

# CULTURAL DIMENSION AND PROFESSIONALISM AND UNIFORMITY OF INTERNAL AUDITING PRACTICE

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# **CULTURAL DIMENSION AND PROFESSIONALISM AND UNIFORMITY OF INTERNAL AUDITING PRACTICE**

## **Abstract**

This study extends the literature on the impact of culture on the accounting and auditing professions by investigating the relationship between cultural dimensions and (1) *professionalism* of the internal auditing community in 45 countries; and (2) *uniformity* of internal auditing practice in 32 countries. More specially, the hypotheses suggested by Gray (1988) are adapted and tested using more recent cultural dimension data. We find evidence that a professional internal audit community is more common in countries characterized by a low level of uncertainty avoidance, collectivism and assertiveness. The results also indicate that a high degree of uniformity of internal auditing practice is more common in countries characterized by a lower level of power distance and collectivism. Comparing the results by legal regime, we find culture to have more influence on professionalism in civil law countries than common law countries. Finally, we find economic development to be inversely associated with uniformity in internal auditing practices.

**Keywords:** Internal auditing, professionalism, uniformity, culture.

**Data Availability:** Data used in this study are from third party sources

# **CULTURAL DIMENSION AND PROFESSIONALISM AND UNIFORMITY OF INTERNAL AUDITING PRACTICE**

## **Introduction**

The objective of this research is to investigate the relationship between cultural dimensions (e.g., uncertainty avoidance, power distance) and (1) the *professionalism* of the internal auditing community in 45 countries; and (2) the *uniformity* of internal auditing practice between 32 countries. Prior research has documented great variability in global practice of internal auditing (see Allegrini et al. 2006; Cooper et al. 2006; Hass et al. 2006 for reviews), and the recent Common Body of Knowledge (CBOK 2006) study in internal auditing conducted by the Institute of Internal Auditors (IIA) in approximately 100 countries also indicates high variation in practice of internal auditing world-wide (Burnaby et al. 2007).

However, while the literature has consistently documented variations in internal auditing practice, very little has been reported on the reasons why these differences exist. The reasons investigated are mainly micro level conditions, such as the maturity of the internal audit function (Sarens et al. 2009b), the influence of internal audit clients (Sarens and De Beelde 2006; Sarens et al. 2009a) or risk management practices (Selim and McNamee 1999; Allegrini and D'Onza 2003). An investigation of the impact of macro economic conditions, such as gross national product (Abdolmohammadi and Tucker 2002) or corporate governance requirements (Cenker and Nagy 2004; Page and Spira 2004) remains rather limited. A primary reason for this deficiency has been the lack of global comparative data. CBOK (2006) provides data for comparative analysis of various countries.

The theory of cultural differences advanced by Hofstede (1980) and refined by House et al. (2004) posits that cultural differences have significant effects on the development and operations of various professional practices, including accounting and external auditing.<sup>1</sup> In this paper, we extend this line of research by investigating the relationship between various cultural dimensions and professionalism and uniformity of internal auditing practice world-wide. In other to test the relative strength of the cultural dimensions in explaining professionalism and uniformity, we also investigate the impact of the legal system (common versus civil law), economic development (GDP per capita and GDP growth) and sources of financing (stock market versus credit market).

The study is also important because internal auditing is a profession that is less regulated than the accounting and external auditing professions investigated in prior research. For example, while accounting and external auditing professions are fully mandated by law and regulated by professional and/or governmental bodies in many countries, the practice of internal auditing has only recently begun to get the attention of regulatory bodies in various countries. Data on the professionalism of the internal auditing practice were obtained from the IIA. We identified 45 countries in which the IIA had affiliates for which we also could find cultural dimension ratings from House et al. (2004).<sup>2</sup> The most recent Common Body of Knowledge study (CBOK 2006) provided the data pertaining to the uniformity of internal auditing practice. Specifically, we use responses from 1,961 Chief Audit Executives (CAE) representing 32 countries.

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<sup>1</sup> See Chanchani and MacGregor (1999) and Douppnik and Tsakumis (2004) for extensive reviews of this literature

<sup>2</sup> The IIA's affiliates are now called institutes. We use the old term, affiliate because that is what they were called when CBOK data were collected.

We hypothesize and find evidence of a negative association between *professionalism* in internal auditing and uncertainty avoidance, collectivism and assertiveness. However, our analysis of the *uniformity* of internal auditing practices indicates an unexpected negative relationship between uniformity and power distance and an unexpected negative relationship between uniformity and collectivism.

The remainder of this paper is organized as follows. In the next section, we review the extant literature and establish our research hypotheses. The study's research methodology is described in the third section, followed by the fourth section that provides the empirical results. The final section contains a summary and conclusions from the study.

## **Background Literature and Hypotheses**

Professionalism and uniformity were proposed by Gray (1988) as a framework to explain accounting development in various cultural settings. These settings had been proposed by Hofstede (1980; 1983) based on four cultural dimensions of uncertainty avoidance, individualism, power distance, and masculinity. House et al. (2004) extended Hofstede's work and collected data from 62 societies to classify the societies into various cultural clusters. All cultural dimensions were measured using a seven-point Likert scale. We note that for most dimensions, ratings of Hofstede (1983) and House et al. (2004) converge. For example, there is a significant positive correlation between Hofstede's power distance scale and House et al.'s societal power distance in the cultural practices scale. Similarly, there is a significant positive correlation between Hofstede's uncertainty avoidance scale and House et al.'s uncertainty avoidance, and Hofstede individualism

scale is significantly and inversely related to House et al.'s institutional collectivism. Finally, Hofstede's individualism scale is significantly and inversely correlated with House et al.'s in-group collectivism construct; and Hofstede's masculinity scale is significantly and positively related with House et al.'s societal assertiveness cultural practices scale (House et al. 2004, 139-140). Table 1 provides a short description of the four cultural dimensions included in Gray's framework according to both references as well as the convergent validity coefficients between both scales. Besides these four dimensions included in Gray's framework, House et al. (2004) added four more dimensions: gender egalitarianism<sup>3</sup>, future orientation<sup>4</sup>, performance orientation<sup>5</sup> and human orientation<sup>6</sup>. Given the lack of theory, we stick to Gray's framework and do not formulate specific hypotheses for these four additional dimensions. Nevertheless, we will include them in our empirical analysis for reason of completeness.

[INSERT TABLE 1 HERE]

Since Gray's (1988) pioneer work, his framework has been used in other research to explain the development of international accounting (Doupnik and Salter 1995), financial reporting practices (Salter and Niswander 1995), ethical decision-making of auditors (Cohen et al. 1995), the use of whistle-blowing as an internal control mechanism (Patel 2003), accountant's disclosure judgments (Tsakumis 2007), and earnings management (Doupnick 2008). While significant variation has been found in the results

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<sup>3</sup> The degree to which an organization or society minimizes gender role differences while promoting gender equality (House et al. 2004).

<sup>4</sup> The degree to which individuals in organizations or societies engage in future-oriented behaviors such as planning, investing in the future, and delaying individual or collective gratification (House et al. 2004).

<sup>5</sup> The degree to which an organization or society encourages and rewards group members for performance improvement and excellence (House et al. 2004).

<sup>6</sup> The degree to which individuals in organizations or societies encourage and reward individuals for being fair, altruistic, friendly, generous, caring, and kind to others (House et al. 2004).

using Gray's (1988) framework, overall, these studies show that cultural differences have significant effects on the development of accounting and auditing professions.

We examine the relationship between cultural dimensions and the development of professionalism in 45 countries and uniformity in 32 countries. In the next sections we present the arguments to establish our research hypotheses.

### ***Professionalism in Internal Auditing***

Professionalism is described by Gray (1988, 8) as “*a preference for the exercise of individual professional judgment and the maintenance of professional self-regulation*”. This definition is quite generic as it applies to accounting, external auditing and internal auditing alike. However, there is a difference between the first two and the latter professions. Specifically, accounting and external auditing professions have a long history of professionalism in various countries and are usually mandated by governments and regulated by professional bodies or governmental entities. However, formation of professionalization in internal auditing is a more recent phenomenon in a large number of countries and is even non-existent in some other countries.

Nevertheless, internal auditing has gained increasing acceptance as a profession in recent years, driven by demands for more corporate accountability following the fraudulent corporate scandals of recent years (e.g., Enron, Royal Ahold). This is because a wave of corporate governance regulation has taken place in various parts of the World to reduce incidence of corporate scandals. For example, the recent NYSE (2003) listing rule requiring listed companies to have an internal audit function has enhanced the standing of internal auditing as a profession in the U.S.

The professional body representing the internal auditing profession is the IIA. The IIA was established in 1941 in the U.S. and has since grown into an approximately 150,000 member organization world-wide. This growing community of internal auditors operates on a self-regulatory basis and is supposed to follow the IIA Standards, Code of Ethics and a certification program (e.g., Certified Internal Auditor). Besides, the IIA has endorsed a number of college and university programs for educating future internal auditors. In addition to its numerous chapters in the U.S. and Canada, the IIA has affiliate offices in almost 100 countries throughout the World.

The qualifying process to establish an affiliate is meant to organize internal auditors into professionals who according to Gray (1988, 8) exercise “*individual professional judgment and the maintenance of professional self-regulation.*” We consider the *age of an IIA affiliate* as a proxy for the development level of its internal audit professionalism. We argue that the longer a country has had its own IIA affiliate, the longer the profession has reached its critical mass to engage in professionalism of its internal auditing community.

Gray uses Hofstede’s (1980) cultural dimensions that distinguish different cultures. According to Gray (1988), professionalism can be linked most closely with individualism and uncertainty avoidance.

**Uncertainty avoidance.** Gray (1988) proposes that professionalism becomes stronger as uncertainty avoidance weakens. Given that internal audit practices are not regulated, and despite the existence of the IIA Standards, they are highly subject to interpretation at local level. This may create uncertainty and ambiguity. Developing professional internal

audit practices requires flexibility and an open-minded attitude. Therefore, we assume that societies characterized by a higher degree of uncertainty avoidance will progress slower toward the creation of a professional internal audit community. Thus, we hypothesize that:

*H1a: Uncertainty avoidance is negatively associated with internal auditing professionalism.*

**Individualism versus collectivism.** According to Gray (1988) preference for independent professional judgment is consistent with preference for a social framework in which there is emphasis on independence, a belief in individual decisions and respect for individual endeavor. We can argue that internal auditors who want to invest in their own individual career (note that internal auditing is still considered as a stepping stone for achieving higher organizational positions) are probably more motivated to invest in the continuous improvement of their practices which is needed to professionalize the internal audit community. We note that collectivism as defined by House et al. (2004) is the opposite of individualism. Thus, we expect that institutional and in-group collectivism to be negatively associated with internal auditing professionalism. Thus,

*H1b: Institutional collectivism is negatively associated with internal auditing professionalism.*

*H1c: In-group collectivism is negatively associated with internal auditing professionalism.*

**Power distance.** Finally, Gray (1988) argues that professionalism is more likely to be accepted in societies where power-distance is short, concern for equal rights is high, and people at various power levels feel unthreatened and prepared to trust other people, and where there is a belief in the need to justify the imposition of professional codes of

conduct. In the context of this study, it can be argued that professionalization of the internal audit function is the merit of everyone in the department regardless of the hierarchical level. Every hierarchical level has its own specific contribution to the professionalization of the function. While the Chief Audit Executive (CAE) is responsible for setting and improving the methodology, lower staff members are expected to implement this methodology on a day-to-day basis. In other words, professionalization of the internal audit function is the joint effect of all internal auditors' contribution. Thus:

*H1d: Power distance is negatively associated with internal auditing professionalism.*

**Masculinity and assertiveness.** According to Gray (1988), there does not appear to be any significant link between masculinity, the fourth cultural dimension proposed by Hofstede (1980), and professionalism. House et al. (2004) replace masculinity with assertiveness (which is a part of the definition of masculinity by Hofstede – see Table 1). We do not have a theory or argument to formulate a directional hypothesis for assertiveness and thus we propose the following null hypothesis:

*H1e: Assertiveness is not associated with internal auditing professionalism.*

### ***Uniformity of Internal Auditing Practices***

Gray (1988, 8) describes uniformity as “*a preference for the enforcement of uniform accounting practices between companies and for the consistent use of such practices over time.*” The IIA tries to accomplish uniformity in internal auditing by establishing Standards, practice advisories, position papers, and other documents to enhance uniform practice throughout the internal community worldwide. This so-called “*progress through sharing*” is supposed to create consistent and comparable internal

audit practices but still allows sufficient flexibility given the different types of organizations adopting internal audit activities. According to Gray (1988), uniformity can be linked most closely with uncertainty avoidance and individualism.

**Uncertainty avoidance.** According to Gray (1988), preference for uniformity is consistent with preference for uncertainty avoidance leading to a concern for order and rigid codes of behavior, need for written rules and regulations, respect for conformity and the search for ultimate, absolute truths and values. Societies characterized by high uncertainty avoidance will be more keen on adopting best practices spread by the IIA, which should contribute to uniformity, which should reduce uncertainty. Therefore, we formulate our hypothesis as:

*H2a: Uncertainty avoidance is positively associated with the uniformity of internal auditing practices.*

**Individualism versus collectivism.** Gray (1988) also argued that uniformity is negatively related to individualism. In other words, conformity is consistent with a preference for collectivism, with its tightly knit social framework, a belief in organization and order, and respect for group norms. We argue that people who feel more comfortable when they formally belong to a professional community ('a group') will be more stimulated to implement best practices endorsed and spread by that community (in this case, represented by the IIA) which stimulates uniformity. Thus, we formulate our next hypotheses as:

*H2b: Institutional collectivism is positively associated with the uniformity of internal auditing practices.*

*H2c: In-group collectivism is positively associated with the uniformity of internal auditing practices.*

**Power distance.** With respect to power distance, Gray (1988) believes that uniformity is more easily facilitated in high-power distance societies than low-power distance societies because the imposition of codes of a uniform character is more likely to be accepted in the former rather than latter societies. In the context of this study, we can argue that in societies accepting high power distance, clear hierarchical differences within the internal audit department are accepted. This allows the CAE to impose certain internal audit practices and mitigate personal interpretation of certain practices. This contributes to uniformity. Thus, our hypothesis represents this expectation:

*H2d: Power distance is positively associated with the uniformity of internal auditing practices.*

**Masculinity and assertiveness.** As stated above, the fourth dimension of Hofstede's (1980) cultural classification theory is masculinity, which House et al. (2004) have termed assertiveness. Gray (1988) did not formulate a relationship between this dimension and uniformity of accounting practices, and we do not have a theory to predict a hypothesis here. Thus we present a null hypothesis of the following form:

*H2e: Assertiveness is not associated with the uniformity of internal auditing practices.*

Table 2 presents a summary of the research hypotheses as proposed by Gray (1988) and as expanded by us based on House et al.'s (2004) cultural dimensions.

[INSERT TABLE 2 HERE]

### ***Other Variables***

In other to test the relative strength of the cultural dimensions in explaining professionalism and uniformity in internal auditing, we include a few more macro variables.

First, we test whether the *legal system* of a country (common law versus civil law) has an impact on professionalism and uniformity. Jaggi and Low (2000) found evidence that the strength of the influence that cultural values have on financial disclosure is mediated by a country's legal system. They found cultural values to be more important in code (civil) law countries. Their study suggests that the influence of culture is reduced once legal system is considered. Consistently, Hope (2003), studying the same issue, obtains opposite signs on the coefficients between the two legal regimes for each of the four cultural values. Similarly, Schultz and Lopez (2001) found that a country's legal system has an impact on the consistency of financial reporting judgments made by accountants.

Second, we investigate whether the degree of *economic development* of a country has an impact on professionalism and uniformity in internal auditing. Abdolmohammadi and Tucker (2002) found that the professionalism of a country's internal audit activity, as measured by its ability to achieve the status of an IIA chapter, is related to economic growth measured by a country's per capita GNP. Consistently, we expect a positive impact of the degree of economic development on professionalism in internal auditing, in this study measured by the age of the IIA affiliate. We could not find evidence in the literature on the impact of economic development on uniformity. However, we will check whether there is an impact in the context of this study.

Third, we test whether *different sources of financing* have an impact on professionalism and uniformity in internal auditing. Jaggi and Low (2000) included this variable in their study on financial disclosure but did not find a significant impact. However, Schultz and Lopez (2001) found that accountants from countries where banks are the primary source of financing are more conservative than accountants from countries that rely more on equity-based financing. Traditional agency theory argues that companies that rely more on the stock market are characterized by a more diffused ownership structure and need more intensive monitoring (DeFond 1992; Francis and Wilson 1988). Internal audit could be such a monitoring mechanism (Adams 1994). Therefore, we expect internal audit professionalism to be greater in countries with more publicly traded shares. Although previous studies are less clear about the impact of stock market financing on uniformity, we will test this relationship as well. Moreover, Carcello et al. (2005) found that an increased proportion of debt also affects a company's investment in its IAF. Therefore, we also include the total amount of domestic credit and expect a positive relationship with both professionalism and uniformity in internal auditing.

## **Methodology**

### ***Professionalism in Internal Auditing***

Data on the age of the IIA affiliates were obtained from the IIA headquarters. We consider the age of the IIA affiliates in 2006 to be consistent with our data on internal audit practices (cf. further). Our analysis is based on the age of 45 affiliates, each representing one country. We limited our sample to 45 countries because only for these

countries could we find cultural dimension data in House et al. (2004) on the four cultural dimensions proposed by Hofstede. For Germany, House et al. (2004) make a distinction between East and West. For South Africa, a distinction is made between the black and white samples, and for Switzerland, a distinction is made between French speaking and non-French speaking societies. We included these countries in our sample and used the average values of the two societies in each country. A similar solution was used for the United Kingdom and Ireland because the two countries are represented by only one IIA affiliate.

We do not include the U.S., Canada, or the Caribbean islands because these societies are represented by numerous IIA chapters (133 in the US alone) that make aggregation of chapter ages very unreliable. As explained in the results section, we perform cluster analysis to classify the 45 IIA affiliates in our sample into at least two age categories. Next, we perform the ANOVA test to check whether the cultural dimensional ratings differ significantly between the cultural clusters used in the study.

### ***Uniformity of Internal Auditing Practices***

The Common Body of Knowledge (CBOK 2006) study, conducted by the IIA Research Foundation in 2006 has resulted in the most comprehensive data base on the current state of the internal auditing profession world-wide (Burnaby et al. 2007). Data on specific internal auditing practices were found in the CBOK database. We secured responses from 1,961 Chief Audit Executives (CAEs) in 32 countries.

Consistent with Doupnik and Salter (1993) and Salter and Niswander (1995), we count the number of specific internal audit practices that were used or put in place by at

least 75 percent of the internal audit departments in a given country as a proxy for *uniformity* of practice. We count the number of specific internal audit practices from a list of 33 practices for which the CBOOK database has data. These practices are listed in Appendix A. The internal audit practices that were used by at least 75 percent of the responding CAEs in each country are selected as a percentage of the total number of internal auditing practices considered to compute a uniformity score. The higher the uniformity score, the more uniform the internal auditing practices in that country.

### ***Other Variables***

A number of legal and economic variables are also used in our study. The source of these legal variables is the CIA World Factbook (CIA 2009). This online database provides for all countries worldwide a brief description of each country's *legal system's* historical roots and classifies the country as primarily a common law or a civil law country. Economic variables included per capita GDP and GDP growth (in 2006, the year when CBOOK data were collected), which are used as proxies for the *degree of economic development*. The *sources of financing* were measured by the market value of publicly traded shares (stock market financing) as well as the stock of domestic credit (credit market financing).

## **Results**

### ***Professionalism in Internal Auditing***

Table 3 shows the results of a cluster analysis in which the 45 IIA affiliates are classified into two significantly different clusters based on their age ( $F = 144.947$ ;  $p <$

.001). Cluster one contains 29 *young affiliates* with an average age of 14 years (range: 1-29 years). Cluster two contains 16 *older affiliates* with an average of 46 years (range: 30-58 years). The T-test at the bottom of Table 3 shows significant differences ( $p < .05$ ) between the young and older affiliates in terms of uncertainty avoidance, institutional collectivism and in-group collectivism. Marginally significant differences ( $p < .10$ ) between the two clusters were found for assertiveness.

[INSERT TABLE 3 HERE]

Specifically, compared to countries with younger IIA affiliates we find countries with older IIA affiliates (i.e., higher degree of professionalism), are to have a significantly lower degree of *uncertainty avoidance* ( $t = 3.008$ ;  $p = .005$ ). This finding supports Hypothesis 1a. Also, countries with older IIA affiliates (thus a higher degree of professionalism) are characterized by a significantly lower degree of *institutional collectivism* ( $t = 2.691$ ;  $p = .012$ ) as well as significantly lower degree of *in-group collectivism* ( $t = 2.787$ ;  $p = .008$ ) than countries with younger affiliates. The latter two results support Hypotheses 1b and 1c. Finally, countries with older IIA affiliates are characterized by a lower degree of *assertiveness* ( $t = 1.750$ ;  $p = .087$ ), which is inconsistent with Hypothesis 1e. Overall, these results are consistent with all Gray's (1988) predictions expect for assertiveness.

Investigating other variables, we find a significant association between professionalism in internal auditing and *legal system* (Chi-square = 5.867;  $p = .015$ ). More specifically, we find evidence that a significantly higher proportion of the young IIA affiliates are located in countries with a civil law system (79.3 percent compared to 20.7 percent in common law countries). Moreover, a significantly higher proportion of

the older IIA affiliates are located in countries with a common law system (56.2 percent compared to 43.8 percent in civil law countries).

Similar to Jaggi and Low (2000), we have split up our sample in two subsets of countries according to the legal system (cf. Table 4). Within the group of 15 common law countries, only uncertainty avoidance turns out to be significantly different between young and older IIA affiliates ( $t = 2.517$ ;  $p = .029$ ). Within the group of 30 civil law countries, our results are consistent with Table 4 except for institutional collectivism, indicating that cultural dimensions have more impact on professionalism in countries with a civil law system compared to countries with a common law system.

[INSERT TABLE 4 HERE]

Second, Table 5 shows no significant difference in terms of *economic development* (measured by GDP per capita and GDP growth) between countries with a young IIA affiliate and countries with an older IIA affiliate. Thus, the degree of economic development does not influence professionalism in internal auditing.

[INSERT TABLE 5 HERE]

Third, Table 5 shows no significant difference in the market value of publicly traded shares and the stock of domestic credit between countries with a young IIA affiliate and countries with an older IIA affiliate. Dividing the market value of publicly traded shares by the stock domestic credit shows the relative importance of stock market financing versus credit market financing. A value higher (lower) than 1 indicates that a country relies more on stock (credit) market financing. No significant differences were found between the relative importance of stock market versus credit market financing and professionalism in internal auditing.

### ***Uniformity in Internal Auditing Practices***

Table 6 provides the results of a cluster analysis of the average uniformity score for the 32 countries used for investigation of *uniformity* of internal audit practices. The uniformity score ranges from 9.09 (for Argentina and Turkey) to 42.42 percent (for Brazil). This score should be interpreted as follows: in Brazil, 42.42 percent (9.9 percent) of the internal audit practices listed in Appendix A are performed by at least 75 percent of the responding internal auditors in Brazil (Argentina/Turkey).

Using cluster analysis, three clusters, significantly different in terms of uniformity score ( $F = 89.333$ ;  $p < .001$ ), could be identified. The first containing seven countries with a *low degree of uniformity* in internal auditing practice (average degree of uniformity = 12.55 percent). A second cluster contains 16 countries with a *medium degree of uniformity* (average score = 22.35 percent) and a third cluster contains nine countries with a *high degree of uniformity* (average score = 32.99 percent).

[INSERT TABLE 6 HERE]

The last row of Table 6 shows the results of the ANOVA test, which indicates that the values for power distance ( $F = 4.840$ ;  $p = .015$ ), institutional collectivism ( $F = 4.448$ ;  $p = .021$ ) and in-group collectivism ( $F = 4.284$ ;  $p = .023$ ) are significantly different between the three clusters. The post hoc pair-wise Bonferoni test shows that countries with a medium degree of uniformity in internal audit practice are characterized by a significantly lower degree of *power distance* ( $p = .013$ ) than countries with a low degree of uniformity. This result is inconsistent with our expectation in Hypothesis 2d. We also find that countries with a medium uniformity in internal audit practice are characterized by a significantly lower degree of *institutional* ( $p = .053$ ) and *in-group* ( $p = .036$ )

*collectivism* than countries with a low degree of uniformity. This result is also inconsistent with the predications of Hypotheses 2b and 2c. No evidence was found for a significant difference between the three clusters in terms of *uncertainty avoidance* and *assertiveness* (masculinity). When reducing the threshold to compute the uniformity score to 50 percent, three similar clusters can be found and the results hold for power distance (Hypothesis 2d) and institutional collectivism (Hypothesis 2b).

Besides the cultural dimension, we tested the effect of a number of legal and economic variables, and did not find a significant association between uniformity of internal auditing practices and *legal system* (Chi-square = 1.317;  $p = .518$ ). First, similar to Jaggi and Low (2000), we split up our sample in two subsets of countries according to countries' legal system (cf. Table 7). Within the group of 11 common law countries, the results shown in Table 6 remain the same except for uncertainty avoidance. In the group of common law countries uncertainty avoidance turns out to be significantly higher in countries with high uniformity compared to countries with medium uniformity ( $F = 10.247$ ;  $p = .006$ ), which supports Hypothesis 2a. Within the group of 21 civil law countries, none of the cultural dimensions is significantly different between the three clusters (i.e., culture is not likely to have an effect on uniformity of internal auditing practices within civil law countries).

[INSERT TABLE 7 HERE]

Second, Table 8 shows a marginally significant difference in terms of *economic development*. More specifically, countries with a high degree of uniformity in internal auditing practices have a marginally significant lower per capita GDP than countries with

a medium degree of uniformity ( $F = 3.320$ ;  $p = .050$ ). Thus, per capita GDP turns out to be negatively associated with uniformity in internal auditing practices.

[INSERT TABLE 8 HERE]

Third, Table 8 shows no significant difference in the market value of publicly traded shares and the stock of domestic credit between the three different uniformity clusters. In addition, no significant relationship was found between the relative importance of stock market versus credit market financing and uniformity of internal auditing practices.

### ***Additional Analysis***

For reasons of completeness, we have run the same analyses for the four additional dimensions of House et al. (2004): gender egalitarianism, future orientation, performance orientation and human orientation. None of these four dimensions is associated with professionalism and uniformity in internal auditing in the countries included in this study. This result does not change when splitting up the sample based on the country's legal system.

### **Summary and Conclusions**

This study extends the literature on the impact of culture on the accounting and auditing profession by investigating the relationship between the cultural dimensions and (1) *professionalism* of the internal auditing community in 45 countries; and (2) *uniformity* of internal auditing practice in 32 countries. The hypotheses tested are based on Gray's

(1988) framework. The results show that *professionalism in internal auditing*, measured by the age of the IIA affiliate, can be explained by Gray's (1988) model.

More specifically, evidence was found that *uncertainty avoidance* is negatively associated with internal auditing professionalism. This confirms that societies less keen on uncertainty and ambiguity (e.g., Thailand, Nigeria, Taiwan, Mexico, and Indonesia) progress slower to a professional internal audit community. This evidence may be positively associated with internal audit practice being less regulated than accounting and external auditing, and therefore more subject to interpretation which creates uncertainty and ambiguity.

Furthermore, the results confirm that *collectivism* is negatively associated with internal auditing professionalism. This implies that a professional internal audit community is largely based on the achievements of individualistic internal auditors who practice in countries like Sweden, Denmark or Finland. Individualistic internal auditors are supposed to be more motivated to invest in the improvement of their practices given that it can benefit their own professional career in which internal audit is often considered as a stepping stone to higher positions.

Finally, we find a (marginally) significant negative association between professionalism in internal auditing and assertiveness. Gray (1988) did not formulate a hypothesis on the impact of assertiveness. Thus, societies characterized by a lower level of assertiveness (such as Sweden, New Zealand and Japan) have more professionalism in their internal auditing practice. This evidence implies that a professional internal audit community is characterized by internal auditors who are nonassertive, nonaggressive, and gentle, thus agreeable in their social relationships. Agreeable people are cooperative

(trusting, caring) and likable (good natured, gentle); they are softhearted and tolerant (Goldberg 1990).

Overall, Hofstede's cultural dimensions have a relatively strong impact on professionalism. However, inconsistent with our expectation from the literature (e.g., Abdolmohammadi and Tucker 2002), the degree of economic development in the 45 countries in our sample is not significantly associated with the degree of professionalism. The same is true for the lack of difference between countries with respect to methods of financing, which is also inconsistent with the traditional agency theory arguments (cf. Adams 1994). However, differences in the legal system are associated with professionalism in internal auditing. Specifically, common law countries are characterized by a higher degree of professionalism compared to civil law countries. A study by Laporta et al. (2000) suggests that in comparison with civil law countries, those with common law systems generally have better corporate governance. Our results suggest that better corporate governance is associated with more professional internal auditing. Also, culture has more effect on professionalism in civil law countries than in common law countries, which is consistent with findings of Jaggi and Low (2000). This finding could be due to the fact the within civil law countries corporate governance requirements (including the recommendation to establish an internal audit function) are less compulsory given the 'comply-or-explain' principle that most of these countries use. Future research may be needed to investigate this issue.

The study also found significant associations between Hofstede's cultural dimensions and the uniformity of internal auditing practices measured by a score consistent with previous studies in this area. However, the significant results are

inconsistent with Gray's (1988) predictions, and thus require additional corroborative data to investigate further.

The results show that, contrary to what we would expect, *individualism* is positively associated with the uniformity of internal audit practices. Countries that are characterized by a lower degree of collectivism (e.g., Sweden, Finland) have more uniform internal auditing practices. Apparently, the feeling to belong to a professional community (in this case, represented by the IIA) does not highly contribute to the creation of uniformity in internal auditing practice, which is not consistent with the mission of the IIA. This evidence may suggest that best practices spread by informal professional networks (consulted on a more ad hoc basis and less focusing on the 'group' feeling), benchmarking (via for example an external quality assessment) and publicly available resources (books, articles,...) are even more important to uniform internal auditing practices. This possibility requires more research in the future to settle.

Besides, this study has found that, contrary to our hypothesis, *power distance* is negatively associated with uniformity in internal auditing practices. For example Australia or Costa Rica, where power distance is low, are characterized by more uniform internal auditing practices. This evidence suggests that hierarchical differences do not play an important role within the internal audit function. Moreover, this result shows that the implementation of best practices, which leads to uniform internal audit practice, is typically not done by imposition via the hierarchical structure of the internal audit department.

Although no significant association between uniformity in internal auditing practices and the legal system could be found, the results of this study show that within

civil law countries cultural dimensions do not have an impact on uniformity in internal auditing practices. We encourage future research to study uniformity of internal auditing practices in civil law countries in more detail in order to come up with viable explanatory variables.

The marginal effect of economic development on uniformity in internal auditing practices may suggest that ‘poorer’ countries comply more with Standards, practice advisories, position papers, and other documents published by the IIA which stimulates uniform practice. This could be due to the fact that within these countries internal audit budgets are more limited which impedes the development of a tailor-made methodology. Again, future research is needed to investigate this further.

It has to be noted that none of the four dimensions added by House et al. (2004) is significantly associated with professionalism and uniformity in internal auditing. This result enhances the strength of the basic cultural dimensions of Hofstede (1980; 1983).

Similar to other studies using perceptual data, our study suffers from a few limitations. First, due to the limited number of cases, multivariate analysis such as regression analysis has been left out given the potential over-specification bias (i.e. too many explanatory variables given the limited number of cases). Second, this study only includes the cultural dimensions of Hofstede (1980; 1983) and House et al. (2004). Nevertheless, the literature provides other, less frequently used, frameworks with quantitative measures of national culture (e.g. Schwartz 1994; Trompenaars and Hampden-Turner 1994). Including variables from these alternative frameworks could be an interesting extension of this study.

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**Appendix A**  
**Internal Auditing Practices**  
**For the calculation of the uniformity of practice score**

1. Reporting status: is the internal audit function in an independent position reporting to the audit committee or other oversight board.
2. Existence of an internal audit charter.
3. Existence of an internal audit mission statement.
4. Existence of an internal audit operating manual.
5. Existence of an annual internal audit plan.
6. Existence of a long-term internal audit plan.
7. Existence of an internal audit risk assessment.
8. Existence of a risk-based audit plan.
9. Existence of a quality assessment and improvement program.
10. The internal audit function performs business viability assessments.
11. The internal audit function assesses compliance with company privacy policies.
12. The internal audit function assesses compliance with corporate governance and regulatory code requirements.
13. The internal audit function monitors the control framework and assists with the development.
14. The internal audit function is involved in corporate takeovers and mergers.
15. The internal audit function is involved in enterprise risk management.
16. The internal audit function is performing ethics audits.
17. The internal audit function assists the external auditor(s).
18. The internal audit function performs health, safety and environment audits.
19. The internal audit function performs financial audits.
20. The internal audit function performs information risk assessments.
21. The internal audit function performs information technology department assessments.
22. The internal audit function tests and evaluates the internal control system.
23. The internal audit function performs investigations of fraud and irregularities.
24. The internal audit function links strategy and company performance.
25. The internal audit function performs management effectiveness reviews.
26. The internal audit function performs operational audits.
27. The internal audit function is involved in project management.
28. The internal audit function performs quality / ISO audits.
29. The internal audit function is involved in resource management and control.
30. The internal audit function reviews security issues.
31. The internal audit function performs social and sustainability audits.
32. The internal audit function performs special projects.
33. The internal audit function provides technical competency training for its auditors.

**Table 1: Convergent Validity Coefficients between House et al. and Hofstede Scales**

<b>House et al. (2004)</b>		<b>Hofstede (1980)</b>
		<p><b>Power Distance</b> is the extent to which the members of a society accept that power in institutions is distributed unequally. This affects the behavior of the less powerful as well as of the more powerful members of society.</p>
<p><b>Power Distance</b> reflects the extent to which a community accepts and endorses authority, power differences, and status privileges.</p>	Practices	0.61**
		<p><b>Uncertainty Avoidance</b> is the degree to which the members of a society feel uncomfortable with uncertainty and ambiguity. This feeling leads them to beliefs promising certainty and to maintaining institutions protecting conformity.</p>
<p><b>Uncertainty Avoidance</b> involves the extent to which ambiguous situations are threatening to individuals, to which rules and order are preferred, and to which uncertainty is tolerated in a society.</p>	Values	0.32**
		<p><b>Individualism</b> stands for a preference for a loosely know social framework in society wherein individuals are supposed to take care of themselves and their immediate families only.</p>
<p><b>Institutional Collectivism</b> reflects the degree to which organizational and societal institutional practices encourage and reward collective distribution of resources and collective action.</p>	Values	-0.55**
<p><b>In-Group Collectivism</b> reflects the degree to which individuals express pride, loyalty, and cohesiveness in their organizations or families.</p>	Practices	-0.82**
		<p><b>Masculinity</b> stands for a preference in society for achievement, heroism, assertiveness, and material success.</p>
<p><b>Assertiveness</b> reflects beliefs as to whether people are or should be encouraged to be assertive, aggressive and though, or nonassertive, nonaggressive, and tender in social relationships.</p>	Practices	0.42**

\*\* =  $p < .01$

Source convergent validity coefficients: House et al. (2004, 140)

**Table 2: Expected Signs of the Associations based on Gray (1988), expanded per House et al. (2004)**

<b>Cultural Dimension</b>	<b>Professionalism</b>	<b>Uniformity</b>
Uncertainty Avoidance	Negative	Positive
Individualism	Positive	Negative
Institutional Collectivism	Negative	Positive
In-group Collectivism	Negative	Positive
Power Distance	Negative	Positive
Assertiveness	Null	Null

**Table 3: Professionalism in Internal Auditing: Relationship with Cultural Dimensions**

<b>Cluster 1: Young IIA Affiliates</b>	<b>Age IIA Affiliate</b>	<b>Uncertainty avoidance</b>	<b>Power distance</b>	<b>Institutional collectivism</b>	<b>In-group collectivism</b>	<b>Assertiveness</b>
Austria	10	3.98	4.95	4.73	4.85	4.62
Germany	11	3.94	5.40	4.75	4.52	4.67
Greece	9	5.09	5.40	5.40	5.27	4.58
Netherlands	9	3.24	4.11	4.55	3.70	4.32
Qatar	3	4.82	4.73	5.13	4.71	4.11
Russia	6	5.07	5.52	3.89	5.63	3.68
Slovenia	6	4.99	5.33	4.38	5.43	4.00
Spain	27	4.76	5.52	5.20	5.45	4.42
Turkey	10	4.67	5.57	5.26	5.88	4.53
China	18	5.28	5.04	4.56	5.80	3.76
Taiwan	14	5.31	5.18	5.15	5.59	3.92
Malaysia	29	4.88	5.17	4.87	5.51	3.87
Thailand	9	5.61	5.63	5.10	5.70	3.64
Bolivia	18	4.70	4.51	5.10	5.47	3.79
Brazil	29	4.99	5.33	5.62	5.18	4.20
Costa Rica	12	4.58	4.74	5.18	5.32	3.75
Ecuador	23	5.16	5.60	5.41	5.81	4.09
Guatemala	1	4.88	5.60	5.23	5.63	3.89
Hong Kong	28	4.63	4.96	4.43	5.32	4.67
Hungary	14	4.66	5.56	4.50	5.25	4.79
Indonesia	18	5.23	5.18	5.18	5.68	3.86
Mexico	22	5.26	5.22	4.92	5.71	4.45
Morocco	14	5.32	5.80	5.00	5.87	4.52
Nigeria	4	5.60	5.80	5.03	5.55	4.79
Poland	9	4.71	5.10	4.22	5.52	4.06
Portugal	14	4.43	5.44	5.30	5.51	3.65

Slovenia	6	4.99	5.33	4.38	5.43	4.00
Switzerland	10	3.50	4.88	4.50	3.91	3.99
Zambia	8	4.67	5.31	4.74	5.84	4.07
Zimbabwe	18	4.73	5.67	4.87	5.57	4.06
<b>Average cluster 1</b>	<b>14</b>	<b>4.78</b>	<b>5.25</b>	<b>4.90</b>	<b>5.35</b>	<b>4.16</b>
<b>Cluster 2: Older IIA Affiliates</b>						
Denmark	55	3.82	3.89	4.19	3.53	3.80
Finland	55	3.85	4.89	4.11	4.07	3.81
France	41	4.26	5.28	4.86	4.37	4.13
Israel	46	4.38	4.73	4.27	4.70	4.23
Italy	34	4.47	5.43	5.13	4.94	4.07
South-Africa	42	4.73	4.64	4.34	4.80	4.48
Sweden	55	3.60	4.85	3.94	3.66	3.38
Australia	54	3.98	4.74	4.40	4.17	4.28
Japan	48	4.33	5.11	3.99	4.63	3.59
New Zealand	32	4.10	4.89	4.20	3.67	3.42
Philippines	58	5.14	5.44	4.78	6.36	4.01
UK & Ireland	58	4.07	5.15	4.45	4.61	4.04
Argentina	46	4.66	5.64	5.32	5.51	4.22
Colombia	35	4.98	5.56	5.38	5.73	4.20
India	43	4.73	5.47	4.71	5.92	3.73
Singapore	30	4.22	4.99	4.55	5.64	4.17
<b>Average cluster 2</b>	<b>46</b>	<b>4.33</b>	<b>5.04</b>	<b>4.54</b>	<b>4.77</b>	<b>3.97</b>
<b>T-test (differences between both clusters)</b>		<b>t = 3.008</b> <b>p = .005</b>	<b>t = 1.550</b> <b>p = .132</b>	<b>t = 2.691</b> <b>p = .012</b>	<b>t = 2.787</b> <b>p = .008</b>	<b>t = 1.750</b> <b>p = .087</b>

Note that higher scores indicate for greater power distance, uncertainty avoidance, collectivism or assertiveness.(seven-point Likert scale)

**Table 4: Professionalism in Internal Auditing: Common Law versus Civil Law Countries**

	<b>Uncertainty avoidance</b>	<b>Power distance</b>	<b>Institutional collectivism</b>	<b>In-group collectivism</b>	<b>Assertiveness</b>
<i>Common Law Countries</i>					
<b>Cluster 1: Young IIA Affiliates</b> (n = 6)	4.96	5.36	4.81	5.58	4.32
<b>Cluster 2: Older IIA Affiliates</b> (n = 9)	4.45	5.08	4.56	5.04	4.06
<b>T-test</b> ( <i>differences between both clusters</i> )	<b>t = 2.517</b> <b>p = .029</b>	<b>t = 1.559</b> <b>p = .145</b>	<b>t = 1.766</b> <b>p = .101</b>	<b>t = 1.805</b> <b>p = .105</b>	<b>t = 1.369</b> <b>p = .202</b>
<i>Civil Law Countries</i>					
<b>Cluster 1: Young IIA Affiliates</b> (n = 23)	4.74	5.22	4.93	5.29	4.12
<b>Cluster 2: Older IIA Affiliates</b> (n = 7)	4.19	5.00	4.51	4.42	3.85
<b>T-test</b> ( <i>differences between both clusters</i> )	<b>t = 2.538</b> <b>p = .026</b>	<b>t = .972</b> <b>p = .359</b>	<b>t = 1.705</b> <b>p = .126</b>	<b>t = 2.771</b> <b>p = .023</b>	<b>t = 1.973</b> <b>p = .072</b>

**Table 5: Professionalism in Internal Auditing: Relationship with Other Variables**

	<b>GDP / Capita in 2006 (\$)</b>	<b>GDP Growth in 2006 (%)</b>	<b>Market Value of Publicly Traded Shares (billion \$)</b>	<b>Stock of Domestic Credit (billion \$)</b>	<b>Importance of Stock Market versus Credit Market</b>
<b>Cluster 1: Young IIA Affiliates</b>	19,555.17	5.29	623.73	707.02	1.05
<b>Cluster 2: Older IIA Affiliates</b>	26,400.00	4.83	947.48	1,466.35	1.15
<b>T-test</b> ( <i>differences between both clusters</i> )	<b>t = -1.378</b> <b>p = .176</b>	<b>t = .547</b> <b>p = .588</b>	<b>t = .581</b> <b>p = .401</b>	<b>t = -1.382</b> <b>p = .174</b>	<b>t = -.339</b> <b>p = .736</b>

**Table 6: Cluster Analysis – Uniformity in Internal Auditing Practices**

<b>Cluster 1: Low Uniformity</b>	<b>Number of responding CAEs</b>		<b>Uniformity Score (%)</b>	<b>Uncertainty avoidance</b>	<b>Power distance</b>	<b>Institutional collectivism</b>	<b>In-group collectivism</b>	<b>Assertiveness</b>
Argentina	13	0.7%	9.09	4.66	5.64	5.32	5.51	4.22
India	25	1.3%	15.15	4.73	5.47	4.71	5.92	3.73
Japan	16	0.8%	15.15	4.33	5.11	3.99	4.63	3.59
Portugal	14	0.7%	15.15	4.43	5.44	5.30	5.51	3.65
Spain	95	4.8%	12.12	4.76	5.52	5.20	5.45	4.42
Turkey	30	1.5%	9.09	4.67	5.57	5.26	5.88	4.53
Venezuela	7	0.4%	12.12	5.26	5.40	5.39	5.53	4.33
<b>Average Cluster 1</b>	<b>200</b>	<b>10.20%</b>	<b>12.55</b>	<b>4.69</b>	<b>5.45</b>	<b>5.02</b>	<b>5.49</b>	<b>4.07</b>
<b>Cluster 2: Medium Uniformity</b>								
Australia	72	3.7%	24.24	3.98	4.74	4.40	4.17	4.28
Austria	57	2.9%	21.21	3.98	4.95	4.73	4.85	4.62
Canada	107	5.5%	21.21	3.75	4.82	4.17	4.26	4.05
China	13	0.7%	24.24	5.28	5.04	4.56	5.80	3.76
Costa Rica	16	0.8%	21.21	4.58	4.74	5.18	5.32	3.75
Finland	14	0.7%	27.27	3.85	4.89	4.11	4.07	3.81
France	69	3.5%	21.21	4.26	5.28	4.86	4.37	4.13
Greece	17	0.9%	21.21	5.09	5.40	5.40	5.27	4.58
Italy	128	6.5%	18.18	4.47	5.43	5.13	4.94	4.07
New Zealand	13	0.7%	21.21	4.10	4.89	4.20	3.67	3.42
Russia	50	2.5%	21.21	5.07	5.52	3.89	5.63	3.68
Singapore	21	1.1%	21.21	4.22	4.99	4.55	5.64	4.17
South Africa	86	4.4%	21.21	4.73	4.64	4.34	4.80	4.48

Sweden	17	0.9%	21.21	3.60	4.85	3.94	3.66	3.38
UK & Ireland	68	3.5%	27.27	4.07	5.15	4.45	4.61	4.04
USA	777	39.6%	24.24	4.00	4.88	4.17	4.25	4.55
<b>Average Cluster 2</b>	<b>1,525</b>	<b>77.77%</b>	<b>22.35</b>	<b>4.31</b>	<b>5.01</b>	<b>4.50</b>	<b>4.71</b>	<b>4.05</b>
<b>Cluster 3: High Uniformity</b>								
Brazil	11	0.6%	42.42	3.60	5.33	5.62	5.18	4.20
Colombia	25	1.3%	30.30	4.98	5.56	5.38	5.73	4.20
Germany	40	2.0%	30.30	3.94	5.40	4.75	4.52	4.67
Malaysia	13	0.7%	36.36	4.88	5.17	4.87	5.51	3.87
Mexico	24	1.2%	30.30	5.26	5.22	4.92	5.71	4.45
Netherlands	26	1.3%	30.30	3.24	4.11	4.55	3.70	4.32
Poland	8	0.4%	33.33	4.71	5.10	4.22	5.52	4.06
Taiwan	76	3.9%	30.30	5.31	5.18	5.15	5.59	3.92
Thailand	13	0.7%	33.33	5.61	5.63	5.10	5.70	3.64
<b>Average Cluster 3</b>	<b>236</b>	<b>12.03%</b>	<b>32.99</b>	<b>4.61</b>	<b>5.19</b>	<b>4.95</b>	<b>5.24</b>	<b>4.15</b>
<b>ANOVA test</b> <i>(differences between three clusters)</i>				<b>F = 1.344</b> <b>p = .277</b>	<b>F = 4.840</b> <b>p = .015</b>	<b>F = 4.448</b> <b>p = .021</b>	<b>F = 4.284</b> <b>p = .023</b>	<b>F = .209</b> <b>p = .812</b>

Note that higher scores indicate for greater power distance, uncertainty avoidance, collectivism or assertiveness.(seven-point Likert scale)

**Table 7: Uniformity in Internal Auditing Practices: Common Law versus Civil Law Countries**

	<b>Uncertainty avoidance</b>	<b>Power distance</b>	<b>Institutional collectivism</b>	<b>In-group collectivism</b>	<b>Assertiveness</b>
<i>Common Law Countries</i>					
<b>Cluster 1: Low Uniformity</b> (n = 2)	4.70	5.56	5.02	5.72	3.98
<b>Cluster 2: Medium Uniformity</b> (n = 2)	4.12	4.87	4.33	4.49	4.14
<b>Cluster 3: High Uniformity</b> (n = 7)	5.07	5.20	4.90	5.61	4.16
<b>ANOVA test</b> ( <i>differences between three clusters</i> )	<b>F = 10.247</b> <b>p = .006</b>	<b>F = 17.025</b> <b>p = .001</b>	<b>F = 12.659</b> <b>p = .003</b>	<b>F = 5.839</b> <b>p = .027</b>	<b>F = .171</b> <b>p = .846</b>
<i>Civil Law Countries</i>					
<b>Cluster 1: Low Uniformity</b> (n = 5)	4.69	5.41	5.03	5.40	4.10
<b>Cluster 2: Medium Uniformity</b> (n = 7)	4.46	5.12	4.64	4.88	3.98
<b>Cluster 3: High Uniformity</b> (n = 9)	4.48	5.19	4.97	5.13	4.14
<b>ANOVA test</b> ( <i>differences between three clusters</i> )	<b>F = .197</b> <b>p = .823</b>	<b>F = 1.024</b> <b>p = .379</b>	<b>F = 1.077</b> <b>p = .362</b>	<b>F = 949</b> <b>p = .406</b>	<b>F = .396</b> <b>p = .679</b>

**Table 8: Uniformity in Internal Auditing Practices: Relationship with Other Variables**

	<b>GDP / Capita in 2006 (\$)</b>	<b>GDP Growth in 2006 (%)</b>	<b>Market Value of Publicly Traded Shares (billion \$)</b>	<b>Stock of Domestic Credit (billion \$)</b>	<b>Importance of Stock Market versus Credit Market</b>
<b>Cluster 1: Low Uniformity</b>	18,185.71	6.09	964.12	2,041.26	0.59
<b>Cluster 2: Medium Uniformity</b>	30,118.75	4.88	2,411.97	2,155.33	1.09
<b>Cluster 3: High Uniformity</b>	19,022.22	4.91	644.48	1,037.44	0.89
<b>ANOVA test</b> ( <i>differences between three clusters</i> )	<b>F = 3.320</b> <b>p = .050</b>	<b>F = .538</b> <b>p = .590</b>	<b>F = .817</b> <b>p = .452</b>	<b>F = .402</b> <b>p = .673</b>	<b>F = 1.565</b> <b>p = .226</b>