, capital market development is higher than in code law countries. Nevertheless, legal origin does no better than cultural values in explaining the absence index, since the F statistic is still not significant at 5%.

Overall, our results suggest that a "divergence" status with regard to IAS can be explained by variations in national culture. Such is not the case for the absence index.

5.3. Regression results: Schwartz's value types

Multivariate analysis results are presented in table 7. Panel A presents the results for the *divergence* index, and Panel B for the *absence* index. For each, we estimate alternative specifications for two basic models:

$$Divergence = \alpha_0 + \alpha_1 Factor\ 1(\ No\ hierarchy\ ) + \alpha_2 Factor\ 2(\ Autonomy\ ) + \alpha_3 Common\ law + \varepsilon \quad \text{(eq. 3)}$$

$$Absence = \alpha_0 + \alpha_1 Factor\ 1(\ No\ hierarchy\ ) + \alpha_2 Factor\ 2(\ Autonomy\ ) + \alpha_3 Common\ law + \varepsilon \quad \text{(eq. 4)}$$

As we did with Hofstede's cultural values, we tabulate two specifications for each equation:

- Model 1 and model 3: with cultural factors only (*factor 1 – no hierarchy – and factor 2 - autonomy*);
- Model 2 and model 4: full model including cultural factors and legal origin (*common law*).

Insert Table 7 about here

The divergence from IAS is apparently explained by differences in culture, particularly as adjusted R^2 is almost 39%. Hypothesis H1 is backed by the multivariate analysis concerning *divergence* (model 1) since both variables, which correspond to factors 1 and 2 defined in section 4 above, are significant at conventional levels. Schwartz's first sub-dimension corresponds to our factor 1, i.e. autonomy versus conservatism. This shows that countries with a high autonomy score are more inclined to diverge from IAS.

The second sub-dimension corresponds to the values of egalitarian commitment and harmony versus hierarchy and mastery. Hierarchy can be linked to international accounting harmonization: the greater a country's acceptance of hierarchy, the more likely it is to accept external influence from a supra-national source, and consequently the IAS. The same applies to mastery: taking action to control the environment appears to be quite compatible with acceptance of an external influence. The same reasoning works conversely. Our results show that a country with a lower hierarchy/mastery score is likely to have accounting standards that diverge from IAS.

There is no association between *divergence* and legal origin (panel A, model 2), if this variable is added to factors 1 and 2, previously identified as summarizing Schwartz's value types.

The absence index (absence of national accounting rules concerning an issue covered by IAS) is not explained by cultural variables, since the F statistic is not significant at 5% whatever the specifications (models 3 and 4).

Overall, our results suggest that a "diverging" status with regard to IAS can be explained by variations in national culture.

6. Limitations

One of the contributions of this paper is the creation of new measures of international accounting differences. However, it should be noted that our measures are based on Nobes (2001)'s study, which relies upon subjective responses. Moreover, in computing our divergence/absence indexes, we considered that each of the 111 items studied was of equal weight: we then counted the number of divergence/absence responses for each country in our sample. *Divergence* and *absence* were thus treated as continuous variables. For instance, a country with 50% divergence is deemed to be twice as divergent as a country that is 25%

divergent. This “equal-weight” assumption may be debatable, but the same could be said of the contrary solution (attributing a specific weight to each item over a total of 111). The definition of a specific weight would imply that IAS are not equally important, and the concept of the importance of one IAS is not easily evaluated.

Another possible limitation lies in the fact that our vision of national culture is partly derived from Hofstede (1980). Hofstede’s model has been strongly criticized (Baskerville, 2003) but is widely used because of the extensive international coverage of the study, and has generated robust results. When using Schwartz’s value types, our results still hold, which strengthens evidence for the influence of culture on international accounting harmonization.

7. Conclusion

This study is designed to examine whether differences between national accounting standards and IAS are explained by cultural dimensions and legal origin. We measure differences between national GAAP and IAS using two innovative measures: *divergence* and *absence*. *Divergence* measures the degree to which national GAAP and IAS cover a specific accounting topic but prescribe different methods. *Absence* measures the degree to which national GAAP do not cover an accounting issue regulated by IAS. We use two different sets of measures to proxy culture: the first from Hofstede (1980; 1991; 2001) and the second from Schwartz (1994). We find that cultural values are associated with our divergence index and matter even more than legal origin in explaining divergences from IAS. With regard to the absence index, we find no significant relationship with either cultural values or legal origin. These results contribute to the existing literature in two ways: (1) the relationship between culture and international accounting harmonization has not been studied previously, and (2) although legal origin is usually considered as an explanatory variable for accounting information (Ball et al., 2000), this does not seem to be the case at the level of accounting regulation in the context of international accounting harmonization.

This paper contributes to the ongoing debate on accounting harmonization. More specifically, our findings suggest that the technical and/or political dimensions of the debate, although essential, are not the only issues involved. Opposition to IAS is not exclusively driven by contractual motives or a claimed technical superiority but also by diversity in cultural factors.

Another contribution of this paper is the development of a two-dimensional score to benchmark the differences between national GAAP and IAS.

Appendix A. Australia (Source: Nobes, 2001, p. 14)

Australian requirements are based mainly on the Corporations Act 2001 and the standards of the Australian Accounting Standards Board and Abstracts of the Urgent Issues Group.

Australian accounting may differ from that required by IAS because of the absence of specific Australian rules on recognition and measurement in the following areas:

- intangible assets	IAS 38
- the derecognition of financial assets	IAS 39.35
- provisions, except for certain specific cases such as redundancy and cyclical maintenance	IAS 37
- defined benefit employee obligations	IAS 19
- the treatment of dividends proposed after the balance sheet date, particularly as practice is generally to accrue for them	IAS 10
- detailed requirements for calculating impairment; it is not necessary to discount the cash flows when calculating recoverable amount for impairment losses.	IAS 36.5

There are no specific rules requiring disclosures of:

- the fair values of investment properties	IAS 40.69
- discontinuing operations	IAS 35
- segment liabilities.	IAS 14.56

There are inconsistencies between Australian and IAS rules that could lead to differences for many enterprises in certain areas. Under Australian rules:

- trading, available-for-sale and derivative financial assets are not recognized at fair value	IAS 39.69
- trading and derivative liabilities are not recognized at fair value	IAS 39.93
- gains and losses on the change in value of trading financial instruments are not required to be taken to income	IAS 39.103
- hedge accounting is permitted more widely	IAS 39.142
- deferred tax is accounted for on the basis of timing differences rather than temporary differences	IAS 12.15
- on disposal of a foreign entity, the cumulative amount of deferred exchange differences in equity is not recognized in income	IAS 21.37
- investment properties can be held at cost without depreciation	IAS 40.50
- the changes in value of investment properties held at a current value are taken to reserves	IAS 40.28
- revaluations of intangible assets are permitted without an active market	IAS 38.64
- poolings/unitings of interests are prohibited	IAS 22.77
- in the context of a business combination accounted for as an acquisition, provisions may be created more extensively than under the IAS	IAS 22.31
- a primary/secondary basis is not used for segment reporting	IAS 14.26
- earnings per share is calculated before extraordinary items, and there are other differences.	IAS 33

In certain enterprises, these other issues could lead to differences from IAS:

- there are no specific rules concerning the translation of the financial statements of hyperinflationary subsidiaries	IAS 21.36
- an event after the balance sheet date indicating that the enterprise is not a going concern is not treated as an adjusting event	IAS 10.13
- research costs could be capitalized if they meet a recoverability test	IAS 38.42
- negative goodwill is eliminated by proportionately writing down the carrying value of non-monetary assets	IAS 22.59
- government grants are recognized in full when an enterprise has a right to receive them and no obligation to repay	IAS 20.12/24
- there is no specific prohibition of discounting of deferred tax balances	IAS 12.53

Appendix B. Survey Questionnaire (beginning) (Source: Nobes, 2001, p. 149)

IAS reference			National GAAP for 31 December 2001
Para	Extract from IAS Text		Question
27.11	A parent which issues consolidated financial statements should consolidate all subsidiaries, foreign and domestic, other than those referred to in paragraph 13.	1	When there are subsidiaries must consolidated accounts be prepared?
27.6	A subsidiary is an enterprise that is controlled by another enterprise (known as the parent). Control (for the purpose of this Standard) is the power to govern the financial and operating policies of an enterprise so as to obtain benefits from its activities.	2	Is a subsidiary defined on the basis of de facto control (which can exist without majority ownership)?

Appendix C. Hofstede's indexes for 52 countries (2001, p. 500, 502)

	PDI		IND		MAS		UA	
	rank	score	rank	score	rank	score	rank	score
Argentina	35/36	49	22/23	46	20/21	56	10/15	86
Australia	41	36	2	90	16	61	37	51
Austria	53	11	18	55	2	79	24/25	70
Belgium	20	65	8	75	22	54	5/6	94
Brazil	14	69	26/27	38	27	49	21/22	76
Bulgaria		70		30		40		85
Canada	39	39	4/5	80	24	52	41/42	48
Chile	24/25	63	38	23	46	28	10/15	86
China		80		20		66		30
Czech Republic		57		58		57		74
Denmark	51	18	9	74	50	16	51	23
Estonia		40		60		30		60
Finland	46	33	17	63	47	26	31/32	59
France	15/16	68	10/11	71	35/36	43	10/15	86
Germany FR	42/44	35	15	67	9/10	66	29	65
Great Britain	42/44	35	3	89	9/10	66	47/48	35
Greece	27/28	60	30	35	18/19	57	1	112
Hong Kong	15/16	68	37	25	18/19	57	49/50	29
Hungary		46		80		88		82
India	10/11	77	21	48	20/21	56	45	40
Indonesia	8/9	78	47/48	14	30/31	46	41/42	48
Iran	29/30	58	24	41	35/36	43	31/32	59
Ireland (Rep of)	49	28	12	70	7/8	68	47/48	35
Israel	52	13	19	54	29	47	19	81
Italy	34	50	7	76	4/5	70	23	75
Japan	33	54	22/23	46	1	95	7	92
Luxembourg		40		60		50		70
Malaysia	1	104	36	26	25/26	50	46	36
Mexico	5/6	81	32	30	6	69	18	82
Morocco		70		46		53		68
Netherlands	40	38	4/5	80	51	14	35	53
New Zealand	50	22	6	79	17	58	39/40	49
Norway	47/48	31	13	69	52	8	38	50
Pakistan	32	55	47/48	14	25/26	50	24/25	70
Peru	21/23	64	45	16	37/38	42	9	87
Philippines	4	94	31	32	11/12	64	44	44
Poland		68		60		64		93
Portugal	24/25	63	33/35	27	45	31	2	104
Romania		90		30		42		90
Russia		93		39		36		95
Singapore	13	74	39/41	20	28	48	53	8
Slovakia		104		52		110		51
South Africa	35/36	49	16	65	13/14	63	39/40	49
South Korea	27/28	60	43	18	41	39	16/17	85
Spain	31	57	20	51	37/38	42	10/15	86
Sweden	47/48	31	10/11	71	53	5	49/50	29
Switzerland	45	34	14	68	4/5	70	33	58
Taiwan	29/30	58	44	17	32/33	45	26	69
Thailand	21/23	64	39/41	20	44	34	30	64
Turkey	18/19	66	28	37	32/33	45	16/17	85
USA	38	40	1	91	15	62	43	46
Venezuela	5/6	81	50	12	3	73	21/22	76

PDI = *Power distance* index – IND = *Individualism* index – MAS = *Masculinity* index – UA = Uncertainty avoidance – LTO = Long-term orientation index. Countries with no indication of rank have been added more recently in Hofstede (2001).

Appendix D. Schwartz's indexes (1994, p. 112-115; Schwartz & Bardi, 1997, p. 397, 399)

Country	Conservatism	Affective Autonomy	Intellectual Autonomy	Hierarchy	Mastery	Egalitarian Commitment	Harmony
Australia	4.06	3.50	4.12	2.36	4.09	4.98	4.05
Brazil	3.97	3.30	4.13	2.64	4.16	4.92	4.02
Bulgaria	4.43	3.13	3.78	3.07	4.04	4.83	4.32
China	3.97	3.32	4.27	3.70	4.73	4.49	3.71
Czech Republic	3.95	3.12	4.30	2.07	3.76	4.89	4.39
Denmark	3.64	4.01	4.58	1.86	3.97	5.52	4.16
Estonia	4.26	3.08	3.63	2.00	3.73	4.96	4.65
Finland	3.84	3.51	4.62	2.03	3.63	5.26	4.54
France	3.35	4.41	5.15	2.16	3.89	5.45	4.31
Germany	3.42	4.03	4.75	2.27	4.07	5.37	4.42
Greece	3.68	3.96	4.09	2.01	4.53	5.35	4.39
Hong Kong	4.04	3.11	4.08	2.83	4.18	4.85	3.34
Hungary	3.97	3.34	4.44	2.42	3.96	4.87	4.51
Israel	4.08	3.62	4.31	2.69	4.06	4.78	3.01
Italy	3.82	2.95	4.60	1.69	4.08	5.57	4.80
Japan	3.87	3.54	4.68	2.86	4.27	4.69	4.07
Malaysia	4.46	3.16	4.07	2.43	4.34	4.66	3.50
Mexico	4.03	3.23	4.20	2.35	4.34	4.99	4.67
Netherlands	3.68	3.51	4.44	2.26	3.98	5.39	3.98
New Zealand	3.73	3.98	4.36	2.38	4.23	5.15	3.99
Poland	4.31	3.13	4.09	2.53	4.00	4.82	4.10
Portugal	3.76	3.54	4.12	2.08	4.25	5.62	4.29
Russia	4.17	3.04	4.27	2.47	3.74	4.68	3.74
Singapore	4.38	3.04	3.68	2.75	3.93	4.79	3.72
Slovakia	4.28	2.76	4.03	2.11	4.09	4.98	4.40
Slovenia	4.27	3.76	5.03	1.76	3.76	4.36	4.72
Spain	3.42	3.97	4.9	2.03	4.11	5.55	4.53
Switzerland	3.25	4.24	5.33	2.20	4.18	5.19	4.50
Taiwan	4.31	3.21	3.93	2.85	4.11	4.68	4.17
Thailand	4.22	3.62	4.08	3.32	3.99	4.34	3.93
Turkey	4.27	3.25	4.12	3.30	3.90	5.12	4.26
USA	3.90	3.65	4.20	2.39	4.34	5.03	3.70

Appendix E. 52 countries included in the sample

Argentina	France	Luxembourg	Russian federation
Australia	Germany	Malaysia	Singapore
Austria	Greece	Mexico	Slovakia
Belgium	Hong Kong	Morocco	South Africa
Brazil	Hungary	Netherlands	Spain
Bulgaria	India	New Zealand	Sweden
Canada	Indonesia	Norway	Switzerland
Chile	Iran	Pakistan	Taiwan
China (People's Republic)	Ireland	Peru	Thailand
Czech Republic	Israel	Philippines	Turkey
Denmark	Italy	Poland	United Kingdom
Estonia	Japan	Portugal	United States
Finland	Korea (South)	Romania	Venezuela

Appendix F. 32 countries common to the Schwartz/IAS sample

Australia	France	Mexico	Slovenia
Brazil	Greece	Malaysia	Slovakia
Bulgaria	Hong Kong	Netherlands	Spain
China (People's Republic)	Germany	New Zealand	Switzerland
Czech Republic	Hungary	Poland	Taiwan
Denmark	Israel	Portugal	Thailand
Estonia	Italy	Russia	Turkey
Finland	Japan	Singapore	United States

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Table 1
Divergence, absence, difference and conformity scores for the 52 countries studied

	Divergence (1)	*Absence (2)*	*Difference (A=1+2)*	*Conformity (B, as a check)*	*Total (A+B)*
Mean	21	24	45	66	111
Std. Deviation	9	15	18	18	0
Minimum	0	0	0	31	111
Percentile 25%	14	13	34	52	111
Median	21	23	43	68	111
Percentile 75%	28	33	59	77	111
Maximum	38	56	80	111	111

Our two indexes of differences (*divergence* and *absence*) are based on the study of 111 IAS items for 52 countries. For a given country, *Divergence* is the number of items (out of 111) for which national GAAP and IAS diverge (prescription of different solutions to the same problem). *Absence* is the number of items absent in national GAAP compared to IAS (items covered in IAS but not in national GAAP). *Difference* is the sum of *Divergence* and *Absence*. *Conformity* is the addition of 111 dummy variables coded 1 if local rules and IAS are identical (111 items studied). *Total* is the sum of *Conformity* and *Difference*.

Table 2
Level of divergence/absence/difference/conformity of national GAAP relative to IAS

IAS	**Related theme**	**Divergence (1)**	**Absence (2)**	**Difference (=1+2)**	**Conformity (3)**
1	Presentation of financial statements	0%	19%	19%	81%
2	Inventories	25%	8%	33%	67%
7	Cash flow statements	14%	25%	39%	61%
8	Extraordinary items	31%	15%	46%	54%
10	Post-balance sheet events	20%	4%	24%	76%
11	Construction contracts	37%	10%	46%	54%
12	Deferred tax	31%	22%	53%	47%
14	Segment information	9%	43%	52%	48%
16	Tangible fixed assets	15%	2%	17%	83%
17	Leases	20%	23%	43%	57%
19	Employee benefits	18%	52%	70%	30%
20	Government grants	12%	8%	19%	81%
21	Foreign currency translations	17%	10%	27%	73%
22	Business combinations	18%	14%	32%	68%
24	Related parties	0%	27%	27%	73%
27	Consolidated subsidiaries	17%	4%	21%	79%
28	Associates	10%	4%	13%	87%
29	Inflation adjustment	6%	7%	13%	88%
31	Joint ventures	4%	12%	15%	85%
32	Financial instruments	30%	39%	69%	31%
33	Earnings per share	10%	35%	44%	56%
35	Discontinuing operations	17%	65%	83%	17%
36	Impairment of assets	14%	34%	48%	52%
37	Provisions and contingencies	21%	18%	38%	62%
38	Intangible assets and goodwill	20%	12%	31%	69%
39	Financial Instruments: Recognition and Measurement	45%	27%	72%	28%
40	Investment Property	16%	26%	42%	58%

Table 3
Pearson's correlation matrix of Schwartz's value types for the 32-country sample

	Conservatism	Affective autonomy	Intellectual autonomy	Hierarchy	Mastery	Egalitarian commitment	Harmony
Conservatism	1.000						
Affective autonomy	-0.780***	1.000					
Intellectual autonomy	-0.744***	0.703***	1.000				
Hierarchy	0.407	-0.246	-0.394	1.000			
Mastery	-0.152	0.113	-0.095	0.321	1.000		
Egalitarian commitment	-0.711	0.400	0.328	-0.579***	-0.005	1.000	
Harmony	-0.262	0.098	0.323	-0.536***	-0.299	0.372	1.000

****: correlation significant at the 0.01 level.*

Table 4
Varimax principal components factor analysis (Schwartz's value types)

	Eigen values	*Percentage of variance explained*	*Cumulative percentage explained*
Conservatism	3.365	0.481	0.481
Affective autonomy	1.562	0.223	0.704
Intellectual autonomy	0.847	0.121	0.825
Hierarchy	0.560	0.080	0.905
Mastery	0.359	0.051	0.956
Egalitarian commitment	0.235	0.034	0.990
Harmony	0.072	0.010	1.000
	Factor 1	*Factor 2*	
Conservatism	-0.121	-0.956	
Affective autonomy	-0.056	0.883	
Intellectual autonomy	0.231	0.787	
Hierarchy	-0.770	-0.369	
Mastery	-0.722	0.271	
Egalitarian commitment	0.415	0.642	
Harmony	0.776	0.186	

Table 5
Univariate tests: Pearson's correlation between IAS indexes and (1) cultural dimensions and (2) legal origin

Variables	divergence	absence
Panel A: Hofstede's cultural dimensions		
Power distance index	-0.366***	0.13
(p)	(0.008)	(0.357)
Individualism	0.485***	-0.101
(p)	(0.000)	(0.476)
Masculinity	0.137	0.164
(p)	(0.331)	(0.245)
Uncertainty avoidance	0.161	0.338**
(p)	(0.255)	(0.014)
Panel B: Schwartz's value types		
Factor1 (No hierarchy)	0.413**	0.315
(p)	(0.019)	(0.079)
Factor2 (Autonomy)	0.507***	-0.015
(p)	(0.003)	(0.936)
Panel C: Legal origin		
Common law	-0.143	-0.396***
(p)	(0.294)	(0.003)

*** Correlation is significant at the 0.01 level (2-tailed).
** Correlation is significant at the 0.05 level (2-tailed).

Definition of variables:
Divergence is the number of items (out of 111) for which national GAAP and IAS diverge (prescription of different solutions to the same problem). *Absence* is the number of items absent in national GAAP compared to IAS (items covered in IAS but not in national GAAP).
Power Distance index: The extent to which the less powerful members of society accept that power is unequally distributed.
Individualism: In individualistic societies there are few ties beyond those of the nuclear family, whereas in collectivist societies people belong to strong, cohesive in-groups.
Masculinity: In 'masculine' societies men are assertive, tough, and concerned with material success, whereas women are more modest, tender, and interested in the quality of life. In 'feminine' societies, both are equally concerned with quality of life.
Uncertainty Avoidance: The extent to which people feel threatened by uncertain or unknown situations. This is expressed in a need for formality, predictability and clear rules.
Factor 1 measures the level of acceptance of *harmony* but not of *hierarchy* and *mastery*. To simplify, we call *factor 1* the "*no hierarchy*" factor.
Factor 2 measures *autonomy (*either *affective* or *intellectual)* as opposed to *conservatism*. To simplify, we call *factor 2* the "*autonomy*" factor.
Common law is a dummy variable coded 1 if the country has a common law tradition.
All variables are country-specific measures.

Table 6
Regression results: Hofstede's cultural dimensions and legal origin

	Panel A: Divergence		Panel B: Absence	
	(1)	(2)	(3)	(4)
Power distance index	-0.064	-0.063	0.029	-0.021
Sig.	0.331	0.35	0.81	0.857
Individualism	0.164	0.162	-0.012	-0.034
Sig.	0.011**	0.013**	0.918	0.757
Masculinity	0.054	0.055	0.1	0.133
Sig.	0.342	0.339	0.341	0.186
Uncertainty avoidance	0.102	0.085	0.202	0.126
Sig.	0.037**	0.129	0.026**	0.195
Common law (dummy variable)		-1.666		-8.167
Sig.		0.572		0.114
Constant	7.185	8.935	4.403	12.814
Sig.	0.298	0.237	0.728	0.326
Observations	52	50	52	50
R-squared	0.325	0.329	0.138	0.198
Adj R-squared	0.267	0.253	0.064	0.107
F	5.656	4.32	1.879	2.17
Sig (F)	0.001	0.003	0.130	0.075

** Coefficient significant at the 0.05 level (2-tailed).
* Coefficient significant at the 0.10 level (2-tailed).

Definition of variables:
Divergence is the number of items (out of 111) for which national GAAP and IAS diverge (prescription of different solutions to the same problem). *Absence* is the number of items absent in national GAAP compared to IAS (items covered in IAS but not in national GAAP). *Divergence* and *Absence* are country-specific measures.
Power Distance: The extent to which the less powerful members of society accept that power is unequally distributed.
Individualism: In individualistic societies there are few ties beyond those of the nuclear family, whereas in collectivist societies people belong to strong, cohesive in-groups.
Masculinity: In 'masculine' societies men are assertive, tough, and concerned with material success, whereas women are more modest, tender, and interested in the quality of life. In 'feminine' societies, both are equally concerned with quality of life.
Uncertainty Avoidance: The extent to which people feel threatened by uncertain or unknown situations. This is expressed in a need for formality, predictability and clear rules.
Common law is a dummy variable coded 1 if the country has a common law tradition.

Table 7
Regression results (Schwartz's cultural dimensions)

	Panel A: Divergence		Panel B: Absence	
	(1)	(2)	(3)	(4)
Factor1 (No hierarchy)	3.092	2.087	3.802	1.765
Sig.	0.006***	0.089*	0.084*	0.468
Factor2 (Autonomy)	3.791	3.443	-0.179	-0.884
Sig.	0.001***	0.003***	0.933	0.678
Common law		-4.563		-9.258
Sig.		0.106		0.105
Constant	22.594	23.734	26.063	28.377
Sig.	0.000***	0.000***	0.000***	0.000***
Observations	32	32	32	32
R-squared	0.427	0.479	0.099	0.181
Adj R-squared	0.388	0.423	0.037	0.094
F	10.821	8.586	1.6	2.066
Sig(F)	0.000	0.000	0.219	0.181

*** Coefficient significant at the 0.01 level (2-tailed).
** Coefficient significant at the 0.05 level (2-tailed).
* Coefficient significant at the 0.10 level (2-tailed).

Divergence is the number of items (out of 111) for which national GAAP and IAS diverge (prescription of different solutions to the same problem). *Absence* is the number of items absent in national GAAP compared to IAS (items covered in IAS but not in national GAAP).
Factor 1 measures the level of acceptance of *harmony* but not of *hierarchy* and *mastery*. To simplify, we call *factor 1* the "*no hierarchy*" factor.
Factor 2 measures *autonomy (*either *affective* or *intellectual)* as opposed to *conservatism*. To simplify, we call *factor 2* the "*autonomy*" factor.
Common law is a dummy variable coded 1 if the country has a common law tradition.