Cultural Significance on Accounting: Analyzing the Link between Uncertainty Avoidance
and Accounting Conservatism in the Hofstede-Gray-Framework

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SUMMARY

The Hofstede-Gray-Framework postulated by Gray (1988) combines the four cultural dimensions from Hofstede (1980) with accounting values being professionalism versus statutory control, uniformity versus flexibility, conservatism versus optimism, and secrecy versus transparency. This thesis focuses on the cultural dimension of uncertainty avoidance (Hofstede, 1980) which is considered the most significant dimension to predict the accounting values of countries and clusters (Salter & Niswander, 1995). This dimension is strongly linked to accounting conservatism. In this context, a variety of research gaps are addressed, as for example: The improvement of the measurement of dependent variables by applying measures of unconditional conservatism based on current research, the examination if cultural influences on accounting practice persist following the adoption of IFRS and the improvement of the independent variable by integrating data from a questionnaire on financial risk perception (Weber and Hsee, 1999) into the research design. Besides that a comprehensive literature review has been performed providing conclusions and analyses not having been published so far. Based on an examination of 44 countries for the Hofstede data set, it could be concluded that culture cannot be dismissed as a possible variable explaining accounting conservatism even after adoption of IFRS. The financial risk questionnaire dataset less evident than for the Hofstede scale. As the statistical results are encouraging and valuable from a research gap perspective, it is suggested to continue the search for further participants in the survey to increase the number of participants per country to a reasonable amount.

ZUSAMMENFASSUNG

Das sognannte Hofstede-Gray-Konzept (Gray, 1988) verbindet die vier Kulturdimensionen von Hofstede (1980) mit Werteinstellungen im Accounting, wie z.B., Professionalität versus statutarische Kontrolle, Uniformität versus Flexibilität, Konservatismus versus Optimismus und Geheimhaltung versus Transparenz. In dieser Arbeit konzentriere ich mich auf die Kulturdimension Unsicherheitsvermeidung (Hofstede, 1980), die gemäss Salter und Niswander (1995) die wichtigste Kulturdimension zur Einschätzung von Werteinstellungen von Ländern und Ländergruppen im Accounting darstellt. Diese Kulturdimension ist eng mit dem Konzept des Accountingkonservatismus verbunden. In diesem Gesamtkontext wird eine Verbesserung der Operationalisierung der abhängigen Variablen mit Hilfe von neueren Forschungsergebnissen aus dem Bereich der non-konditionellen Accountingkonservatismusforschung angestrebt. Darüber hinaus wird untersucht, ob kulturelle Einflüsse auf Accountingentscheide auch nach der gesetzlichen Einführung von IFRS beobachtbar sind. Neben weiteren Fragestellungen, wird auch eine Verbesserung der Operationalisierung der unabhängigen Variable von Hostede (1980) angestrebt und zwar mit Hilfe eines Fragebogens zur finanziellen Risikowahrnehmung. Zusätzlich wird in der Arbeit ein umfassender Überblick über die Literatur zum Thema gegeben, der Analysen und Schlussfolgerungen aufzeigt, die so bisher nicht veröffentlicht worden sind. Basierend auf einer Stichprobe von 44 Ländern, konnte für die Hofstede-Daten gezeigt werden, dass Kultur eine Variable ist, die auch nach der gesetzlichen Einführung von IFRS, als erklärende Variable von interkulturellen Unterschieden im Accountingkonservatismus nicht ignoriert werden kann. Die statistischen Ergebnisse für die Fragebogendaten waren weniger eindeutig als die Hofstede-Daten, dennoch sind sie ermutigend und wertvoll aufgrund der bisher in diesem Kontext wenig aufgenommenen Kritik an den Hofstede. Ich schlage daher vor, die Anzahl der Teilnehmer pro Land weiter zu erhöhen und die Fragebogendaten dann nochmals auszuwerten.

1.   Personal motivation

Having been fascinated by foreign cultures and finance topics since my study year in Japan at Tokyo International University in the late nineties, I decided to revisit both interests within a doctoral thesis after some years of professional experience. Fortunately, Professor Dr. Thomas Berndt kindly offered me to get in touch with the exciting world of accounting research at the Institute of Public Finance, Fiscal Law and Law and Economics of the University of St. Gallen. I am incredibly thankful for this opportunity. Without the valuable advice of Professor Dr. Thomas Berndt and Professor Dr. Andreas Grüner, this thesis would have not been possible.

While I first intended to conduct research on the relation between culture and loss aversion, I changed my mind when I prepared my contribution to a PhD seminar in autumn 2010 on Behavioral Accounting. Pioneering work in this area has been conducted by Becker (1967). Behavioral Accounting Research "applies theories and methodologies from the behavioral sciences to examine the interface between accounting information and processes and human (including organizational) behavior"[1]. Birnberg and Shields (1989) proposed five schools within Behavioral Accounting Research: Managerial Control, Accounting Information Processing, which are the oldest schools, and Accounting Information Systems Design, Auditing Research and Organizational Sociology, which are the more recent ones.[2] The School of Accounting Information Systems Design offers a valid framework to combine culture and accounting.[2] Key research in this school has been conducted by Sorter and Becker (1966) aiming to understand the choice of accounting methods done by managers. They could show the existence of a corporate personality determining the choice of particular accounting policies. The proposed corporate personality roots in the personalities of executives of the firm: Firms with more conservative executives preferred LIFO (Last-in First-out) and the accelerated method, while more liberal minded firms used FIFO (First-in First-out) and the straight line method.[2] In an earlier study the same authors have found that firms keeping one set of books, meaning that they apply the same depreciation method for their tax and financial reports, showed intolerance for ambiguity. This ambiguity intolerance was linked to a culture of risk aversion and conservatism, shown by lower debt to asset ratios, more defensive or liquid asset positions, less tolerant attitudes about controversial accounting issues and more authoritarian psychological attitudes.[3]

Instead of linking conservative accounting decisions with corporate culture, I had the idea transposing this research question on a country level. I had the opinion that the aggregate or sum of all corporate personalities in one country could lead to country-specific corporate

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[1] Birnberg/Shields (1989), p. 24.
[2] Cf. Birnberg/Shields (1989), p. 23.
[3] Cf. Sorter/Becker (1964), p. 185.

personalities and culture-specific results. This could be examined by an analysis of financial statements providing indicators in the form of accounting and financial measures. I hypothesized that country-specific corporate personalities, or rather personality traits, operationalized by the uncertainty avoidance dimension of Hofstede (1980) might be reflected in diverging accounting measures (e.g., financial ratios) or choice of different accounting methods (e.g., FIFO, LIFO, etc.).

I was eventually convinced by the topic after having conducted some first ad-hoc regression analyses with financial data downloaded from Bloomberg and the uncertainty dimension from Hofstede (1980) leading to significant results. A big dampener was put on my enthusiasm, when I discovered the Hofstede-Gray-Framework during my literature research: Gray (1988) has already linked all cultural dimensions found by Hofstede with specific accounting values including conservatism. After having coped with my first shock that I will not have the chance to hit the big jackpot anymore, I quickly learnt that there are enough open questions surrounding the Hofstede-Gray-Framework which might end up in a worthwhile research contribution. The result of this thinking is outlined in the problem definition.

2. Problem definition

Acknowledging a possible influence of cultural aspects on accounting is rather counter-intuitive from a common sense or practitioner perspective. The accountant is seen as a professional who – as part of a wider corporate governance (finance) function – coordinates and governs the process to provide an objective, unbiased, and transparent presentation of the financial situation of a firm.

Reviewing academic literature, numerous statements on the impact of culture on accounting can be found. According to Nobes (2004), accounting is "clearly affected by its environment, including the culture of the country in which it operates"[4]. Hofstede and Hofstede (2005) define culture as "collective programming of the mind that distinguishes one human group from the other. This leads to a set of societal values that drives institutional form and practice"[5] in the respective culture. Accounting can be seen as a part of institutional form and practice. Gray (1988) states, "the value system of attitudes of accountants may be expected to be related to and derived from societal values with special reference to work related values"[6].

In the so-called Hofstede-Gray-Framework, Gray (1988) combines the four cultural dimensions from Hofstede (1980) being individualism versus collectivism, large versus small power distance, strong versus weak uncertainty avoidance, and masculinity versus femininity with accounting values being professionalism versus statutory control, uniformity versus flexibility, conservatism versus optimism, and secrecy versus transparency.[7,8] With this framework, Gray (1988) provides an explanation for international differences in the behaviour of accountants and accounting practices. Gray (1988) did not provide any empirical evidence for the links between accounting values and cultural dimensions postulated by him in the form of hypotheses. Following the publication of his research paper, plenty of researchers worked on the lack of empirical evidence for the hypotheses with mixed results.[9]

In this thesis I focus on the varying degree of uncertainty avoidance or financial risk perception across cultures and their possible correlation to the accounting value conservatism (Gray, 1988), operationalized by conservative accounting choices and measures. My contribution will be structured as follows:

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[4] Nobes (2004), p. 17.
[5] Hofstede/Hofstede (2005), p. 3.
[6] Gray (1988), p. 5.
[7] Cf. Hofstede/Hofstede (2005), p. 22.
[8] Cf. Gray (1988), p. 8.
[9] Cf. Finch (2010), p. 3.

First, I integrate the topic of this thesis into the broader context of accounting research. This thesis, similarly to other studies on the Hofstede-Gray-Framework, contributes to International Accounting Harmonization Research which is a sub-discipline of International Accounting Research and Financial Accounting Research. While International Accounting Harmonization Research reached a certain degree of maturity prior to the introduction of IFRS as legally binding requirement for stocks listed in the European Union, the importance of the field and the need for further research is obvious. First, the standardization project between the IASB and the FASB is still ongoing being a classic field of international accounting harmonization research. Second, the transferability of models postulated before the introduction of IFRS into the IFRS era needs to be assessed, ultimately raising the question if the idea of full accounting standardization across nations and their different cultures represents an achievable mission.

Following the situation of the topic in the field of accounting research, it is indispensable to describe the cultural dimensions of Hofstede in the overall context of culture theories. The section on culture theories highlights the challenges around the definition of the term culture which countless authors describe a concept being difficult to define. It further explains the most well-known culture theories, e.g., the work of Parson and Shils (1951), Kluckhohn and Strodtbeck (1961), Hall (1976), Hofstede (1980), Trompenaars (1993), Schwartz (1999), and project GLOBE (2004). Particular attention has been paid to the description of the culture dimensions of Hofstede (1980) which have been widely recognized for their relevancy, added value to international management research and relative accuracy shown in replication studies confirming Hofstede's initial results. Contrary, the dimensions from Hofstede have been exposed to strong criticism with regards to the number of dimensions covered, statistical integrity, their outdatedness, reliance on IBM data, and many others. In addition, I elaborated an analysis which shows that a research tradition for the elaboration and refinement of culture dimensions has been built and how the involved researchers influenced each other in postulating different patterns of culture. This contribution is based on the idea of Straub et al. (2002) and has not been published as such before. Finally, current topics in culture theory, e.g., the idea of core cultural dimension to see the wood for the trees in the jungle of culture models, quantitative versus qualitative approaches, and the dispute around convergence or divergence of cultural values in a globalized world are discussed. The latter issue is addressed in this thesis, as, in addition to analyses with Hofstede scale, most current data will be collected through a questionnaire on risk perception leading to a reflection of current cross-cultural differences in the sample. This is a major advantage to studies just using the uncertainty avoidance scale from Hofstede from 1980.

After having explained the main concepts of this thesis, accounting and culture, I provide a comprehensive literature overview on the combination of the two starting with international classification research prior to the Hofstede-Gray-Framework which is considered the first step to better understand international differences in accounting practice, however, without having explicitly mentioned the influence of culture. The literature review continues with studies prior to the Hofstede-Gray-Framework, explicitly dealing with the impact of culture on accounting. I could show that a number of authors incorporated culture in their research on international accounting topics before the Hofstede-Gray-Framework has been published. This indicates that the Hofstede-Gray-Framework was not the starting point of combining culture and accounting by examining the impact of one on the other. Not all of these authors have been mentioned in the first and later publications on the Hofstede-Gray-Framework. In addition the thesis will provide an overview on the Hofstede-Gray-Framework itself. Gray (1988) provides a concise and comprehensible framework aiming to establish a relationship between accounting values and the cultural dimensions of Hofstede. This theoretical concept marks the starting point for studies examining the cultural impact on accounting. Gray published two significant theoretical papers on the Hofstede-Gray-Framework. One publication is from 1988 and the later publication from 2006. I have found differences between these papers which have not yet been discussed in papers of other researchers. First, it includes a fifth cultural dimension called long-term versus short-term orientation which has been added by Hofstede at a later stage to its overall culture model. Some researchers have adapted this fifth dimension while others have not. Second, the explicit formulation of hypotheses has been dropped in the later publication without any reasoning for this significant change. Third and this is a consequence of the second change, the explicit linkage of a specific accounting value to a set of cultural dimensions has been alleviated allowing research on not only four, but rather 20 hypotheses (five cultural dimensions multiplied by four accounting values). Finally, one further significant item to mention is the sixth cultural dimension recently proposed by Hofstede, which is called indulgence versus restraint. This cultural dimension has not been included in any of the publications on the Hofstede-Gray-Framework so far. This fact does not only provide room for further empirical research on the extended Hofstede-Gray-Framework, but also an opportunity to undertake qualitative reasoning on possible hypotheses and individual associations to particular accounting values to be examined empirically at a later stage by other researchers.

The literature review also takes into account that Gray (1988) has not empirically tested his hypotheses and therefore provides an overview of the subsequent studies aiming to find empirical evidence for the concept. The studies will be categorized in the following sections: Comprehensive testing of the framework, the testing of particular hypotheses, case studies, and

applications as well as theoretical reviews. In addition, this section indicates which studies have been conducted before and after the implementation of IFRS. The studies are assessed in terms of coverage of independent variables, operationalization of dependent variables, control variables, statistical method, and number of countries covered. Additionally, overview tables are provided. Given the amount of research on the framework, I consider theoretical reviews valuable contributions to provide critical status updates for the scientific community. Earlier reviews have been published by Doupnik and Tsakumis (2004) and Finch (2008) who only reviewed twelve and eight studies, respectively. A review as comprehensive as in this thesis has not been published so far.

While the overview shows mixed results for the Hofstede-Gray-Framework, there were only two studies in which all hypotheses related to cultural impact on accounting practices were rejected. The findings go in parallel with the research designs of the studies on the Hofstede-Gray-Framework. In the early years after the publication of the Hofstede-Gray-Framework comprehensive studies of the whole framework have been conducted with mixed results. Afterwards more and more studies have chosen to examine particular hypotheses on relations between cultural dimensions and accounting values. The overall research design became more diverse and flexible. Research designs targeting single cultural values and accounting values relations allow research question-based operationalization of independent and dependent variables and inclusion of relevant contextual variables. While the Hofstede-Gray-Framework would be kept as a conceptual basis, the increased degree of flexibility might lead to potential improvement of the research design and the validity of results. One obvious example would be the replacement of for example the cultural dimensions of Hofstede. These suggestions are in line with the suggestions of Doupnik and Tsakumis (2004) who argue that many relationships in the framework have not yet been tested and that alternatives to Hofstede's dimensions should be explored.

Following Doupnik and Tsakumis (2004) asking for an effort to test specific relationships in the Hofstede-Gray-Framework and for alternatives to Hofstede's dimensions, an alternative to the cultural dimension uncertainty avoidance will be proposed. The cultural dimension of uncertainty avoidance has been found to be the most significant factor in predicting the accounting value profile of countries and clusters (Salter & Niswander, 1995). Salter & Niswander (1995) have shown that the uncertainty avoidance dimension forecasts about 80% of the accounting value profile. As the uncertainty avoidance scale is derived from questions which are not related to financial decisions, it could be argued that an uncertainly avoidance measurement technique more related to financial decisions, could be considered a more valid independent variable explaining differences in risk related financial behaviour in different

cultures. A financial decisions based alternative to the values provided by the uncertainty avoidance dimension of Hofstede (1980) which has been widely used for different research and practice settings, could not only improve the face validity of the Hofstede-Gray-Framework it could also represent a valuable independent variable for future research in international finance. I would like to emphasize that these values cannot not be derived from the work of concurrent cultural models developed by Trompenaars and project GLOBE as their uncertainty avoidance dimension is based on Hofstede's (1980) concept. A country ranking derived from survey on financial risk perception will be developed on the basis of a questionnaire from Weber and Hsee (1998).

The importance of the uncertainty avoidance dimension within the Hofstede-Gray-Framework is significant. Gray (1988) says that the accounting value of conservatism can be most closely linked with the cultural dimension of uncertainty avoidance. Most studies examining the accounting value conservatism apply outdated measures and do not take into account the differentiation between conditional and unconditional conservatism. Salter and Lewis (2011) consider the definition of unconditional conservatism being almost identical to the definition of accounting conservatism by Gray (1988), but use a measure from Gray (1980) not used in any study on the Hofstede-Gray-Framework testing study. Salter et al. (2013) rely on Basu's (1997) model of unconditional conservatism which has been criticized by other researchers. Taking up this criticism and based on Wang et al. (2009), the following measures of unconditional accounting conservatism will be applied in this thesis: Inventory valuation, book to market ratio and negative accruals. In summary, the research gaps addressed in the empirical analysis part of this thesis are as follows:

- Improvement of the dependent variables: This thesis will apply state of the art measures of unconditional conservatism (Wang et al., 2009) and will not rely on one single measure only which follows the recommendation of the same authors.
- Improvement of the independent variable: This thesis will present an alternative measure for uncertainty avoidance based on a financial risk questionnaire (Weber and Hsee, 1999) which can be considered a more valid instrument in the context of accounting decisions than a scale derived from an employee survey.
- Adoption of IFRS: The last area for discussion, which represents a research gap, relates to the fact that the majority of the studies were conducted before the adoption of IFRS in the European Union in 2004. Also in studies after 2004, the mentioning of IFRS in the research design is limited to case studies, which include questions on specific standards and survey participants are asked to do specific assessments. This opens a research gap allowing the examination of the persistence of a cultural impact on accounting practices

following the adoption of IFRS with countries who have not adopted the standard so far being excluded from the sample. As the international accounting harmonization process has made significant progress with the introduction of IFRS, this thesis can contribute to the understanding if cross-cultural differences in accounting decisions vanish following the introduction of IFRS, or if they perpetuate, e.g., if the Hofstede-Gray-Framework is still a valuable model.

- Data collection: The majority of the studies on the accounting value conservatism uses data collected in quasi-experiments (Schulz and Lopez, 2001; Doupnik and Richter, 2004), secondary data (Salter and Niswander, 1995) or the data collection process is subject to methodological issues (Eddie, 1990). Salter and Lewis (2011) used data from SEC Form 20-F, which are prepared under US GAAP or under generally accepted accounting principles of another jurisdiction with a reconciliation of some items to US GAAP. The paper from Salter et al. (2013) is actually the only paper using non-adjusted disclosed data. This thesis will use externally disclosed data downloaded from Bloomberg.

- Number of countries: The number of countries covered ranges from one (Sudarwan and Fogarty, 1996) to 29 (Salter and Niswander, 1995) with the majority of the studies on accounting conservatism covering only a small number of countries. Given the far larger number of countries covered by Hofstede (1980) there seems to be room for improvement. This thesis applies a sample size of 44 countries. For the financial risk perception questionnaire clusters were formed.

- Control variables: Older studies often do not take into account the institutional factors influencing accounting decisions like the importance of the domestic stock market and a country's marginal tax rate as shown by Salter and Niswander (1995). This has improved significantly. It seems that the least common denominator for studies in the field of accounting conservatism are the tax rate and market capitalization or importance of the equity market as applied with Salter and Lewis (2011). These control variables will also be included in the research design of this thesis.

Based on the research gaps, companies worldwide will be examined with regards to the choice of their inventory valuation method, market to book ratio, and negative accruals in order to measure a potential link between Hofstede's uncertainty avoidance scale and unconditional accounting conservatism. In addition to the analyses with Hofstede data, the analyses will also be conducted for the data gathered through the financial risk perception questionnaire. Univariate and multivariate regression analyses as well as robustness tests will be calculated. Following that, implications for further research and practical implications will be presented.

3. Accounting and culture: Definitions and theory

This thesis combines two complex fields of research: Accounting and culture. In this section the definitions for accounting and culture will be provided along with an overview on the research area in an extent necessary for this thesis.

3.1   Accounting

3.1.1   Definition

Accounting is defined as "a set of concepts and techniques that are used to measure and report financial information about an economic unit. The economic unit is generally considered to be a separate enterprise. The information is reported to a variety of different types of interested parties. These include business managers, owners, creditors, governmental units, financial analysts, and even employees. In one way or another, these users of accounting information tend to be concerned about their own interests in the entity."[10]

3.1.2   Purpose, fields of accounting and global standardization efforts

3.1.2.1   *Purpose and fields of accounting*

Walther (2014) further provides an overview of the purpose and the stakeholders of accounting information: "Business managers need accounting information to make sound leadership decisions. Investors hope for profits that may eventually lead to distributions from the business (e.g., 'dividends'). Creditors are always concerned about the entity's ability to repay its obligations. Governmental units need information to tax and regulate. Analysts use accounting data to form opinions on which they base investment recommendations. Employees want to work for successful companies to further their individual careers, and they often have bonuses or options tied to enterprise performance. Accounting information about specific entities helps satisfy the needs of all these interested parties."[10]

Accounting can be segregated into different fields of practice. Walther (2014) outlines: "The diversity of interested parties leads to a logical division in the discipline of accounting. Financial accounting is concerned with external reporting to parties outside the firm. In contrast, managerial accounting is primarily concerned with providing information for internal management."[10]

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[10] Walther (2014), p. 1 (http://www.principlesofaccounting.com/chapter1/chapter1.html).

3.1.2.2   Global accounting standardization efforts

Standardization efforts have two aspects. An accounting standard, e.g., a local one, represents a standardization effort in itself. As Walther (2104) points out: "Consider that financial accounting is targeted toward a broad base of external users, none of whom control the actual preparation of reports or have access to underlying details. Their ability to understand and have confidence in reports is directly dependent upon standardization of the principles and practices that are used to prepare the reports. Without such standardization, reports of different companies could be hard to understand and even harder to compare."[10]

However, standardization also takes place on an international level based on "certain well-organized processes and organizations"[10]. "In the United States, a private sector group called the *Financial Accounting Standards Board* (FASB) is primarily responsible for developing the rules that form the foundation of financial reporting. The FASB's global counterpart is the *International Accounting Standards Board* (IASB)."[10]

In the recent years, standardization efforts increased even more with "the IASB and FASB are working toward convergence, such that there may eventually be a single harmonious set of international financial reporting standards (IFRS). This effort to establish consistency in global financial reporting is driven by the increase in global trade and finance. Just as standardization is needed to enable comparisons between individual companies operating within a single economy, so too is standardization needed to facilitate global business evaluations."[10]

Both the IASB and the FASB "are guided by concepts that are aimed at production of relevant and representationally faithful reports that are useful in investment and credit decisions"[10].

3.1.3   Accounting research

3.1.3.1   Introduction

Gordon and Porter (2009) define accounting research as follows: "Academic research looks at how accounting affects the world around us and how the world affects accounting"[11]. In an effort to rank academic research programs in accounting, Coyne, Summers, Williams, and Wood (2010) examined articles in top accounting journals by applied methodology and subject

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[11] Gordon/Porter (2009), p. 26.

area between 1990 and 2009. The derived categorization, which has been also confirmed by other researchers, results in the thematic areas in accounting research stated below:[12]

- Accounting Information Systems: This subject area contains studies on "issues related to the systems and the users of systems that collect, store, and generate accounting information"[13]. Research streams within this area can be "design science, ontological investigations, expert systems, decision aides, support systems, processing assurance, security, controls, system usability, and system performance"[14].
- Auditing: This area contains studies on "the audit environment - external and internal, auditor decision making, auditor independence, the effects of auditing on the financial reporting process, and auditor fees"[14].
- Financial: This area contains studies on "financial accounting, financial markets, and decision making based on financial accounting information"[14].
- Managerial: This area contains studies on "budgeting, compensation, decision-making within an enterprise, incentives, and the allocation of resources within an enterprise"[14].
- Tax: This area contains studies on "taxpayer decision making, tax allocations, tax computation, structuring of accounting transactions to meet tax goals, tax incentives or market reactions to tax disclosures"[14].
- Other: This area contains a wide a range of themes which cannot be categorized in the categories above. Topics can be "education, methodologies, law, psychology, history, the accounting profession, work environment, etc."[14].

Given the international aspects of the research questions of this thesis, a categorization within the presented subject areas of accounting research and a definition of International Accounting Research needs to be provided. International Accounting Research (IAR) can deal with every of the research topics listed above "provided there is an international connection"[15]. Wallace and Meek (2002) define International Accounting Research as "accounting phenomena in one country with lessons or repercussions extending to other countries…accounting phenomena related to multinational enterprises… global movements to shape the direction of accounting…and comparative accounting requirements and practices"[15]. It is considered a sub-discipline of accounting research since 1976 when the international section of the American Accounting Association was created.[16] This thesis deals with international aspects of the topical area financial.

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[12] Cf. Baker/Barbu (2007), p. 273.
[13] Coyne/Summers/Williams/Wood (2010), p. 7.
[14] Baker/Barbu (2007), p. 273.
[15] Baker/Barbu (2007), p. 273.
[16] Cf. Baker/Barbu (2007), p. 273.

The Hofstede-Gray-Framework needs be discussed in the context of international accounting classification studies aiming to explain differences in international accounting systems and practices helpful in international accounting harmonization projects. Therefore, this study aims to contribute to International Accounting Harmonization Research as well.

3.1.3.2 *International Accounting Harmonization Research*

International Accounting Harmonization Research (IAH Research) is a sub-discipline of International Accounting Research (IAR) and Financial Accounting Research. International Accounting Harmonization Research (IAH) is defined as research stream which "investigates the arguments for, efforts made towards, and trends in the direction of achieving international harmonization of financial accounting standards"[17].
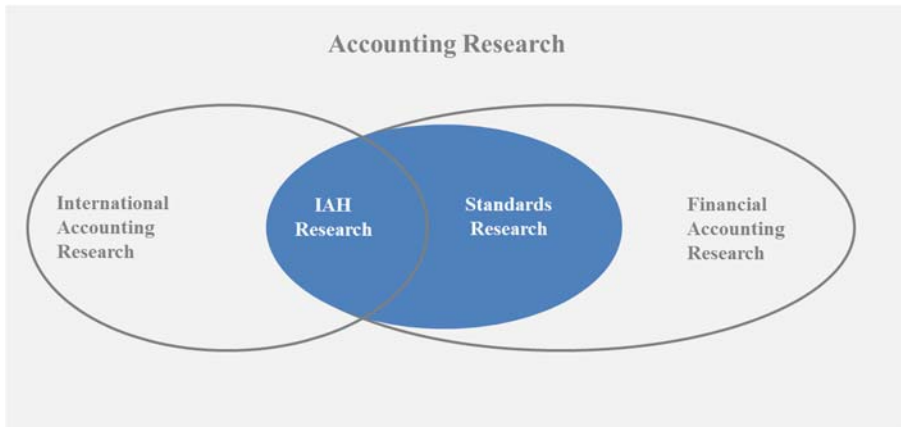
Figure 3.1.3.2-1: Situating International Accounting Research and International Accounting Harmonization Research within accounting research (own presentation based on Baker & Barbu, 2007)[18]

The international harmonization of financial accounting standards is a topic which has been discussed for more than 50 years by both academia and practicing accountants.[19] 1 January

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[17] Baker/Barbu (2007), p. 274.
[18] Source: Based on Baker/Barbu (2007), p. 274.
[19] Cf. Baker/Barbu (2007), p. 272.

2005 has been the most important date in the overall discussion: "All companies domiciled in the European Union with shares listed on securities exchanges are required to prepare their consolidated accounts in accordance with International Financial Reporting Standards (IFRS)"[19].

However, the introduction of IFRS was only the final milestone of the standardization efforts in the European Union, substantial preparatory work by researchers and practitioners was performed before and still continues given the ongoing efforts on a global basis. At the very beginning, articles were published by practicing accountants in respective professional journals.[19] The goal of these articles was to examine "differences in accounting principles and practices in European countries, with a suggested approach to worldwide uniformity"[20]. The striving for worldwide uniformity has remained an important topic within the intervening period and until today, when already 105 of 130 jurisdictions worldwide require IFRS for all or most listed companies and financial institutions.[19,21]

The graph below shows the timeline of the most important events with regards to IAH.[22] Main events had been the creation of the International Accounting Standards Committee (IASC) in 1973,[22] the issuance of the Framework for the Preparation and Presentation of Financial Statements in 1989 after some years with slow progress and the agreement with the International Organization of Securities Commissions (IOSCO) again after some years of slow progress.[22] With the latter agreement, the IASC was mandated to "develop a core set of accounting standards"[23] and the IOSCO indicated to support the implementation on a worldwide basis. In 2001, the International Accounting Standards Board (IASB) has been founded to succeed the IASC and in 2002 the European Parliament approved the use of IAS/IFRS for companies listed on stock exchanges in the European Union.

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[20] Brandt (1962), p. 68.
[21] Cf. IFRS (2014), internet: http://www.ifrs.org/Use-around-the-world/Pages/Analysis-of-the-IFRS-jurisdictional-profiles.aspx .
[22] Cf. Baker/Barbu (2007), p. 275.
[23] Baker/Barbu (2007), p. 275.
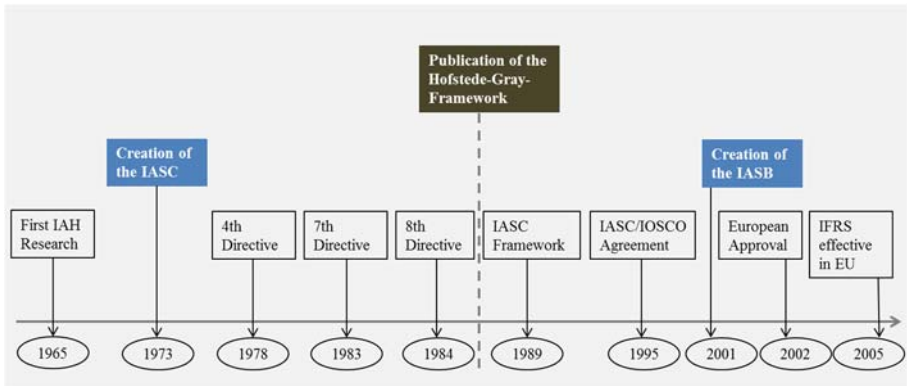
Figure 3.1.3.2-2: Timeline of important events in International Accounting Harmonization (own presentation based on Baker & Barbu, 2007)[24]

According to Baker and Barbu (2007) International Accounting Harmonization Research (IAH) can be categorized into three different thematic streams.

- IAH research during the initial period (1965-1973): Prominent themes in this period were accounting uniformity, comparative studies and reflections on the IAH process. [25] Reflections on the IAH process refer to studies on international accounting classification, as for example Müller (1967) or Seidler (1967) who did not only compare international accounting systems, but also described "impediments to achieving international harmonization"[26], as for example the close connection between financial accounting standards and tax legislation in some countries.

- IAH research during the intermediate period (1974-1989): Besides the continuation of studies on accounting uniformity and comparative studies, new topics came up as for example the creation of a conceptual framework, the IASC Framework, the Accounting Directives issued by the European Union and lastly the influence of environmental factors as a possible reason for accounting differences. [27] Two environmental factors were

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[24] Source: Based on Baker/Barbu (2007), p. 275.
[25] Cf. Baker/Barbu (2007), p. 277.
[26] Baker/Barbu (2007), p. 277.
[27] Cf. Baker/Barbu (2007), p. 279.

proposed to influence differences in accounting systems and practices between countries: The cultural and the economic factor.[28] Amongst others, the study on the Hofstede-Gray-Framework (Gray, 1988) dealing with the cultural impact on accounting was published during this period. Economic factors leading to accounting differences and international harmonization difficulties include the "level of regulation within an economy"[29] and macro- and microeconomic factors[28]. Even an international accounting classification system according to economic factors has been developed.[28]

- IAH research during the mature period (1990-2004): Besides the continuation of studies on accounting uniformity, comparative studies, influencing factors from the environment and accounting directives; the "impact of harmonized accounting processes on share price and return"[30] as well as the measurement of the degree of international accounting harmonization have become new focus areas. In the area of influential factors of the environment on accounting differences, additional efforts have been put in studies examining single influential factors only, as for example culture and politics, but also exactly on the opposite with the examination of multiple influence factors.[31] Researchers of the latter sub-stream argued that one single factor might be insufficient explaining a complex topic such as accounting differences and proposed multiple influential factors for differences in accounting systems and practices.

3.1.4   Conclusion

The section provided definitions of the terms accounting and accounting research, an overview of the different subject areas in accounting research and most importantly an introduction into International Accounting Harmonization Research (IAH Research). It could be pointed out that the thesis will contribute to International Accounting Research and Financial Accounting Research within the common subset of research on international harmonization of financial accounting standards (IAH).

While IAH Research reached a certain degree of maturity prior to the introduction of IFRS as legally binding requirement for stocks listed in the European Union and other countries, the importance of the field and the need for further research is obvious. First, the standardization project between the IASB and the FASB is still ongoing and need to be considered as a classic

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[28] Cf. Baker/Barbu (2007), p. 280.
[29] Baker/Barbu (2007), p. 280.
[30] Baker/Barbu (2007), p. 282.
[31] Cf. Baker/Barbu (2007), p. 286.

field of international accounting harmonization research. Second, the transferability of models postulated before the introduction of IFRS into the IFRS era needs to be assessed, ultimately raising the question if the idea of full accounting standardization across nations and their different cultures represents an achievable mission. Such reasoning would imply the addition of a further period of IAH Research to the work of Baker and Barbu (2007), which could be called the post-IFRS introduction period. Comparable to the other postulated periods, research on main topics of the previous era could be continued, e.g., the degree of international accounting harmonization and new research areas could be initialized, such as the impact of factors like culture on accounting values in countries who applying IFRS.

Most of the studies on the Hofstede-Gray-Framework have been conducted in the pre-IFRS era or IFRS standards are only used in the research design (e.g., construction of case studies, questionnaires) with actually disclosed data not being used. This will be outlined in the section on studies on the Gray-Hofstede-Framework of this thesis. As the international accounting harmonization process has made significant progress with the introduction of IFRS, this thesis aims to examine if cross-cultural differences in accounting decisions vanish following the introduction of IFRS or if they perpetuate.

3.2   Culture

3.2.1   Definition

It is indispensable to define terms and concepts, a thesis is dealing with and would like to contribute to; however, in the case of culture this is a challenging endeavour. Countless authors describe the concept of culture as very difficult to define. Raymond Williams (1976), for example, considers "culture as one of the two or three most complicated words in English language... because it has now come to be used for important concepts in several distinct intellectual disciplines and in several distinct systems of thought"[32]. Already the famous anthropologists Alfred Kroeber and Clyde Kluckhohn found a huge amount of definitions for culture in the 50ies of the past century.[33]

In his book "Culture Theory: An Introduction", Smith (2000) provides a short overview on how the term culture historically developed over time. At the very beginning the term was closely linked to the "cultivation of animals and crops and with religious worship (hence the

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[32] Williams (1976), p. 76.
[33] Cf. Smith (2000), p. 1.

world 'cult')"[34]. Further Smith (2000) elaborates that "from the sixteenth century until the nineteenth the term began to be widely applied to the improvement of the individual human mind and personal manners through learning"[34]. This was also the time, when the distinction between a person being cultured or having no culture has arisen and when the term became more and more linked to the improvement of a society as a whole in other words when it was used as a synonym for civilization.[33] People in these times considered countries in Europe having culture or being civilizations, whereas people in Africa were perceived as barbarian.[33] The term in these times therefore did not only refer to technological differences, but also to morals and manners.[33] During the period of Romanticism, the term culture referred more to "spiritual development"[34] alone; segregating it clearly from its agricultural roots and technological progress and development. The romanticists of the nineteenth century, further included tradition and everyday life as part of their understanding of culture; the concepts 'folk culture' and 'national culture' emerged in this era.[33]

In the late eighties of the past century, Williams (1976) considered all these historic developments as part of the term culture and how it was used and applied at that very point in time:

- "To refer to the intellectual, spiritual, and aesthetic development of an individual, group, or society.
- To capture a range of intellectual and artistic activities and their products (film, art, theatre). In this usage culture is more or less synonymous with 'the Arts'. Hence we can speak of a Minister for Culture.
- To designate the entire way of life, activities, beliefs, and customs of a people, group, or society."[35]

The first two usages of the term strongly refer to the intellectual aspect of culture, which can be also found in the "German concept of Kultur"[35]. The latter refers to a concept of culture showing strong similarities with "civilization and with individual or collective moral progress"[35]. These definitions of culture are considered as "often highly value-laden and elitist, seeking to validate artistic products that experts and dominant social groups consider as important or interesting"[35].

In the context of this thesis, in particular the third use of the term culture deems to be important. Furthermore, Smith (2000) values this usage of culture as "championed by many

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[34] Smith (2000), p. 1.
[35] Smith (2000), p. 2.

anthropologists in the first part of the century and remains to that discipline today. It is an interpretation that is more value-neutral and analytic. It asserts that culture is to be found everywhere and not just in the high arts or in Western civilization"[35].

In 1952, Kroeber and Kluckhohn published a study on the different meanings of the term culture in which they gathered an enormous amount of definitions of culture which they categorized into six areas.

- Descriptive definitions: Culture as "comprehensive totality making up the sum of social life"[35], list of "the various fields making up culture"[35].
- Historical definitions: Culture as historical heritage developed and passed over for generations.[36]
- Normative definitions: Culture as "rule or way of life that shaped patterns of concrete behaviour and action"[37] and the "role of values without referencing to behaviour"[37].
- Psychological definitions: Culture as "problem-solving device, allowing people to communicate, learn, or fulfil material and emotional needs"[37].
- Structural definitions: Culture definitions highlighting the "organized interrelations of the isolable aspects of culture"[37] and therefore showing "that culture was an abstraction that was different from concrete behaviour"[37].
- Genetic definitions: Culture as how it developed in terms of human interaction or as a "product of intergenerational transmission"[37].

Smith (2000) considers this definitions grouping as still valid today; however, the concept has further evolved in a "subtle way"[37] and mostly touches the following thematic areas within the third usage category according to Williams (1976):

- "Culture tends to be opposed to the material, technological, and social structural. It is also argued that we need to understand culture as something distinctive from, and more abstract than, an entire way of life."[37]
- "Culture is seen as the realm of the ideal, the spiritual, and the non-material. It is understood as a patterned sphere of beliefs, values, symbols, signs and discourses."[38]
- "Emphasis is placed on the autonomy of culture. This is the fact that it cannot be explained away as a mere reflection of underlying economic forces, distribution of power, or social structural needs."[38]

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[36] Cf. Smith (2000), p. 3.
[37] Smith (2000), p. 3.
[38] Smith (2000), p. 4.

- "Efforts are made to remain value-neutral. The study of culture is not restricted to the Arts, but rather is understood to pervade all aspects and levels of social life. Ideas of cultural superiority and inferiority play almost no place in contemporary academic study."[38]

Also contemporary definitions of culture still root in the third usage of the term culture according to Williams (1976) and therefore often refer to the designation of a particular way of life, activities, beliefs, and customs within a specific society. A few examples are outlined below.

a)   Banks, J.A. & Banks McGee, C. A. (1989)

In their book on multicultural education, the authors define culture as follows: "Most social scientists today view culture as consisting primarily of the symbolic, ideational, and intangible aspects of human societies. The essence of a culture is not its artifacts, tools, or other tangible cultural elements but how the members of the group interpret, use, and perceive them. It is the values, symbols, interpretations, and perspectives that distinguish one people from another in modernized societies; it is not material objects and other tangible aspects of human societies. People within a culture usually interpret the meaning of symbols, artifacts, and behaviors in the same or in similar ways."[39]

b)   Lederach (1995)

"Culture is the shared knowledge and schemes created by a set of people for perceiving, interpreting, expressing, and responding to the social realities around them."[40]

c)   Damen (1987)

"Culture: learned and shared human patterns or models for living; day-to-day living patterns. These patterns and models pervade all aspects of human social interaction. Culture is mankind's primary adaptive mechanism."[41]

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[39] Banks/Banks McGee (1989), p. 8.
[40] Lederach (1995), p. 9.
[41] Damen (1987), p. 367.

d)   Hofstede (1980)

Hofstede (1980) defines culture from a more mechanic perspective, de-emphasizing the "active part of human beings in the creation of culture"[42]. Hence, Hofstede's definition describes culture as "the sum total of the beliefs, rules, techniques, institutions, and artefacts that characterize human populations"[43] or the "collective programming of the mind, that distinguishes the members of one group of people from others"[44]. Basis for the development of culture is the process of socialization,[45] which represents "the influence of parents, friends, education, and the interaction with other members of a particular society"[43]. This results in "learned patterns of behaviour common to members of a given society"[43]. Culture is therefore learned, not innate.[44] Hofstede emphasizes that it is important to distinguish culture from human nature and personality.[45] Human nature is something common to all human beings, it represents "the universal level in one's mental software"[44], is inherited and guides the physical and basic psychological functioning.[45] Examples are fear, love, sadness, shame and others.[45] According to Hofstede, the personality of a human being is a unique feature not shared with anyone else and is considered a set of traits which are partly inherited and partly learned.[45] Learning arises through exposure to a particular culture and personal experiences.[45] Cultural traits have been developed through learning across generations.[45]

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[42] Thomas/Utler (2013), p. 41.
[43] Rugman/Collinson (2009), p. 129.
[44] Hofstede/Hofstede (2005), p. 4.
[45] Cf. Hofstede/Hofstede (2005), p. 4.
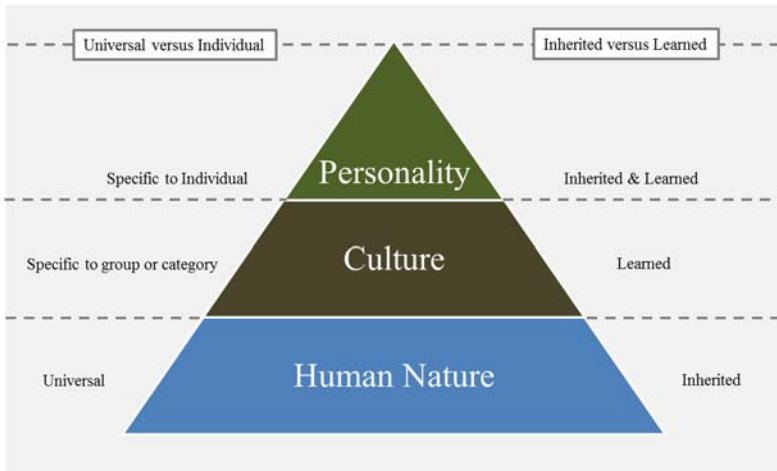
Figure 3.1.3.2-3: "The three levels of uniqueness in mental programming"[46] (own presentation based on Hofstede & Hofstede (2005))

According to Hofstede, culture can be observed in many different ways. Hofstede proposes four terms to describe on how culture manifests itself: Symbols, heroes, rituals and values.[47] He illustrates these terms as skins of an onion. The external skin represents the symbols being the most superficial and the core of the onion represents the values being the deepest manifestation of culture.[47] Heroes and rituals lay in between.

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[46] Source: Hofstede/Hofstede (2005), p. 4.
[47] Cf. Hofstede/Hofstede (2005), p. 6.
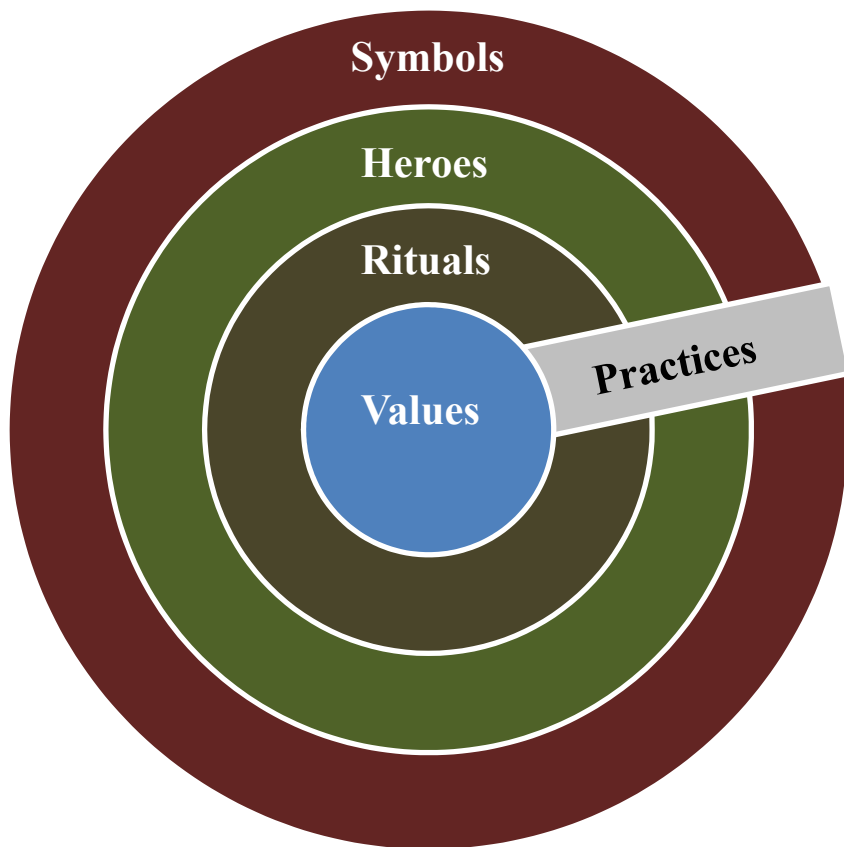
Figure 3.1.3.2-4: "The 'Onion': Manifestations of culture at different levels of depth according to Hofstede & Hofstede (2005)[48]"

[48] Source: Hofstede/Hofstede (2005), p. 7.

The different skins of the onion are defined as follows:

- "Symbols are words, gestures, pictures or objects that carry a particular meaning only recognized as such by those who share the culture."[49] Examples for symbols are language, clothes, hairstyles or status symbols.[50] Symbols underlie a certain change over time and are therefore placed at the most superficial part of the onion.[50]

- "Heroes are persons, alive or dead, real or imaginary, who possess characteristics that are highly prized in a culture and thus serve as models for behaviour."[49] A hero can be Jeanne d'Arc. However, in the modern world also Batman, Barbie or Asterix can be considered national heroes.[50]

- Rituals are considered collective activities, who are often carried own for their own sake, but are considered as essential part of a culture.[51] Examples for rituals are the way to greet other people, religious ceremonies and even the way language is used to foster goals as group cohesion.[51]

- Values represent the core of the onion model. Hofstede refers to values as "feelings with an arrow to it: a plus and a minus side"[52]. Values expresses preferences of certain states over the other, as for example evil versus good, dirty versus clean, dangerous versus safe and others.[51] Values are acquired in our childhood until the age of ten to twelve years; afterwards the focus is on learning new practices.[51]

According to Hofstede, culture reproduces itself from one generation to the other.[53]

e)   Project GLOBE (2004)

Also Project GLOBE researchers acknowledge that there is no agreed definition of culture.[54] It also needs to be noted that in the Project GLOBE literature not much effort is put in to discuss or solve the definition problem. Therefore, project GLOBE defines culture shortly as follows: "Shared motives, values, beliefs, identities, and interpretations or meanings of significant events that result from common experiences of members of collectives that are transmitted across generations."[55]

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[49] Hofstede/Hofstede (2005), p. 7.
[50] Cf. Hofstede/Hofstede (2005), p. 7.
[51] Cf. Hofstede/Hofstede (2005), p. 8.
[52] Hofstede/Hofstede (2005), p. 8.
[53] Cf. Hofstede/Hofstede (2005), p. 9.
[54] Cf. House/Javidan (2004), p. 15.
[55] House/Javidan (2004), p. 15.

f)   Schein (1985)

Schein (1985) defines culture by emphasizing problem solving aspects:[56] "The culture of a group can now be defined as a pattern of shared basic assumptions learned by a group as it solved its problems of external adaptation and internal integration, which has worked well enough to be considered valid and, therefore, to be taught to new members as the correct way to perceive, think, and feel in relation to those problems."[57]

Schein describes the three level concept of culture in the first edition of his book Organizational Culture and Leadership in 1985. He proposes to study culture at the following three levels: Artifacts, espoused beliefs and values and basic underlying assumptions.[58]

Artifacts	• Visible and feelable structures and processes • Observed behaviour (difficult to decipher)
Espoused Beliefs and Values	• Ideals, goals, values, aspirations • Ideologies • Rationalizations (may or may not be congruent with behavior and other artifacts)
Basic Underlying Assumptions	• Unconscious, taken-for-granted beliefs and values (determine behaviour, perception, thought and feeling)

Figure 3.1.3.2-5: "The three levels of culture according to Schein (2010)"[59]

According to Schein (2010), the understanding of the basic underlying assumptions is essential to understand the respective culture.[58] Without understanding the latter, a "correct interpretation"[60] of the artifacts and a judgment on "how much credence to give the espoused values"[60] will not be possible. Hence, the basic underlying assumptions represent the substance and the key to understand the "more surface levels"[60] of a specific culture. In the latter, so-

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[56] Cf. Thomas/Utler (2013), p. 41.
[57] Schein (2010), p. 18.
[58] Cf. Schein (2010), p. 32.
[59] Source: Schein (2010), p. 23.
[60] Schein (2010), p. 32.

called surface levels, "the culture will manifest itself"[60] with easily observable artifacts and "shared espoused values, norms, and rules of behaviour"[60].

g)   Trompenaars

Trompenaars explains culture with an analogy: "A fish only discovers its need for water when it is no longer in it. Our own culture is like water to a fish. It sustains us. We live and breathe through it."[61]

Based on this explanation, Trompenaars's definition of culture shows strong similarities to the approach of Schein (1985).[56] He is postulating layers:

- The outer layer consists of explicit products meaning the "observable reality"[62], as for example "language, food, buildings, houses, monuments, agriculture, shrines, markets, fashions and art"[62].
- The middle layer consists of norms and values of a specific group. Trompenaars (1994) defines norms as "the mutual sense of a group has of what is right and wrong. Norms can develop on a formal level as written laws and on an informal level as social control"[63].
- The core layer consists of assumptions about the existence. Trompenaars (1994) considers it essential to discuss basic questions, as the "strive for survival" [64] within different cultures ranging from the Dutch being constantly threatened by rising water or the Siberians by extreme cold.

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[61] Trompenaars (1994), p. 22.
[62] Trompenaars (1994), p. 23.
[63] Trompenaars (1994), p. 24.
[64] Trompenaars (1994), p. 25.
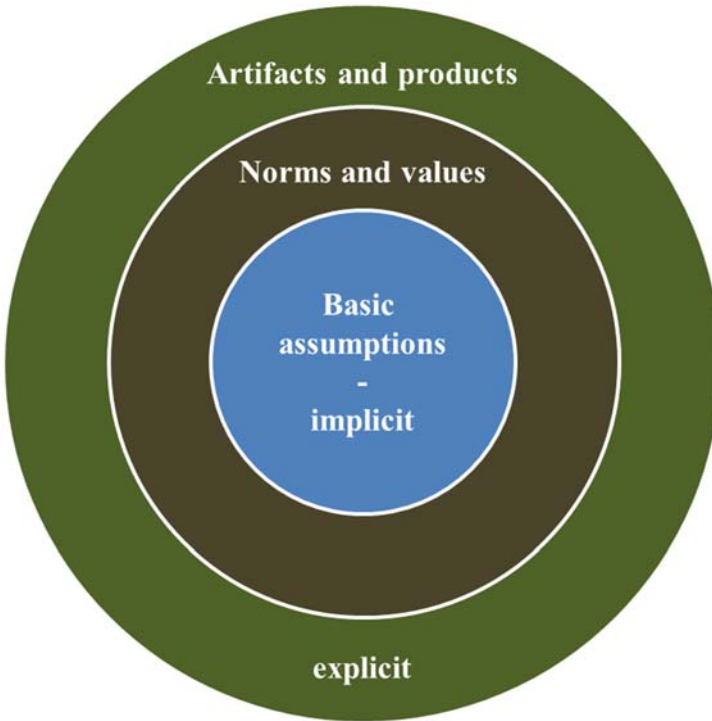
Figure 3.1.3.2-6: "A model of culture according to Trompenaars (1994)[65]"

For Trompenaars culture is "the root of our actions"[66] often "beneath awareness"[66].

h)   Thomas (1993)

Thomas (1993) defines culture in a more practice-oriented way: *"Kultur ist ein universelles, für eine Gesellschaft, Organisation und Gruppe aber sehr typisches Orientierungssystem. Dieses Orientierungssystem wird aus spezifischen Symbolen gebildet und in der jeweiligen Gesellschaft usw. tradiert. Es beeinflußt das Wahrnehmen, Denken, Werten und Handeln aller ihrer Mitglieder und definiert somit deren Zugehörigkeit zur Gesellschaft. Kultur als Orientierungssystem strukturiert ein für die sich der Gesellschaft zugehörig*

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[65] Source: Trompenaars (1994), p. 24.
[66] Trompenaars (1994), p. 26.

fühlenden Individuen spezifisches Handlungsfeld und schafft damit die Voraussetzungen zur Entwicklung eigenständiger Formen der Umweltbewältigung."[42]

In addition, Thomas and Utler (2013) provide an explanation why human beings need, create and further develop cultures: It is the need for an orientation system. *"Dadurch, dass Kultur als Orientierungssystem gefasst wird, erklärt sich dessen Entstehung, Aufrechterhaltung und Weitergabe. Denn aus der psychologischen Forschung ist bekannt, dass es sich bei dem Bedürfnis nach Orientierung um ein zentrales menschliches Bedürfnis handelt, weshalb auch nachvollziehbar ist, warum Kultur nicht auf nationaler Ebene entwickelt wird, sondern in allen Formen des menschlichen Zusammenlebens. Teil der Orientierungsfunktion von Kulturen ist demnach auch, den Mitgliedern Sinnstiftungs- und Bewertungsmassstäbe zur Verfügung zu stellen, mit deren Hilfe die komplexen Umweltanforderungen bewältigt werden. Diese Bewertungsmassstäbe werden im Laufe der menschlichen Sozialisation erworben und wirken daher auch meist automatisch, also ohne bewusste kognitive Steuerung"*[67].

3.2.2 Culture models

3.2.2.1 Introduction

The above stated theoretical definitions of the term culture are considered as the basis for the development of the culture dimensions (e.g., Hofstede, Schwartz, GLOBE) in the last decades, which have become central theoretical models for the quantitative determination of cultural differences.

The concept of cultural dimensions and standards refers to the general assumption that all societies "face the same basic problems – only the answers differ"[68]. This idea goes back to the work of the two famous social anthropologists Ruth Benedict (1887-1948) and Margaret Mead (1901-1978).[69] Therefore it is the goal of studies on cultural dimensions to find general patterns across cultures with stronger and weaker occurrence in different cultures. Research in the field of cross cultural comparison is mainly covered by a discipline named cross-cultural psychology. Cross-cultural psychology is defined as „the study of similarities and differences in individual psychological functioning in various cultural and ethno-cultural groups; of the relationships between psychological variables and socio-cultural ecological and biological variables; and of ongoing changes in these variables"[70]. Berry (1999) explains the guiding theme for the

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[67] Thomas/Utler (2013), p. 42.
[68] Hofstede (2006), p. 22.
[69] Cf. Hofstede (2006), p. 22.
[70] Cf. Berry/Poortinga/Segall/Dasen (2002), p. 3.

existence of the field in the following way: "In studying behavior, one has to be 'cultural' before being 'cross', but remaining only 'cultural', one loses out on the possibility of attaining generalizations about what is fundamentally (pan-) human. In my view, both of these approaches are necessary; neither is sufficient by itself"[71].

It is important here to state that the reference to a single discipline does not imply an exclusion of other disciplines. It is widely acknowledged and has been outlined before that philosophy, anthropology and other disciplines are for far longer engaging in research around culture and the influence of culture on societal phenomena.[72] This is well reflected in a statement by Segall et al. (1999): "Culture is the key concept in anthropology, comparable to energy in physics or the group in sociology."[73] As indicated in its definition, cross-cultural psychology separates itself from "classic cultural studies / science with the latter relying rather on findings from anthropology and sociology"[74] and even literature science. The main purpose and challenge for cross-cultural psychology is to extract the relevant aspects[72] of the understanding of the concept of culture (their definitions) of other disciplines and to operationalize[72] those with the goal to integrate it in a "verifiable construct"[73] usable in empirical psychological research.[72] While the number of definitions of the concept of culture is closely linked to its complexity,[72] cross-cultural psychologists started to reduce the number of aspects associated with the concept[72] leading to some sort of limitation[72], but also to a higher degree of accuracy[72] of the overall concept and the possibility to operationalize it for application in empirical research. These efforts ended up in a comparatively simple and short definition of culture, as proposed in the textbook on cross-cultural psychology by Berry, Poortinga, Segall and Dasen (2002): "Culture is a shared way of life of a group of people"[75].

Berry (1999) describes the mise en place of the guiding theme of cross-cultural psychology as a "sequenced set of steps [...] corresponding to the three goals of 'transporting and testing' extant psychological knowledge (mainly from the West to other cultural groups), 'exploring and discovering' psychological phenomena in these other cultures (essentially from the indigenous point of view), and finally 'integrating and generating' findings and insights from the first two activities to achieve a psychology that is 'universal'"[76]. Afterwards, Berry (1999) summarizes: "It is not possible to be 'cross-cultural' without first being 'cultural', but to be only 'cultural' (or to pretend that it is possible to be so) eliminates the attainment of

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[71] Cf. Berry (1999), p. 7.
[72] Cf. Genkova (2013), p. 25.
[73] Genkova (2013), p. 25.
[74] Genkova (2013), p. 20.
[75] Genkova (2013), p. 27.
[76] Berry (1999), p. 8.

general principles to which all sciences aspire"[77]. This thought reflects the fundamental difference between cross-cultural psychology and classic cultural sciences as well as philosophy:[78] Human beings are similar than different to each other.[78] Consequently, cross-cultural psychology is looking for universal patterns;[78] however, is expecting a different a different "mode"[79], "representation"[79] or occurrence in the way and degree they are expressed in different cultures.

Besides a better understanding of characteristics of specific cultures, the advantage of such patterns is that they can be considered as value-free as they are connecting a particular aspect of a specific culture with the culture as a whole.[80] This is the main difference to other common objectivity suggesting comparative criteria, as for example economic or technological progress, religion, language or ideology.[80]

Nevertheless, the concept of patterns and the process of developing and collecting data in such a categorization framework, represents and remains a "process of stereotypization"[79] leading to potential errors as for example the over- or underestimation of cultural similarities or differences.[81] It is therefore crucial to be aware not to overstretch the term culture as a reason for cultural differences or similarities and not to even misuse it as an explanation for phenomena, which are not directly explainable or recognizable by other factors.[81] Genkova (2013) also states: "As a matter of principle, the uniqueness of every culture and every individual needs to be respected. However, science is working with generalizations and common statements and is hence emphasizing them"[79]. Within cross-cultural psychology research, these are major risks for the quality of research and therefore need to be managed accordingly. Consequently, Triandis (1994) proposes a "qualification of the respective cultural attributes"[79]/ patterns. These qualifications need to be taken into account and be considered, when findings in cross-cultural studies say "how persons of a specific culture are and act."[82] A summary of these qualifications has been provided by Genkova (2013) and is shown below.

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[77] Berry (1999), p. 10.
[78] Cf. Genkova (2013), p. 27.
[79] Genkova (2013), p. 28.
[80] Cf. Aschenbrenner-Wellmann (2003), p. 67.
[81] Cf. Genkova (2013), p. 28.
[82] Genkova (2013), p. 29.

1. Kulturen (Kulturmodelle) und Gesellschaften sind enorm heterogen.	*Das ist auch der Grund dafür, dass grosse nationale Einheiten als Ersatz für Kultur gehalten werden. Genau betrachtet sind aber Nationen und Kulturen sehr unterschiedliche Konzepte. Der Begriff „Nation" hat sich aber als Bezeichnung für eine Stichprobe, aus der die Daten stammen, durchgesetzt, ohne dass er zusätzliche Informationen bringt. Innerhalb einer Kultur gibt es viele verschiedene Personen. Dies sollte besser bei jeder Aussage berücksichtigt werden. „Die Amerikaner essen Pizza" ist zwar eine grds. korrekte Aussage, aber es gibt auch Amerikaner, die keine Pizza essen, Diäten machen oder sogar allergisch gegen Pizza sind. Besser ist es daher zu behaupten: „Viele Amerikaner essen Pizza."*
2. Keine Beschreibung einer Kultur fokussiert auf den Prototyp der Individuen in dieser einen Kultur.	*Wenn wir ein bestimmtes Wort benutzen, z. B. „gelb", arbeiten wir mit unterschiedlichen Stimuli, als seien diese identisch. Unser Auge unterscheidet zwischen 7.5 Millionen Farben, aber wir benutzen kaum mehr als 40 Farbbe-nennungen, weil wir die Farbstimuli in Kategorien gruppieren. Ähnlich gibt es viele Menschen, die Mitglieder der gleichen Kultur sind und doch individuell verschieden.*
3. Kultur ist eine Bezeichnung, die oft verwechselt und vermischt wird, und zwar mit Sprache, geographischer Lage, Geschichte, Religion, sozialer Klasse, Rasse, dörflich-urbanem Wohnstatus, Nationalität und vielen anderen Kategorien.	*Wenn wir beurteilen wollen, worüber wir genau sprechen, müssen wir alle diese relevanten Kate-gorien spezifizieren, aber meist mangelt es uns an nötigen Informationen, um das zu tun. Wenn die Menschen sich durch ein bestimmtes Verhaltens-muster ausdrücken, zeigen sich ihre „Stich-probenelemente" aus einer Kultur entsprechend ihrer Zugehörigkeit zu bestimmten Gruppen, deren Religion, sozialer Schicht oder demographischen Kategorien. Das „Schöpfen" von „eigener Kultur" kann aber auch nicht mit der Nationalkultur korrespondieren. Demnach befinden sich Menschen auf einem unterschiedlichen Niveau von Akkult-*

	uration und haben unterschiedliche Umgangsweisen beim Kontakt mit anderen Kulturen. Das betrifft sowohl den Umgang mit den Massenmedien als auch die direkten Veränderungen der eigenen Kultur. Die Nationalkultur ist nur einer der Aspekte des Einflusses in Bezug auf Kulturmodelle. Bemerkung: Hier sollte man auch berücksichtigen, dass es innerhalb einer Nation (Nationalstaat) mehrere kulturelle Gruppen gibt, bzw. mehrere Kulturen, die sich voneinander unterscheiden. Einige der ethnischen Gruppen unterscheiden sich auch dann noch, wenn sie schon länger Teil eines Staates sind, z. B. Aboriginal, African und Spanish People in Amerika (Berry et al., 2002). Smith & Bond (1998) berücksichtigen, dass die kulturellen Gruppen innerhalb einer Nation allerdings doch durch gemeinsame Medien, Religion, Ausbildung und Sprache verbunden sind. Trotzdem beinhalten diese Nationen auch viele Sub-Gruppen und bei einem National-vergleich werden diese mit einbezogen.
4. Jede Stichprobe aus Daten basiert auf einem bestimmten Zeitabschnitt.	*Ein Ethnograph führt z. B. eine Felduntersuchung zwei Jahre lang durch und publiziert sie aber erst ein paar Jahre später. Währenddessen hat sich die untersuchte Kultur schon wieder verändert. Die Kulturen bzw. die Kulturmodelle verändern sich permanent und sind auch stark von weltweiten Ereignissen, wie z. B. Kriegen usw. geprägt.*
5. Der wichtigste Gesichtspunkt dabei ist, zu verinnerlichen, dass eine Kultur nicht diese oder jene Charakteristiken hat.	*Eine Kultur ist vielmehr nur als eine Kultur zu bezeichnen, die vielleicht diese oder andere Charakteristiken hat.*

6. Andere Kulturen beeinflussen die Menschen durch Reisen, Kommerz, Massenmedien, Missionare und anderen Tauschressourcen.	*Die Massenmedien implizieren häufig einige amerikanische Kulturelemente, die nicht immer den globalen entsprechen. Einige Elemente von fremden Kulturen haben eine längere Geschichte, andere eine kürzere. Diese Elemente zu erkennen und als „nicht die eigenen" zu bezeichnen, ist sehr wichtig.*

Table 3.2.2.1-1: "Qualification of cultural attributes / patterns according to Triandis (1994) as adapted by Genkova (2013)"[83]

Based on the pattern concept and the caveats stated above, Genkova (2013) and Thomas and Utler (2013) stress the importance of referring to culture models in a particular point in time when dealing with psychological research questions on culture. The main argument for this postulate is that the term cultural model is closer linked to a cross-sectional study, elaborating and observing patterns being part of a specific model.[81] While these patterns might be part of the "development and modification of a specific culture"[79], but this process cannot be empirically captured.[81] Additionally, the term model allows to observe and hence finally answers the question "on the existence of numerous cultures or only one"[79] and might trigger the association of certain patterns with certain cultures and groups. Further, the reference to time clearly shows that cultural patterns can change over time.[81] These factors highlight again the difficulty and impossibility on generalized statements about specific cultures, as changes can occur over time (temporal), triggered by a different sample (local) or through the mode / representation of the pattern (modal).[81]

Having thoroughly worked through all the caveats on the application of findings from cross-cultural studies, we might want to remind ourselves on the following: The potentially most significant reason for the relevance of cross-cultural psychology is founded in the personal need of human beings to encounter members of a foreign culture in an empathic way or the interest to better understand the influence of culture on the daily life and behaviour potentially driven by an acculturation experience. [84] Further, the number of intercultural trainings and integration processes has significantly increased in the course of globalization fostering the need for a better understanding of inter-cultural differences.[84] Last but not least, mass media continuously emphasizes the importance of cultural as an explanation for different kinds of conflicts in the world also supporting the need for further understanding of the fundamentals of these differences.[84]

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[83] Source: Genkova (2013), p. 29.
[84] Cf. Genkova (2013), p. 19.

Based on the pattern concept representing the idea that the "same basic problems"[68] are relevant for all cultures in the world, several models of cultural dimensions have been developed over the last decades. All these cultural dimensions models are based on the common understanding that all cultures are "comparable with each other"[67] as long as their degree of representation with regards to different patterns are known.[85]

The below sections provide an overview on the cultural dimension models postulated in the last decades, with the one of Geert Hofstede being the pioneering and most prominent one.[85]

3.2.2.2   *Parson and Shils (1951)*

Parson and Shils (1951) are distinguishing between three "major classes of culture patterns:"[86] (1) Systems of ideas or beliefs, (2) Systems of expressive symbols; for instance, art forms and styles, (3) Systems of value orientations.[86] Further, Parson and Shils (1951) consider culture patterns as objects of orientation. The latter can become "constitutive parts of the system of orientation"[86], meaning that they have been "internalized"[86].

Within these classes of culture patterns, Parson and Shills (1951) define the following culture sub-patterns:

- Self-Orientation versus Collectivity-Orientation: (1) Self-Orientation: "The normative pattern which prescribes a range of permission for an actor, in a given type of situation, to take advantage of a given opportunity for pursuing a private interest, regardless of the content of the interest or its direct bearing on the interests of other actors"[87]; (2) Collectivity-Orientation: "A normative pattern which prescribes the area within which an actor, in a given type of situation, is obliged to take directly into account a given selection of values which he shares with the other members of the collectivity in question. It defines his responsibility to this collectivity."[87]

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[85] Cf. Thomas/Utler (2013), p. 42.
[86] Parson/Shils (1951), p. 8.
[87] Parson/Shils (1951), p. 81.

- Universalism versus Particularism: (1) Universalism: "The normative pattern which obliges an actor in a given situation to be oriented towards objects in the light of general standards rather than in the light of the object's possession of properties (qualities or performances, classificatory or relational) which have a particular relation to the actor's own properties (traits or statuses)"[88]; (2) Particularism: "The normative pattern which obliges an actor in a given type of situation to give priority to criteria of the object's particular relations to the actor's own properties (qualities or performances, classificatory or relational) over generalized attributes, capacities, or performance standards."[88]

- Achievement versus Ascription: (1) Achievement: "The normative pattern which prescribes that an actor in a given type of situation should, in his selection and differential treatment of social objects, give priority to their specific performances (past, present, or prospective) over their given attributes (including memberships and possessions), insofar as the latter are not significant as direct conditions of the relevant performances"[89]; (2) Ascription: "The normative pattern which prescribes that an actor in a given type of situation should, in his selections for differential treatment of social objects, give priority to certain attributes that they possess (including collectivity memberships and possessions) over any specific performances (past, present, or prospective) of the objects"[88].

- Specificity versus Diffuseness: (1) Specificity: "The normative pattern which prescribes that in a given type of situation an actor should confine his concern with a given type of object to a specific sphere and not permit other empirically possible concerns to enter"[89]; (2) Diffuseness: "The normative pattern which prescribes that in a given situation the orientation of an actor to an object should contain no prior specification of the actor's interest in or concern with or for the object, but that the scope should vary with the exigencies of the situation as they arise."[89]

- Affective versus Affective-Neutral: (1) Affective: "The normative pattern which grants the permission for an actor, in a given type of situation, to take advantage of a given opportunity for immediate gratification without regard to evaluative considerations;"[90] (2) Affective-Neutral: "The normative pattern which prescribes for actors in a given type of situation renunciation of certain types of immediate gratification for which opportunity exists, in the interest of evaluative considerations regardless of the content of the latter."[90]

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[88] Parson/Shils (1951), p. 82.
[89] Parson/Shils (1951), p. 83.
[90] Parson/Shils (1951), p. 80.

The application of the pattern concept clearly shows how the authors interpret and understand the term culture: "Parson and Shils (1951) intimate that culture is composed of a set of values, norms, and symbols that guide individual [...] and social setting; that is greatly variable; that is manifested in institutions, thought patterns, and material objects."[91]

3.2.2.3 *Kluckhohn and Strodtbeck (1961)*

The work of two cultural anthropologists Kluckhohn and Strodtbeck (1961) is often seen as the earliest work on cultural dimensions.[92] It builds on the pattern concept as their Values Orientation Theory proposes that "all human societies must answer a limited number of universal problems that the value-based solutions are limited in number and universally known, but that different cultures have different preferences among them"[93].

Based on these assumptions Kluckhohn and Strodtbeck (1961) formulated the following five cultural dimensions derived from anthropological theories:[94]

- Basic nature of human beings: This dimension seeks to find cultural variations to the question if the basic nature of human beings is (1) good, meaning if "left to their own devices, individuals are basically good and will act in a reasonable and responsible manner"[95]; (2) evil or (3) a mixture of both. Further, the theory seeks an answer to the question if "innate human nature is mutable or immutable"[96].
- Relationships among people: This dimension seeks to find cultural variations to the question if the relationships among people are considered as (1) individualistic, meaning that "the primary responsibility of an individual is to him- or herself. Individual abilities and characteristics are the primary consideration"[95]; (2) Group-oriented, with the "responsibility to family and groups being most important"[95] or (3) Hierarchical, which is "similar to group orientation with the addition that distinct differences in status are expected and respected" [95].

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[91] Srite/Straub/Loch/Evaristo/Karahanna (2003), p. 37.
[92] Cf. Connerley/Pedersen (2005), p. 41.
[93] Hills (2002), p. 2.
[94] Cf. Nardon/Steers (2009), p. 3.
[95] Connerley/Pedersen (2005), p. 41.
[96] Srite/Straub/Loch/Evaristo/Karahanna (2003), p. 34.

- Activity orientation: This dimension seeks an answer to the question if the action orientation of people is (1) Being, meaning "the point of life is to live and experience an understanding and that activity for activity's sake is unimportant"[95], (2) Becoming, meaning the "belief that individuals should strive to develop themselves into an integrated whole"[97] or (3) Doing, meaning that "the point of life is actually to do things, be involved and accomplish goals"[95].

- Relation to nature: This dimension seeks an answer to the question if the relation to nature is rather a one of (1) Subjugation ("nature and environment determine human activities"[95]); (2) Harmony or (3) Domination ("humans can exert domination over their environment while they control their own destinies"[95]).

- Time orientation: This dimension seeks an answer to the question if humans are rather oriented towards the (1) Past, meaning that "history is important in determining our present actions"[98], the (2) Present, meaning that "the current situation should determine what we do as we focus our energy on the present"[98] or (3) The future, meaning that "our actions should concentrate on the future and the attainment of future goals"[98].

According to Hills (2002) Kluckhohn and Strodtbeck (1961) proposed "intensive interviewing"[99] by using "real-life situations"[99] to measure the value orientations. Four of the five value orientations were tested in subcultures of the American Southwest.[94] An overview on the cultural dimensions / value orientations has been provided by Nardon and Steers (2009) as per below. It needs to be noted that the wording of the dimensions has been changed by some authors without any impact on the key message.

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[97] Nardon/Steers (2009), p. 4.
[98] Connerley/Pedersen (2005), p. 42.
[99] Hills (2002), p. 5.

Cultural Dimensions	Scale Anchors		
Relationship with Nature: Beliefs about the need or responsibility to control nature.	Mastery: Belief that people have need or responsibility to control nature.	Harmony: Belief that people should work with nature to maintain harmony or balance.	Subjugation: Belief that individuals must submit to nature.
Relationship with People: Beliefs about social structure.	Individualistic: Belief that social structure should be arranged based on individuals.	Collateral: Belief that social structure should be based on groups of individuals with relatively equal status.	Lineal: Belief that social structure should be based on groups with clear and rigid hierarchical relationships.
Human Activities: Beliefs about appropriate goals	Being: Belief that people should concentrate on living for the moment.	Becoming: Belief that individuals should strive to develop themselves into an integrated whole.	Doing: Belief on striving for goals and accomplishments.
Relationship with Time: Extent to which past, present, and future influence decisions.	Past: In making decisions, people are principally influenced by past events or traditions.	Present: In making decisions, people are principally influenced by present circumstances.	Future: In making decisions, people are principally influenced by future prospects.
Human Nature: Beliefs about good, neutral or evil human nature.	Good: Belief that people are inherently good.	Neutral: Belief that people are inherently neutral.	Evil: Belief that people are inherently evil.

Table 3.2.2.3-1: Kluckhohn and Strodtbeck's (1961) cultural dimensions as adapted by Nardon and Steers (2009)[100]

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[100] Source: Nardon/Steers (2009), p. 4.

3.2.2.4 Hall (1959, 1966, 1976)

Hall has been a cultural anthropologist[98] working predominantly on finding patterns for interpersonal communication variations between different cultures[98] aiming to help specialists and executive[101] with exposure to intercultural business settings. His work also included research on the cultural dimensions of space and time.[101] Hall is considered a protagonist of "major influence in the field of intercultural research"[102].

Hall published a series of monographs over decades forming a sound model of cultural dimensions. In his first publication "The Silent Language" (1959), he postulates the following dimensions of culture, being elaborated on in later publications, e.g., "The Hidden Dimension" (1966) and his most influential work "Beyond Culture" (1976):

- "Time refers to how members of different cultures orient towards time and the way they perceive it (monochronic versus polychronic).
- Space refers to differing cultural frameworks for defining and organizing space, with frameworks internalized in all individuals at an unconscious level.
- Context refers to the nature of how meaning is constructed differently across cultures using different ratios of context and information."[102]

While Hall put emphasis on all dimensions, the concept of high-/low context communication has been by far the most famous and influential one,[103] as most models of cultural dimensions do not "explicitly relate culture and communication in the first instance"[104]. With regards to the importance of communication in relation to culture Hall (1992) states: "We believed that culture is communication and no communication by humans can be divorced from culture."[105] According to Hall (1976), the usage of context and information is necessary for a meaningful communication and cultures differ in their application.[104] In the course of communication, individuals "combine pre-programmed elements (culture-specific context) and information to create meaning"[102], the process is universal; however, the degree of representation leads to intercultural differences.

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[101] Cf. Thomas/Utler (2013), p. 45.
[102] Kittler/Rygl/Mackinnon (2011), p. 65.
[103] Cf. Kittler/Rygl/Mackinnon (2011), p. 65.
[104] Kittler/Rygl/Mackinnon (2011), p. 64.
[105] Hall (1992), p. 212.

Hall (1976) differentiates between high- and low-context cultures. "High-context transactions feature pre-programmed information that is in the receiver and in the setting, with only minimal information in the transmitted message. Low-context transactions are the reverse."[106] According to Hall, the high- and low context concept represents a model of "two poles in a continuous scale of meaning with nearly all possible combinations of context and information but without both extremes (high-context: only context; low-context: only information) themselves"[107].
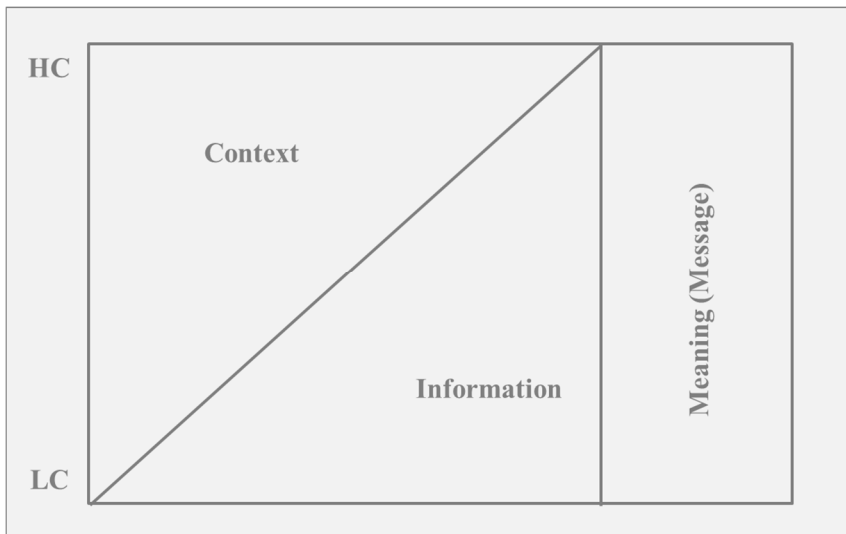
Figure 3.2.2.4-1: Hall's (1976) high- and low-context concept[108]

While the high- and low-context concept has been used less and less frequent in academic research due to the drawbacks of the country classification framework attached to the widely respected concept,[109] it needs to be valued that the work of Hall has been highly influential within cross-cultural psychology. Many of the terms developed by him, e.g., the monochromic and polychromic idea of time is still in use today.[110] The below table shows a summary of the cultural dimensions developed by Hall, including the categorization of different nationalities according to his concept.

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[106] Hall (1976), p. 101.
[107] Kittler/Rygl/Mackinnon (2011), p. 66 (quotation of Hall (2000)).
[108] Source: Hall (1976), p. 102.
[109] Cf. Kittler/Rygl/Mackinnon (2011), p. 78.
[110] Cf. Connerley/Pedersen (2005), p. 42.

Cultural Dimensions	Scale Anchors	
Context: Extent to which the context of a message is as important as the message itself.	Low context: Direct and frank communication; message itself conveys its meaning. Examples: Germany, US, Scandinavia.	High context: Much of the meaning in communication is conveyed indirectly through the context surrounding a message. Examples: Japan, China.
Space: Extent to which people are comfortable sharing physical space with others.	Center of power: Territorial; need for clearly delineated personal space between themselves and others. Examples: US, Japan.	Center of community: Communal; comfortable sharing personal space with others. Examples: Latin America, Arab States.
Extent to which people approach one task at a time or multiple tasks simultaneously.	Monochronic: Sequential attention to individual goals; separation of work and personal life; precise concept of time. Examples: Germany, US, Scandinavia.	Polychronic: Simultaneous attention to multiple goals; integration of work and personal life; relative concept of time. Examples: France, Spain, Mexico, Brazil, Arab States.

Figure 3.2.2.4-2: Hall's (1976) cultural dimensions as adapted by Nardon and Steers (2009)[111]

3.2.2.5   Hofstede (1980)

One of the most established studies in the field of cultural theories has been conducted by the Dutch psychologist Hofstede. On the basis of questionnaires handed out to 116'000 IBM employees in 70 countries, he extracted cultural characteristics according to four cultural dimensions (later expanded to five and then six). According to Hofstede, the main advantage of undertaking such a study with employees of one large multinational enterprise is the strong similarity between the participants within the sample with the only exception of nationality.[112]

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[111] Source: Nardon/Steers (2009), p. 5.
[112] Cf. Hofstede/Hofstede (2005), p. 23.

Finally, Hofstede focused his research on the measurement of values, as he is considering them as more stable than practices.[113]

Hofstede conducted a statistical analysis of the "country averages values of the answers to questions about the values of similar IBM employees in different countries"[114]. Hofstede found common problems across nations, with members of different nations reacting differently towards them.[112] Common problems are for example, social inequality, the relationship between the individual and the group, masculinity and femininity as well as the management of uncertainty and ambiguity.[112] These common problems are not overly new and are in line with findings from other researchers.[112] The four common problem areas found were renamed into the four dimensions, Hofstede's work is well-known for: Power distance, collectivism versus individualism, femininity versus masculinity and uncertainty avoidance.[112] Later a fifth, long-term versus short-term orientation, and again later, a sixth dimension, indulgence versus restraint, have been added. For every country in the study, a score on the six cultural dimensions is provided.

The cultural dimensions have been derived directly from the survey questions trough factor analysis.[115] Prerequisite was, that all questions had a pre-coded answer type ranging from one to five.[115] For all answers a mean score or percentage by country was calculated leading to a respective overview table showing a mean score percentage by country for all questions.[115] A factor analysis was then conducted to cluster the mean scores to the different questions into groups.[115] In a cluster similar questions are grouped together meaning that one can expect that if a country scores high on a specific question of the respective cluster, it will also score high on another question of this specific cluster.[115]

The first cluster found, consisted of questions dealing with power and inequality.[115] Based on the three most strongly correlated questions a power distance index for each country was calculated.[116] Power distance describes the degree to accept the unequal distribution of power[117,118], and is defined as "the extent to which the less powerful members of institutions and organizations within a country expect and accept that power distributed unequally"[119].

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[113] Cf. Hofstede/Hofstede (2005), p. 21.
[114] Hofstede/Hofstede (2005), p. 23.
[115] Cf. Hofstede/Hofstede (2005), p. 41.
[116] Cf. Hofstede/Hofstede (2005), p. 42.
[117] Cf. Rugman/Collinson (2009), p. 134.
[118] Cf. Silverthorne (2005), p. 9.
[119] Hofstede/Hofstede (2005), p. 46.

Hofstede states that "there is inequality in any society"[120]. The questions composing the power distance index are the following:

- "Answers by non-managerial employees on the question 'How frequently, in your experience, does the following problem occur: Employees being afraid to express disagreement with their managers?' (mean score on a 1 to 5 scale from 'very frequently' to 'very seldom')

- Subordinates' perception of their boss's actual decision-making style (percentage choosing the description of either an autocratic or a paternalistic style, out of four possible styles plus a 'none of these' alternative)

- Subordinates' preference for their boss's decision making style (percentage preferring an autocratic or a paternalistic style or, on the contrary, a style based on majority vote, but not a consultative style)."[121]

On his website, Geert Hofstede, provides Power Distance scores for 78 countries.[122] For 75 of the countries the data is directly derived from the IBM database, whereas the rest is taken from replication studies.[116] Hofstede emphasizes that the positions of the countries need to be interpreted from a relative and not from an absolute viewpoint.[116] Generally speaking, most Asian, Eastern European, Latin American and European, Arabian and African countries show rather high power distance scores, whereas German-speaking, Nordic, Anglo-Saxon countries and Israel showed rather low scores.[123] An overview of the scores is provided in the appendix of this thesis.

The origins of power distance differences are also explored by Hofstede. He emphasizes the relation between power distance and language, e.g., the Roman language, and states that in Roman language countries higher power distance scores can be found.[124] The Roman culture goes back a few thousand years ago and is characterized by a strong, central government – the same is true for China.[125] While these assumptions seem reasonable, Hofstede also provides some quantitative analysis to further investigate the origins of power distance differences and found that the cultural dimension can be predicted from the following indicators:

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[120] Hofstede/Hofstede (2005), p. 40.
[121] Hofstede/Hofstede (2005), p. 42.
[122] Cf. Hofstede (2014), data excel file from webpage.
[123] Cf. Hofstede/Hofstede (2005), p. 44.
[124] Cf. Hofstede/Hofstede (2005), p. 66.
[125] Cf. Hofstede/Hofstede (2005), p. 68.

- "The country's geographic latitude (higher latitudes associated with lower PDI)

- Its population size (larger size associated with higher PDI)

- Its wealth (richer countries associated with lower PDI)."[126]

The second cluster is called individualism versus collectivism. Hofstede defines this cultural dimension as follows: "Individualism pertains to societies in which the ties between individuals are loose: everyone is expected to look after himself or herself and his or her immediate family. Collectivism as its opposite pertains to societies in which people from birth onward are integrated into strong, cohesive in-groups, which throughout people's lifetimes continue to protect them in exchange for unquestioning loyalty."[127] According to Hofstede the majority of people in the world live in collectivist societies, "where the interest of the group prevails over the interest of the individual"[128]. A minority of people in the world live in individualist societies, where "the interests of the individual prevail over the interests of the group"[129]. Individualism is referring to self-reliance and emotional independency.[146]

The survey question related to the individualism versus collectivism dimension were: "Try to think of those factors which would be important to you in an ideal job; disregard the extent to which they are contained in your present job. How important is it to you to..."[127]. The respondent could then choose from a list of 14 items and rate them on a scale from one (of utmost importance) to five (of very little or no importance), implying that the measurement of individualism versus collectivism is based on a set of fourteen work goals.[130] Work goals strongly associated with individualism are personal and family time, freedom to adopt own approaches and challenging work, whereas work goals associated with collectivism are training opportunities, physical working conditions (e.g., lighting, space) and the full usage of one's skills.[130]

Anglo-Saxon cultures, as the United States, Australia, the UK and Canada are the most, whereas Latin American cultures, as for example Guatemala, Ecuador or Panama are relatively the least individualistic oriented countries. Nevertheless, the scores clearly show that the common "rule in our world"[131] is collectivism, with individualism being the exception. An overview of the scores is provided in the appendix of this thesis.

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[126] Hofstede/Hofstede (2005), p. 68.
[127] Hofstede/Hofstede (2005), p. 76.
[128] Hofstede/Hofstede (2005), p. 74.
[129] Hofstede/Hofstede (2005), p. 75.
[130] Cf. Hofstede/Hofstede (2005), p. 76.
[131] Hofstede/Hofstede (2005), p. 79.

The origins of the development of individualism or collectivism in societies are closely related to modernization.[132] Modernization goes along with change of family size which first increased from the transformation of hunter-gatherer tribes to agricultural societies and then again decreased in the urbanization and industrialization age.[132] Hofstede outlines that societies with a large agricultural sector stayed rather collectivist and largely industrialized societies rather individualist.[132] He acknowledges however, that there are some exceptions in East Asia, e.g., Japan, South Korea, Hong Kong or Singapore which remained rather collectivist although being strongly industrialized.[132] Statistical predictors for individualism are the country's wealth, with richer countries being more individualist, and the geographic latitude, with countries located closer to the equator being more collectivist.[133]

Masculinity, the third dimension, refers to importance of achievement, assertiveness and material success versus more feminine values as "relationships, modesty, caring and the quality of life"[146]. Hofstede defines the dimension as follows: "A society is called masculine when emotional gender roles are clearly distinct: mean are supposed to be assertive, tough, and focused on material success, whereas women are supposed to be more modest, tender, and concerned with the quality of life. A society is called feminine when emotional gender roles overlap: both men and women are supposed to be modest, tender, and concerned with the quality of life."[134]. The question in the survey measuring this dimension is similar to the one of the individualism versus collectivism dimension: "Try to think of those factors which would be important to you in an ideal job; disregard the extent to which they are contained your present job."[135] Then 14 work goal items were presented and the respondents were asked to opine. Work goals strongly associated with masculinity were earnings, recognition, advancement and challenge.[136] Work goals associated with femininity were good relationship with manager, cooperation, good living area for oneself and family and employment security.[137] Countries with high masculinity scores are the Slovak Republic, Japan, Hungary, countries with low masculinity scores are Sweden, Norway, Latvia and the Netherlands.

To explain the origin of the dimension, Hofstede goes back to the Old Testament, the Garden Eden, in which the man was put first and the woman being made of Adam's rip.[138] He provides further examples, e.g., the philosopher Plato who considered men and woman as equal

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[132] Cf. Hofstede/Hofstede (2005), p. 110.
[133] Cf. Hofstede/Hofstede (2005), p. 111.
[134] Hofstede/Hofstede (2005), p. 120.
[135] Hofstede/Hofstede (2005), p. 118.
[136] Cf. Hofstede/Hofstede (2005), p. 118-119.
[137] Cf. Hofstede/Hofstede (2005), p. 119.
[138] Cf. Hofstede/Hofstede (2005), p. 156.

in ancient Greek societies (with politics remaining male dominated), the strong role of women in the Viking period, when they managed autonomously villages while their me undertook long journeys across the world's seas or the influence of the Inca culture on Peru and Chile (femininity) versus the Aztec culture dominating Mexico (masculinity).[139] All the examples outlined by Hofstede, show that differences in masculinity versus femininity were reported long time ago and that the treatment of the genders is deeply rooted in the different societies.[140]

The fourth dimension found by Hofstede is called uncertainty avoidance and plays an important role in this thesis. The term uncertainty goes back to the work of the organizational sociologist James G. March, who described the phenomenon first in American organizations – generally referring to the fact that the future is uncertain and that human beings need to live with it.[141] Societies have found ways to deal with anxiety, e.g., the development of technologies, laws and rules as well as religion.[141] Hofstede considers uncertainty avoidance a subjective experience or feeling. However, these feelings can be shared by other members in the society leading to potentially collective patterns.[141] These feelings are acquired and learned through family, schools and the state and the way to cope with them is part of every society's culture. [141,142]

The dimension was initially discovered when examining the cultural dimension of power distance with a question about job stress.[142] The answers on the latter question showed a cultural pattern indicating that British employees across a wide range of professions reacted less nervous than German ones.[142] This initial question has been included into the final questionnaire leading to the following set of questions assessing the degree of uncertainty avoidance of a specific individual in a society:

- The first question is related to job stress: "How often do you feel nervous or tense at work?"[143] The answers range from "(1) I always feel this way to (5) I never feel this way"[143].

- "Agreement with the statement 'Company rules should not be broken – even when the employee thinks it is in the company's best interest' (mean score on a 1 to 5 scale). This item was labelled rule orientation."[143]

[139] Cf. Hofstede/Hofstede (2005), p. 158-159.
[140] Cf. Hofstede/Hofstede (2005), p. 160.
[141] Cf. Hofstede/Hofstede (2005), p. 165.
[142] Cf. Hofstede/Hofstede (2005), p. 166.
[143] Hofstede/Hofstede (2005), p. 166.

- "The percentage of employees expressing their intent to stay with the company for a long-term career. The question was 'How long do you think you will continue working for IBM?' and the answers ran (1) Two years at the most; (2) From two to five years; (3) More than five years (but I probably will leave before I retire); and (4) Until I retire. The percentage in a country answering 3 or 4 was correlated with the mean answers on items 1 and 2."[143]

Hofstede admits that at first the combination of these three questions did not make sense.[144] However, the answers to the questions are not positively correlated, meaning that someone shares all the attributes related to these questions and therefore the measured construct can be considered rather a society-wide phenomenon.[144] In the case of these three questions, the "differences in means answers by country"[145] were correlated: In a country with low mean job stress scores (reminder: a low score implies high job stress), people favoured adherence to rules and a long-term career.[144]

Uncertainty avoidance represents the degree to which people of a particular cultural group dislike risk and uncertainty,[146] or the level of anxiety towards an uncertain future.[144] Hofstede defines uncertainty avoidance as "the extent to which the members of a culture feel threatened by ambiguous or unknown situations"[145]. A high degree of uncertainty avoidance will be shown in affection to rituals, routines and procedures. Countries high in this dimension have "high stress levels and design rules and norms to reduce uncertainty or ambiguity" [147] and "tend to be uncomfortable or insecure with risks"[147]. A low degree of uncertainty avoidance will be reflected in a tendency towards flexibility and informality. The below table shows the uncertainty scores by country with high scores being found in Latin American and Southern European countries, mean scores in German speaking countries and low scores for the Anglo and Nordic countries.

Country	Uncertainty Avoidance
Greece	112
Portugal	104
Guatemala	101

Country	Uncertainty Avoidance
Taiwan	69
Arab countries	68
Morocco	68

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[144] Cf. Hofstede/Hofstede (2005), p. 167.
[145] Hofstede/Hofstede (2005), p. 167.
[146] Cf. Rugman/Collinson (2009), p. 135.
[147] Silverthorne (2005), p. 10.

Uruguay	100	Ecuador	67
Belgium Netherl	97	Germany	65
Malta	96	Lithuania	65
Russia	95	Thailand	64
Belgium	94	Latvia	63
El Salvador	94	Bangladesh	60
Belgium French	93	Canada French	60
Poland	93	Estonia	60
Japan	92	Finland	59
Serbia	92	Iran	59
Suriname	92	Switzerland	58
Romania	90	Switzerland German	56
Slovenia	88	Trinidad and Tobago	55
Peru	87	Africa West	54
Argentina	86	Netherlands	53
Chile	86	Africa East	52
Costa Rica	86	Australia	51
France	86	Slovak Rep	51
Panama	86	Norway	50
Spain	86	New Zealand	49
Bulgaria	85	South Africa white	49
Korea South	85	Canada	48
Turkey	85	Indonesia	48
Hungary	82	U.S.A.	46
Mexico	82	Philippines	44
Israel	81	India	40
Colombia	80	Malaysia	36
Croatia	80	Great Britain	35
Brazil	76	Ireland	35
Venezuela	76	China	30
Italy	75	Vietnam	30
Czech Rep	74	Hong Kong	29
Austria	70	Sweden	29
Luxembourg	70	Denmark	23

Pakistan	70	Jamaica	13
Switzerland French	70	Singapore	8

Table 3.2.2.5-1: Uncertainty Avoidance Index (UAI) values according to Hofstede (2014)[788]

Hofstede outlines that the concept of uncertainty avoidance is strongly linked with anxiety.[148] Anxiety is not the same as fear, but rather a "state of being uneasy or worried about what may happen"[149]. Studies have shown that anxiety scores of countries are strongly positively correlated with uncertainty avoidance scores.[148] Psychological personality tests show that with people with higher anxiety and uncertainty avoidance scores neuroticism is higher and agreeableness lower.[150] Neuroticism is associated with personnel traits such as anxiety, angry hostility, depression, self-consciousness, impulsiveness and vulnerability.[151] Hofstede further emphasizes that uncertainty avoidance and risk avoidance are not the same. Whereas risk is often expressed as a concrete probability, a figure, anxiety and uncertainty are diffuse feelings.[151] Anxiety has no object and uncertainty avoidance no probability attached to it.[151] Hofstede postulates that "as soon as uncertainty avoidance is expressed as risk, it ceases to become a source of anxiety"[152]. He says that it become a source of fear, "but may also be accepted as routine, such as the risks of driving a car or practicing a sport"[152]. Uncertainty avoidance is not about reducing risk, but about reducing ambiguity leading to a need for structure in organizations and clearly predictable and interpretable relationships.[151] This can even mean that members of societies with high uncertainty avoidance scores take more risk, but only familiar risk which is not associated with uncertainty or ambiguity.[153]

Hofstede analyzed uncertainty in different contexts and the relation to other socially relevant variables. With regards to occupation, no differences in uncertainty avoidance could be found as the set of questions did not allow a valid measurement given their different meaning for certain professions consequently leading to no correlation across the three questions and professions in scope.[153] Further, Hofstede could not find any gender differences in the same country and occupations, both showed the same stress levels and rules orientation.[153] On the other hand, a relationship between age and uncertainty could be found: In countries with older

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[148] Cf. Hofstede/Hofstede (2005), p. 170.
[149] Hofstede/Hofstede (2005), p. 170.
[150] Cf. Hofstede/Hofstede (2005), p. 171.
[151] Cf. Hofstede/Hofstede (2005), p. 172.
[152] Hofstede/Hofstede (2005), p. 172.
[153] Cf. Hofstede/Hofstede (2005), p. 173.

employees, higher levels of stress, more rule orientation and a stronger commitment to stay with the firm could be oberserved.[153] Uncertainty avoidance also seems to have an impact on family life. Family life in high uncertainty avoidance societies is more stressful, feelings are more intense and balance and satisfaction is in average lower. Also fertility is correlated with uncertainty avoidance: Societies scoring high in uncertainty avoidance have less children and family size is in average smaller in case for affluent Western societies.[154] The World Values survey has examined happiness in life which has been found being negatively correlated with uncertainty avoidance with no difference for rich or poor countries.[155] People in countries with high uncertainty avoidance scores showed a negative tendency to describe their overall work and life situation.[155] Also satisfaction with health as analyzed by the World Values Survey is negatively correlated with uncertainty avoidance independently of the country's wealth.[155] People in high uncertainty avoidance societies felt less healthy, although there was no objective evidence for differences in health.[155] Differences in uncertainty avoidance also impacts learning styles at schools and universities. Students from countries with high uncertainty avoidance prefer structured learning situations which include timetables, learning objectives and clear assignments.[156] Students from countries with weak uncertainty avoidance, however, prefer vague objectives, broad assignments and no timetables.[157] They think that there is more than one correct answer to questions and expect to be rewarded for creativity and originality.[157] There is also a difference regarding the performance of teachers and professors: While students from strong uncertainty avoidance countries expect them to be experts knowing all answers, students from weak uncertainty avoidance countries accept if their teachers do not know everything.[157] Also the attribution (oneself versus luck) of success differs.[157] Further, there are differences in shopping of food (pure basic products in high uncertainty avoidance versus convenience products in weak uncertainty avoidance cultures), cosmetics, old versus new cars or new technological products were found.[158] With regards to the workplace, strong uncertainty avoidance is closely linked to the need of having a long-term career with a company, the establishment of formal laws and informal rules for employees often based on an emotional desire leading in extreme cases to dysfunctionalities, strong expertise through well-educated specialists (in comparison to a higher acceptance of common sense and generalist managers in weak uncertainty avoidance countries),[159] and a preference of managers dealing rather with operational than strategic work[160]. Further research has been done on the link to creativity and innovation delivering mixed results, which however indicate that weak uncertainty avoidance

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[154] Cf. Hofstede/Hofstede (2005), p. 176.
[155] Cf. Hofstede/Hofstede (2005), p. 177.
[156] Cf. Hofstede/Hofstede (2005), p. 178.
[157] Cf. Hofstede/Hofstede (2005), p. 179.
[158] Cf. Hofstede/Hofstede (2005), p. 180.
[159] Cf. Hofstede/Hofstede (2005), p. 183.
[160] Cf. Hofstede/Hofstede (2005), p. 184.

cultures are good in basic innovations, but not less good in developing and implementing new products out of them (e.g., UK having more Nobel prize winner than Japan, but Japan is bringing more new products on the world markets).[161,162] People in strong uncertainty avoiding countries preferred to work for larger companies, but were more self-employed which was driven by dissatisfaction in their lives which is higher in countries with strong uncertainty avoidance.[161] It has been further found that weak uncertainty avoidance is strongly correlated with McClelland's famous psychological concept of need for achievement supposing to predict the economic development of countries.[163] Hofstede showed that the correlation to weak uncertainty avoidance and masculinity is even stronger.[163] Also with regards to the relation of the citizen to the state, the level of uncertainty avoidance can be the source of some observable differences. Countries with strong uncertainty avoidance tend to have more and more precise laws triggering a feeling of security.[164] Also individualism versus collectivism plays an important role here: An individualist country with high uncertainty avoidance scores will have rather written down rules, whereas collectivist countries have implicit rules rooted in long traditions.[164] Citizens from countries with high uncertainty avoidance scores were found to be less optimistic with regards to possibilities to influence decisions made by political authorities, considered themselves more dependent of the expertise of their government and state functions, were less interested in politics overall and are inclined to have less trust in politicians and civil servants.[165] Furthermore, in high uncertainty avoidance countries people are obliged to carry an identity card for being always able to legitimize themselves, people are more conservative, have a strong need for law and order and young people are often seen as suspect and according to Hofstede have more "native terrorists".[166] In addition, Hofstede found that high uncertainty avoidance is linked to a wide range of prejudices including xenophobia, low tolerance for other religions – it often occurs in combination with high masculinity scores.[167] Xenophobia has been proven costly in economic history: The expulsion of Jews from Spain and Portugal in the 15th century or the exodus from Jewish scientists from Germany in the 20th century are well-known examples.[168]

As per discussion above, the following table outlines the key differences between weak and strong uncertainty avoidance societies. Hofstede notes that these key differences highlight the extremes and most societies lay somewhere in between.

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[161] Cf. Hofstede/Hofstede (2005), p. 185.
[162] Cf. Hofstede/Hofstede (2005), p. 186.
[163] Cf. Hofstede/Hofstede (2005), p. 187.
[164] Cf. Hofstede/Hofstede (2005), p. 190.
[165] Cf. Hofstede/Hofstede (2005), p. 192.
[166] Cf. Hofstede/Hofstede (2005), p. 193.
[167] Cf. Hofstede/Hofstede (2005), p. 196.
[168] Cf. Hofstede/Hofstede (2005), p. 197.

Key Differences Between Weak and Strong Uncertainty Avoidance	
Weak Uncertainty Avoidance	**Strong Uncertainty Avoidance**
General Norm and Family	
Uncertainty is a normal feature of life, and each day is accepted as it comes.	The uncertainty inherent in life is a continuous threat that must be fought.
Low stress and low anxiety.	High stress and high anxiety.
Aggression and emotions should not be shown.	Aggression and emotions may at proper times and places be ventilated.
In personality tests, higher scores on agreeableness.	In personality tests, higher scores on neuroticism.
Comfortable in ambiguous situations in and with unfamiliar risks.	Acceptance of familiar risks; fear of ambiguous situations and of unfamiliar risks.
Lenient rules for children on what is dirty and taboo.	Firm rules for children on what is dirty and taboo.
Weak superegos developed.	Strong superegos developed.
Similar modes of address for different others.	Different modes of address for different others.
What is different is curious.	What is different is dangerous.
Family life is relaxed.	Family life is stressful.
In affluent Western societies, more children.	In affluent Western countries, fewer children.
Health, Education and Shopping	
People feel happier.	People feel less happy.
People have fewer worries about health and money.	People have more worries about health and money.
People have more heart attacks.	People have fewer heart attacks.
There are many nurses but few doctors.	There are many doctors but few nurses.
Students are comfortable with open-ended learning situations and concerned with good discussions.	Students are comfortable in structured learning situations and concerned with the right answers.

Teachers may say, 'I don't know'.	Teachers are supposed to have all the answers.
Results are attributed to a person's own ability.	Results are attributed to circumstances or luck.
Teachers involve parents.	Teachers inform parents.
In shopping the search is for convenience.	In shopping the search is for purity and cleanliness.
Used cars, do-it-yourself home repairs.	New cars, home repairs by experts.
There is a fast acceptance of new products and technologies, like email and the internet.	There is a hesitance toward new products and technologies.
More books and newspapers.	Fewer books and newspapers.
Risky investments.	Conservative investments.
Appeal of humor in advertising.	Appeal of expertise in advertising.
Workplace, Organization and Motivation	
More changes of employer, shorter service.	Fewer changes of employer, longer service.
There should be no more rules than strictly necessary.	There is an emotional need for rules, even if these will not work.
Hard-working only when needed.	There is an emotional need to be busy and an inner urge to work hard.
Time is a framework for orientation.	Time is money.
There is tolerance for ambiguity and chaos.	There is a need for precision and formalization.
Belief in generalists and common sense.	Belief in experts and technical solutions.
Top managers are concerned with strategy.	Top managers are concerned with daily operations.
More new trademarks.	Fewer new trademarks.
Focus on decision process.	Focus on decision content.
Intrapreneurs are relatively free from rules.	Intrapreneurs are constrained by existing rules.
There are fewer self-employed people.	There are more self-employed people.

Better at invention, worse at implementation.	Worse at invention, better at implementation.
Motivation by achievement and esteem or belonging.	Motivation by security and esteem or belonging.
The Citizen and the State	
Few and general laws or unwritten rules.	Many and precise laws or unwritten rules.
If laws cannot be respected, they should be changed.	Laws are necessary, even if they cannot be respected.
Fast result in case of appeal to justice.	Slow result in case of appeal to justice.
Citizens competent toward authorities.	Citizens incompetent toward authorities.
Citizen protest is acceptable.	Citizen protest should be repressed.
Civil servants do not have law degrees.	Civil servants have law degrees.
Civil servants positive toward political process.	Civil servants negative toward political process.
Citizens are interested in politics.	Citizens are not interested in politics.
Citizens trust politicians, civil servants and the legal system.	Citizens are negative toward politicians, civil servants and the legal system.
There is high participation in voluntary associations and movements.	There is low participation in voluntary associations and movements.
The burden of proof of identifying a citizen is on the authorities.	Citizens should be able to identify themselves at all times.
Liberalism.	Conservatism, law and order.
Positive attitudes toward young people.	Negative attitudes toward young people.
Tolerance, even of extreme ideas.	Extremism and repression of extremism.
Tolerance, Religion and Ideas	
More ethnic tolerance.	More ethnic prejudice.
Positive or neutral toward foreigners.	Xenophobia.
Refugees should be admitted.	Immigrants should be sent back.
Defensive nationalism.	Aggressive nationalism.
Lower risk of violent intergroup conflict.	High risk of violent intergroup conflict.

One religion's truth should not be imposed on others.	In religion, there is only one Truth and we have it.
If commandments cannot be respected, they should be changed.	If commandments cannot be respected, we are sinners and should repent.
Human rights: Nobody should be persecuted for their beliefs.	More religious, political and ideological intolerance and fundamentalisms.
In philosophy and science, there is a tendency toward relativism and empiricism.	In philosophy and science, there is a tendency toward grand theories.
Scientific opponents can be personal friends.	Scientific opponents cannot be personal friends.
Literature dealing with fantasy words.	Literature dealing with rules and Truth.

Table 3.2.2.5-2: Key differences between weak and strong Uncertainty Avoidance societies (own presentation based on Hofstede (2005)) [169,170,171,172,173]

Comparable to power distance, uncertainty avoidance has its roots in huge ancient empires being the Roman and Chinese empire.[174] The countries which were part of the ancient Roman Empire all scored high on uncertainty avoidance, whereas countries which were part of the Chinese empire scored rather low.[174] The same was true for countries with large Chinese minorities, as for example Thailand, Indonesia, Philippines and Malaysia.[174] As argued for power distance, both empires were characterized by strong central governments.[174] However, there was an important difference with regards to the legal system: The Roman empire had a codified law which applied to all citizens, whereas the Chinese system did not develop such a concept – law was based on general principles derived from Confucius.[174] Further, a slight negative correlation between uncertainty avoidance could be found implying that weak uncertainty avoidance countries were slightly wealthier than those with strong uncertainty avoidance.[175] Finally, Hofstede argues that uncertainty avoidance scores will likely change over time as this has been shown for the anxiety levels, which changed for example due to wars, of countries.[176]

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[169] Source: Hofstede/Hofstede (2005), p. 176.
[170] Source: Hofstede/Hofstede (2005), p. 181.
[171] Source: Hofstede/Hofstede (2005), p. 189.
[172] Source:Hofstede/Hofstede (2005), p. 194.
[173] Source: Hofstede/Hofstede (2005), p. 203.
[174] Cf. Hofstede/Hofstede (2005), p. 202.
[175] Cf. Hofstede/Hofstede (2005), p. 204.
[176] Cf. Hofstede/Hofstede (2005), p. 205.

The fifth cultural dimension, which has not been part of the initial publication from Hofstede, is called long-term orientation. This dimension goes back to the work of Michael Bond who developed the Chinese Value Survey.[177] It stands for "the fostering of virtues oriented toward future rewards – in particular; perseverance and thrift. Its opposite pole, short-term orientation, stands for the fostering of virtues related to the past and present – in particular, respect for tradition, preservation of 'face' and fulfilling social obligations"[178]. The countries scoring particularly high on long-term orientation are all from East Asia, as for example China, Taiwan, Japan and South Korea.[178] Lower scoring countries are in Africa and Latin America. Low long-term orientation is associated with low saving rates both on the government and individual side.[179] An overview of the scores of this dimension is provided in the appendix.

Most lately a sixth dimension has been added, which is called indulgence versus restraint.[180] "Indulgence stands for a society that allows relatively free gratification of basic and natural human drives related to enjoying life and having fun. Restraint stands for a society that suppresses gratification of needs and regulates it by means of strict social norms."[181] Countries scoring high in indulgence are mainly located in Latin America and Africa, whereas lower scoring countries are located in Eastern Europe and Asia. An overview of the scores of this dimension is provided in the appendix.

Cultural Dimensions	Scale Anchors	
Power Distance: Beliefs about the appropriate distribution of power in society.	Low power distance: Belief that effective leaders do not need to have substantial amounts of power compared to their subordinates. Examples: Austria, Israel, Denmark, Ireland, Norway, Sweden.	High power distance: Belief that people in positions of authority should have considerable power compared to their subordinates. Examples: Malaysia, Mexico, Saudi Arabia.

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[177] Cf. Hofstede/Hofstede (2005), p. 208.
[178] Hofstede/Hofstede (2005), p. 210.
[179] Cf. Hofstede/Hofstede (2005), p. 212.
[180] Cf. Hofstede (2014), internt: http://www.geerthofstede.nl/dimensions-of-national-cultures.
[181] Hofstede (2014), internt: http://www.geerthofstede.nl/dimensions-of-national-cultures.

Uncertainty Avoidance: Degree of uncertainty that can be tolerated and its impact on rule making.	Low uncertainty avoidance: Tolerance for ambiguity; little need for rules to constrain uncertainty. Examples: Singapore, Jamaica, Denmark, Sweden, UK.	High uncertainty avoidance: Intolerance for ambiguity; need for many rules to constrain uncertainty. Examples: Greece, Portugal, Uruguay, Japan, France, Spain.
Individualism – Collectivism: Relative importance of individual versus group interests.	Collectivism: Group interests generally take precedence over individual interests. Examples: Japan, Korea, Indonesia, Pakistan, Latin America.	Individualism: Individual interests generally take precedence over group interests. Examples. US, Australia, UK, Netherlands, Italy, Scandinavia.
Masculinity – Femininity: Assertiveness vs. passivity; material possessions vs. quality of life.	Masculinity: Values material possessions, money, and the pursuit of personal goals. Examples: Japan, Austria, Italy, Switzerland, Mexico.	Femininity: Values strong social relevance, quality of life, and the welfare of others. Examples: Sweden, Norway, Netherlands, Costa Rica.
Long-term vs. Short-term Orientation: Outlook on work, life, and relationships.	Short-term orientation: Past and present orientation. Values traditions and social obligations. Examples: Pakistan, Nigeria, Philippines, Russia.	Long-term orientation: Future orientation. Values dedication, hard work, and thrift. Examples: China, Korea, Brazil.

Table 3.2.2.5-3: Hofstede's (1980) cultural dimensions as adapted by Nardon and Steers (2009)[111]

3.2.2.6 *Critique on Hofstede (1980)*

Hofstede has been mainly criticized for his questionnaire, which had not been designed initially for measuring culture.[182] It was more a kind of an afterthought and has not been based upon a specific cultural theory.[182] The applied statistical technique, exploratory factor analysis, is not considered statistically valid and construct validity of the factors is questionable.[182] The

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[182] Cf. Silverthorne (2005), p. 15.

face validity of operational definitions of some dimensions and the items in the questionnaire is critizable.[182] Another main point of criticism is that Hofstede has conducted his research with the employees of IBM only. Using only the employees of one specific company exposes a study to criticism in a way that results might not be generalizable. Results might be influenced by IBM's own culture. Additionally, important countries as for example mainland China, Africa and the former communist-bloc countries had been left out,[183] which gives ground for critique considering the fact that a global theory of culture is proposed. Robinson (1985) concluded that "in sum given Hofstede's theoretical orientation, sample, and method of analysis, the outcome of his study is predictable. Once he has elected to consider only between-country differences, chosen the basis of their ability to distinguish between countries rather than between individuals, classes or sexes, it is not at all surprising that he finds remarkable differences between societies in values. One wonders, in fact, how he could have reached any other conclusion."[184] Last but not least, it is dubious if the study which has been conducted 40 years ago will result in the same findings today.[182] For accounting research Baskerville (2003) even concludes that "the manner in which Hofstede established the dimensions of culture, and the subsequent reification of culture as a variable in cross-national studies in accounting, led to dependence on cultural indices as an explanatory variable in accounting practices and behavior"[185]. Jones (2007) provided a summary of the points of criticism against Hofstede.

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[183] Cf. Silverthorne (2005), p. 13.
[184] Robinson (1985), p. 115.
[185] Baskerville (2003), p. 2.

Summary of arguments against Hofstede	
Relevancy	A survey is not considered an appropriate research instrument to measure cross-cultural differences
Cultural homogeneity	Domestic population is not homogenous
National divisions	Nations are not the proper unit of analysis
Political influences	Questionable outcomes on masculinity and uncertainty avoidance given Europe was in the midst of a cold war. Lack of data from socialist and third world countries
One company approach	A study on one company cannot be generalized on the entire culture of the country
Outdated	The study is too old, also because of changing global environments, internationalization and convergence
Too few dimensions	The number of dimensions is not sufficient for information on a culture
Statistical integrity	Likelihood of sample error

Table 3.2.2.6-1: Arguments against Hofstede's (1980) cultural dimensions (own presentation based on Jones (2007))[186]

Nevertheless, it can be stated, that there is broad support for Hofstede's dimensions of culture and their effect on organizations. This support is built on several replications done between 1990 and 2002 with non-IBM employees by different researchers.[187] The researchers who conducted replication studies include Hoppe (1990), Shane (1995), Mertritt (1998), de Mooij (2001, Mouritzen (2002) and van Nimwegen (2002) and conducted the study in 14 to 28 countries with samples from different industries.[188] Four of the six replication studies found evidence for only three of the cultural dimensions postulated by Hofstede.[187] However, the cultural dimension which could not be confirmed was different in every study.[187] It is therefore not deniable, that Hofstede is providing a theory that can be "tested and used in research"[189]. To conclude, while researchers are aware of the drawbacks of the Hofstede (1980) model, they are also aware of the wide recognition of the model representing in the main time the "main reference" [190] in the field of cultural theories.[191]

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[186] Source: Jones (2007), p. 5.
[187] Cf. Hofstede/Hofstede (2005), p. 25.
[188] Cf. Hofstede/Hofstede (2005), p. 26.
[189] Silverthorne (2005), p. 14.
[190] Yusoff/Lehman (2009), p. 9.
[191] Cf. Yusoff/Lehman (2009), p. 9.

Summary of arguments in support of Hofstede	
Relevancy	When the work was published, research on culture was little and internalization rapidly increasing
Rigour	Rigorous design with systematic data collection and coherent theory
Relative accuracy	The majority of the replication studies confirmed Hofstede's findings

Table 3.2.2.6-2: Arguments in support of Hofstede's (1980) cultural dimensions (own presentation based on Jones (2007))[192]

3.2.2.7 Trompenaars (1993)

Based on the work of Hofstede, Fons Trompenaars (1993) proposed seven dimensions of culture after having conducted research through questionnaires with a minimum of 500 managers from each of 28 countries.[193] The questionnaire refers to value dimensions postulated by Parsons and Kluckholm and Strodbeck.[193] The work of these authors has been presented before. In addition, it needs to be noted that the questionnaire from Trompenaars is based on "previously created, brief, value-laden business dilemmas"[194], whereas from Hofstede "used existing data and regression techniques"[194] to extract the dimensions from the replies to the questionnaires. His work does not only highlight value differences across cultures, but also differences in personal relationships.[195]

The summary of the cultural dimensions of Trompenaars as provided below, will show that the first five dimensions are related to relationships among humans and are based on the work of Parsons (1951)[196] and the last two dimensions deal with time management and society's relationship with nature and are postulated by Trompenaars himself.[196] A clear inspiration by Kluckhohn and Strodtbeck can be seen with regards to the last two dimensions.

- Individualism-collectivism: This dimension is similar to the one proposed by Hofstede.[193] It refers to the question if "individuals perceive themselves primarily as individuals or as part of a group"[194]. From the viewpoint of the society the dimension can be explained as "whether the society should focus on facilitating an individual's ability and desire to contribute to society or whether the emphasis should be on collective issues shared by

[192] Source: Jones (2007), p. 6.
[193] Cf. Silverthorne (2005), p. 35.
[194] Silverthorne (2005), p. 35.
[195] Cf. Nardon/Steers (2009), p. 5.
[196] Cf. Thomas/Utler (2013), p. 46.

many"[194]. Trompenaars emphasizes that in collectivist societies, there are different groups an individual can affiliate to, e.g., family or country.[193] Which group will be preferred depends on the country: In China the family comes first, in Japan the nation and in Ireland the religion.[193]

- Universalism-particularism: Universalism refers to the common understanding and application on some general values in all kinds of circumstances, whereas particularism means that a society believes that "unique circumstances and relationships prevail"[194]. A more universalist oriented culture will rather rely on contracts and legal strategies, a particularist one rather on relationships and trust.[193] Trompenaars has found that universalism is rather a Western pattern and characteristic for countries such as the United States and the Netherlands, whereas particularism is a pattern of Eastern societies, as for example China or Indonesia.[193]

- Neutral versus affective relationships: This dimension shows how specific cultures express emotions.[193] In affective relationships cultures, people express their emotions openly, whereas in neutral relationships cultures emotions are held under control.[193] Affective relationships societies are for example Mexico and the Netherlands, in Japan neutral relationships are preferred.[193]

- Specific versus diffuse relationships: This dimension refers to the question if in an interpersonal relationship the relationship or specific matters are considered important.[196] Trompenaars makes the distinction of a public and a private life in the personal life of people.[197] "In specific relationship societies, the public area is likely to be larger than the private area, and people will prefer to keep their private lives separate and closely guarded"[198]. This dimension explains a well-known cultural difference between the American and British compared to the German culture. In American and British specific-relationships societies, people tend to have a large public life and "small, well separated personal lives"[198]; in the German diffuse-relationship society it is the opposite.[197] This leads to rather "formal relationships"[198] in Germany with Americas perceiving Germans as "reserved and difficult to get to know"[197] and Germans perceiving Americans as "intrusive and disrespectful"[198].

- Achievement versus ascription: This dimension refers to the way a society determines the way to power and status.[197] In achievement-oriented societies, employees are evaluated based on performance relative to their peers.[197] Examples for such societies are the United States and Austria.[197] Ascription-oriented societies assess employees based on "age, gender, qualifications, or the importance of the task or the project"[198]. Examples for such societies are China and Venezuela.[197]

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[197] Cf. Silverthorne (2005), p. 36.
[198] Silverthorne (2005), p. 36.

- Time perspective: This dimension refers to the attitude towards time.[199] It is considered to be derived from Kluckhohn and Strodtbeck's time orientation dimension, asking for the attitude towards "past versus present versus future"[200].

- Relationship with environment: This dimension refers to "internal versus external control"[200]. It is again considered to be derived from Kluckhohn and Strodtbeck's cultural dimensions concept, e.g., from the "subjugation and domination orientations in the sense of being able or not being able to control what happens in the environment"[200].

Cultural Dimensions	Scale Anchors	
Universalism – Particularism: Relative importance of applying standardized rules and policies across societal members; role of exceptions in rule enforcement.	Universalism: Reliance on formal rules and policies that are applied equally to everyone. Examples: Austria, Germany, Switzerland, US.	Particularism: Rules must be tempered by the nature of the situation and the people involved. Examples: China, Venezuela, Thailand, Japan.
Individualism – Collectivism: Extent to which people derive their identity from within themselves or their group.	Individualism: Focus on individual achievement and independence. Examples: US, Nigeria, Mexico, Argentina.	Collectivism: Focus on group achievement and welfare. Examples: Singapore, Thailand, Japan.
Specific – Diffuse: Extent to which people's various roles are compartmentalized or integrated.	Specific: Clear separation of a person's various roles. Examples. Sweden, Germany, Canada, UK, US.	Diffuse: Clear integration of a person's various roles. Examples: China, Venezuela, Mexico, Japan, Spain.
Neutral – Affective: Extent to which people are free to express their emotions in public.	Neutral: Refrain from showing emotions; hide feelings. Examples: Japan, Singapore, UK.	Affective: Emotional expressions acceptable or encouraged. Examples: Mexico, Brazil, Italy.

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[199] Cf. Connerley/Pedersen (2005), p. 43.
[200] Connerley/Pedersen (2005), p. 43.

Achievement – Ascription: Manner in which respect and social status are accorded to people.	Achievement: Respect for earned accomplishments. Examples: Austria, US, Switzerland.	Ascription: Respect for ascribed or inherited status. Examples: Egypt, Indonesia, Korea, Hungary.
Time Perspective: Relative focus on the past or the future in daily activities.	Past/present oriented: Emphasis on past events and glory. Examples: France, Spain, Portugal, Arab countries.	Future oriented: Emphasis is on planning and future possibilities. Examples: China, Japan, Korea, Sweden, US.
Relationship with Environment: Extent to which people believe they control the environment or it controls them.	Inner-directed: Focus on controlling the environment. Examples: Australia, US, UK.	Outer-directed: Focus on living in harmony with nature. Examples: China, India, Sweden, Egypt, Korea.

Table 3.2.2.7-1: Trompenaar's (1993) cultural dimensions as adapted by Nardon and Steers (2009)[201]

3.2.2.8   GLOBE

The GLOBE (Global Leadership and Organizational Behavior Effectiveness) project started in 1992 and has been the most recent research on cultural dimensions and is considered the most comprehensive one.[202] It has been initiated by Robert House, who led a team of 170[202] international researchers to study the "influence of cultural differences on leadership processes"[203]. It is based on Hofstede's (1980) and Trompenaars (1993) findings and can be seen as an extension of their approach.[204] 18'000 managers from the telecommunications, food and banking sector in 62 countries had been queried.[204] The study has been conducted over a period of 7 years.[202]

Starting point of the research was a questionnaire with 735 items on differentiating attributes of cultures in societies and organizations based on prior literature and theories

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[201] Source: Nardon/Steers (2009), p. 6.
[202] Cf. Connerley/Pedersen (2005), p. 45.
[203] Nardon/Steers (2009), p. 6.
[204] Cf. Rugman/Collinson (2009), p. 137.

developed by the GLOBE research team.[205] In two pilot studies these questions were presented to middle managers for response.[205] In the following, the team has isolated nine dimensions of culture with four of them overlapping with Hofstede's cultural dimensions.[202] This has been done by classic psychometric statistical methods, e.g., item analysis, factor analysis, cluster analysis and others.[205]

In comparison to Hofstede, one of the overlapping cultural dimensions had been uncertainty avoidance (preference for order and formality and structure, improvement of predictability) and the remaining three are power distance, institutional collectivism versus individualism, in-group collectivism).[202] Five additional dimensions have been newly defined by Project GLOBE. The cultural dimensions as defined by Project GLOBE are as follows:

- Uncertainty avoidance: This cultural dimension describes the need in a society to avoid uncertainty "by reliance on norms, rituals, and bureaucratic practices to alleviate the unpredictability of future events"[206]. The measure has been designed to reflect the same definition of uncertainty avoidance as Hofstede (2001).[207] Original work on uncertainty avoidance has been done by Cyert and March (1963) with Hofstede's merit being to "elevate"[208] the dimension on a societal level.[207]

- Power distance: This cultural dimension refers to the degree to which societies "expect and agree that power should be unequally shared"[206]. The measure been designed to reflect the same definition of power distance as Hofstede (2001).[207] Original work on power distance has been done by Mulder (1971) with Hofstede's merit being to "elevate"[208] the dimension on a societal level.[207]

- Collectivism I – institutional collectivism: This cultural dimension describes the degree to which societies "encourage and reward collective distribution of resources and collective action"[206]. Actually, the collectivism related items in the pilot questionnaire were designed to measure the same definition of collectivism as Hofstede (2001).[207] However, the factor analysis found two types of collectivism: Institutional and in-group collectivism.[207] As such, institutional collectivism is a completely new dimension, which has not been studied in prior research.[207]

- Collectivism II – in-group collectivism: This cultural dimension refers to the degree to which "individuals express pride, loyalty, and cohesiveness in their organizations or families"[206]. This dimension has its ultimate root in the work of Triandis (1995).[207]

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[205] Cf. House/Javidan (2004), p. 11.
[206] Silverthorne (2005), p. 38.
[207] Cf. House/Javidan (2004), p. 13.
[208] House/Javidan (2004), p. 13.

- Gender egalitarianism: This cultural dimension refers to the degree a society reduces "gender-role differences and gender discrimination"[206]. Based on the drawbacks of Hofstede's masculinity dimension, the Project GLOBE researchers developed the gender egalitarianism and assertiveness dimensions.[207] Hofstede's dimension was found to be "confounded by many items that we judged to be irrelevant to the concept of masculinity"[208]. Furthermore, the construct lacks face validity "and is confounded by items that appear to measure multiple constructs"[208].

- Assertiveness: This cultural dimension refers to the degree a society wants members to be "tough, confrontational, assertive, and competitive versus modest and tender"[209].

- Future orientation: This cultural dimension refers to the degree of future orientation in societies observable through "planning, investing, and delaying gratification"[209] versus a shorter time horizon for decisions and a tendency for instant gratification. This dimension is based on the work of Kluckholm and Strodtbeck (1961) which has been presented before.[207] The GLOBE researchers consider this dimension as slightly similar to long-term orientation, the cultural dimension which has been later added to Hofstede's work.[207]

- Performance orientation: This cultural dimension refers to the degree of which a society "encourages and rewards group members for performance improvement and excellence"[209] in comparison to a society which values "family and background"[209]. The cultural dimension of performance orientation is designed based on the work of McClelland (1961) being famous for his research on "need for achievement"[208].

- Humane orientation: This cultural dimension refers to the degree of which a society "encourages and rewards people for being fair, caring, generous, altruistic, and kind"[210] in comparison to "power, material possessions, and self-enhancement"[210]. This dimension is again based on the work of Kluckholm and Strodtbeck (1961) who postulated a dimension called human nature (good versus bad).[207]

For each of the cultural dimensions, "original scales"[205] ranging from one to seven had been developed as well as two forms of questions.[211] One type of questions aims to measure the assessment of managers of actual practices (as is, "the way things are"[212]) in their organizations, and the other type is supposed to measure what should be (values, should be scale).[211] This approach is based on the definition of culture within Project GLOBE which manifests itself in two distinct forms: "(a) the commonality (agreement) among members of collectives with respect to psychological attributes [...] and (b) the commonality of observed and reported

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[209] Connerley/Pedersen (2005), p. 45.
[210] Connerley/Pedersen (2005), p. 46.
[211] Cf. House/Javidan (2004), p. 11.
[212] Javidan /House/Dorman (2004), p. 29.

practices of entities such as families, schools, work organizations, economic and legal systems and political institutions"[213]. An overview of the cultural dimensions definitions including specific questionnaire items is included below:

Culture Construct Definitions	Specific Questionnaire Item
Power Distance: The degree to which members of a collective expect power to be distributed equally.	Followers are (should be) expected to obey their leaders without question.
Uncertainty Avoidance: The extent to which a society, organization, or group relies on social norms, rules, and procedures to alleviate unpredictability of future events.	Most people lead (should lead) highly structured lives with few unexpected events.
Humane Orientation: The degree to which a collective encourages and rewards individuals for being fair, altruistic, generous, caring, and kind to others.	People are generally (should be generally) very tolerant of mistakes.
Collectivism I (Institutional Collectivism): The degree to which organizational and societal institutional practices encourage and reward collective distribution of resources and collective action.	Leaders encourage (should encourage) group loyalty even if individual goals suffer.
Collectivism II (In-Group-Collectivism): The degree to which individuals express pride, loyalty, and cohesiveness in their organizations and families.	Employees feel (should feel) great loyalty toward this organization.
Assertiveness: The degree to which individuals are assertive, confrontational, and aggressive in their relationship with others.	People are (should be) generally dominant in their relationships with each other.

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[213] Cf. House/Javidan (2004), p. 16.

Gender Egalitarianism: The degree to which a collective minimizes gender inequality.	Boys are encouraged (should be encouraged) more than girls to attain a higher education.
Future Orientation: The extent to which individuals engage in future-oriented behaviors such as delaying gratification, planning, and investing in the future.	More people live (should live) for the present rather than for the future. (Scored inversely).
Performance Orientation: The degree to which a collective encourages and rewards group members for performance improvement and excellence.	Students are encouraged (should be encouraged to strive for continuously improved performance.

Table 3.2.2.8-1: Project GLOBE – culture construct definitions and sample questionnaire items (Javidan, House & Dorfman, 2004) [214]

The main difference to the other models on cultural dimensions is that GLOBE groups the 61 societies (although the study is about 62 societies) in its study into 10 clusters.[215] The advantage of this approach is the "reduced number of possible comparisons"[206] and the "simplification of the research process"[206]. The GLOBE researchers did the clustering for the following five reasons:

- Implementation of a holistic approach, showing a profile for each cluster based on the nine cultural dimensions.[216] This basically leads to a quick and convenient overview of the cultural differences of different regions in the world.[216]
- Provision of a useful tool to further examine "the extent to which each cultural cluster is associated with specific leadership attributes"[217].
- "Opportunity to validate the appropriateness of societal clusters."[218] The GLOBE project provides the opportunity to propose a clustering method based on cultural values and practices and to empirically test it.[216]

[214] Source: Javidan/House/Dorfman (2004), p. 30.
[215] Cf. Silverthorne (2005), p. 39.
[216] Cf. Gupta/Hanges (2004), p. 178.
[217] Gupta/Hanges (2004), p. 178.
[218] Gupta/Hanges (2004), p. 179.

- Clusters are considered a practical framework to understand and manage cultural differences in multicultural enterprises.[219]
- Clusters can also be useful for theory development.[219] Societal clusters can help to find potential "boundary conditions for management theories"[218] or can assist in the sampling strategy in cross-cultural research studies.[219]

Other researchers argue that the clustering of several countries even enforces issues of the other often applied approach: The focus on countries, which neglects within-country cultural differences.[220] The danger that significant within-society heterogeneity might not be captured is also acknowledged by GLOBE researchers.[221] Gupta and Hanges consequently quote Ronen and Shenkar (1985): "Many countries are not homogenous: They consist of various populations. They may differ according to language (French and Flemish and Belgium; French, German, and Italian in Switzerland, etc.); according to climate and differing proximity to other countries (e.g., Northern and Southern Italy); or according to urban/rural and other differences. (p. 441)."[222]

Clustering has been often done based on variables, as for example religion, language, geographical proximity, mass migration and ethnic social capital.[218] The earliest clustering work goes back to the works of Toynbee (1947) and Cattell (1950) resulting in five clusters in the case of Toynbee (western, Orthodox, Christian, Islamic, Hindu, Far Eastern) and eight clusters in the case of Cattell (Christian Homeland, Catholic Colonial, Eastern European, Nordic, Islamic, East Baltic, Hamitic, Oriental).[223] Most influential research on clustering was proposed by Ronen and Shenkar (1985) who applied the smallest space analysis facilitating a grouping of countries based on their similarities towards work related values.[224] Given, Ronan and Shenkar 1995) used limited datasets from previous studies,[224] the GLOBE project replicated and extended their work based on the huge amount of data collected within the project.[221] Overall, prior research suggests that "religion-language, geography, and ethnicity, and work-related values and attitudes"[222] as well as economic development are relevant attributes to cluster societies.[221] And, which is important that "we should expect, societies that share similar religion-language, geography, and ethnicity tend to look alike in regards to fundamental characteristics"[222].

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[219] Cf. Gupta/Hanges (2004), p. 179.
[220] Cf. Silverthorne (2005), p. 38.
[221] Cf. Gupta/Hanges (2004), p. 183.
[222] Gupta/Hanges (2004), p. 183.
[223] Cf. Gupta/Hanges (2004), p. 181.
[224] Cf. Gupta/Hanges (2004), p. 182.

The GLOBE project categorizes 61 societies into 10 clusters. These clusters are further categorized by being described as being part of the main four geographic regions in the world: Europe, the Americas, Africa and Asia.[221] The European region is divided into an Anglo, Latin Europe, Nordic Europe, Germanic Europe, and Eastern Europe cluster.[221]

- The Anglo cluster includes countries such as England, Australia, South Africa (White sample), Canada, New Zealand, Ireland and the United States of America.[221] The reasoning for the classification goes back to historic migrations from Jutland, Angeln and Saxony, the rise of the Anglo-Saxon culture in Britain and its diffusion over to the countries mentioned above.[225]
- The Latin Europe cluster includes countries such as Italy, Portugal, Spain, France, Switzerland (French speaking part) and Israel with the Roman culture being the common link.[225]
- The Nordic Europe cluster encompasses countries as Finland, Sweden and Denmark; a cluster which is closely related to the historic concept of Scandinavia.[225]
- The Germanic Europe cluster includes countries such as the Netherlands, Austria, Switzerland, former West Germany and former East Germany with German language, values and Protestantism as the common link amongst these countries.[226]
- The Eastern Europe cluster is linked through the influence of the former Soviet Union and earlier trough a so called Asian steppe nomad culture.[227] The following societies form part of this cluster: Hungary, Russia, Kazakhstan, Albania, Poland, Greece, Slovenia, and Georgia.[227]

The Americas consists of the Latin America cluster, whereas the other American societies are part of the Anglo cluster.[227]

- The Latin America cluster is characterized by Catholicism, a Roman law heritage and Roman language, which distinguishes them from the Unites States and Canada.[227] Societies being part of this cluster are: Costa Rica, Venezuela, Ecuador, Mexico, El Salvador, Columbia, Guatemala, Bolivia, Brazil and Argentina.[227]

Africa is divided into a Middle East and a Sub-Saharan Africa cluster.[227]

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[225] Cf. Gupta/Hanges (2004), p. 184.
[226] Cf. Gupta/Hanges (2004), p. 185.
[227] Cf. Gupta/Hanges (2004), p. 186.

- The Middle East cluster is based on the common Arabic language, the Islamic moral and legal code and the common geographic features (desert countries).[227] Societies being part of this cluster are: Qatar, Morocco, Turkey, Egypt, and Kuwait.[228]

- The Sub-Saharan Africa cluster is very diverse in terms of "ethnicity, religion, language and customs"[229] with a common philosophical concept called "Ubuntu"[229] or humaneness for each other. This cluster includes societies such as Namibia, Zambia, Zimbabwe, Nigeria and South Africa (black sample).[230]

The Asian region is distinguished into a Southern Asia cluster and a Confucian Asia cluster.[230]

- The Southern Asia cluster is characterized by a "peaceful and interactive coexistence over long periods"[231] and the societies of the cluster have seen continuously "a rich interaction and balance among spirituality, psychology, philosophy, morality politics and economics"[231]. This cluster includes societies such as Iran, India, Indonesia, Philippines, Malaysia and Thailand.[232]

- The Confucian Asia cluster includes countries such as Taiwan, Singapore, Hong Kong, South Korea, China and Japan.[232] The common link amongst these countries is the Confucian culture and the strong influence of China.[232]

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[228] Cf. Gupta/Hanges (2004), p. 187.
[229] Gupta/Hanges (2004), p. 187.
[230] Cf. Gupta/Hanges (2004), p. 188.
[231] Gupta/Hanges (2004), p. 187.
[232] Cf. Gupta/Hanges (2004), p. 189.
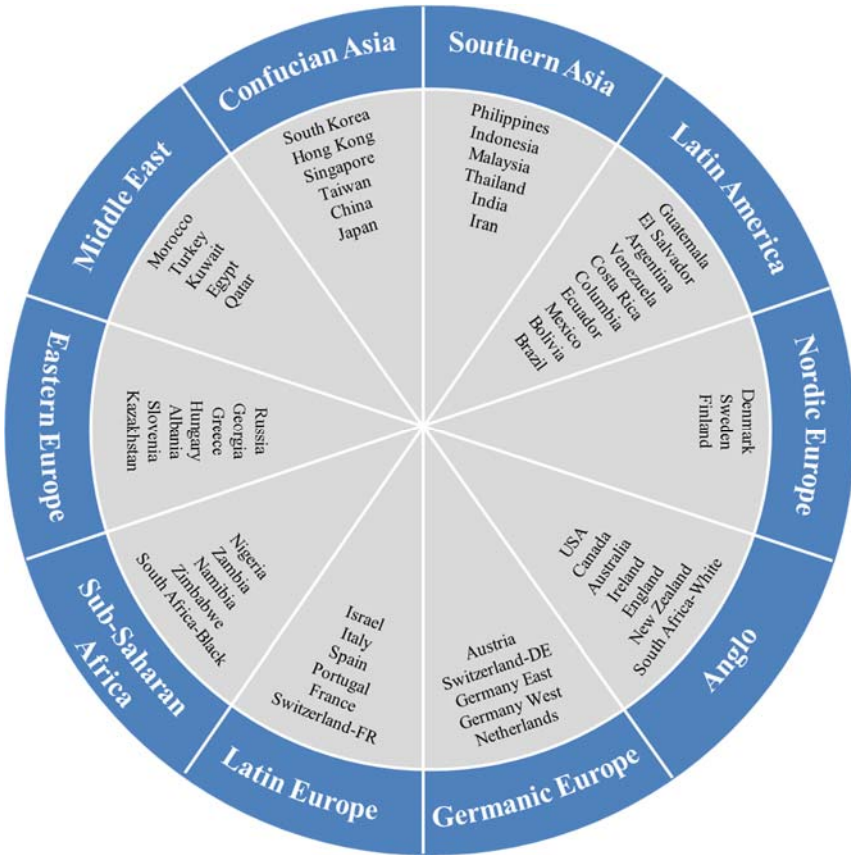
Figure 3.2.2.8-1: Country Clusters according to GLOBE (2004)[233]

The empirical validity of the clustering has been statistically tested by a discriminant analysis.[232] The goal was to test if the clustering is supported by the data, e.g. the cultural dimensions.[232] The results of the analysis strongly supported the clustering.[234] An assessment of the robustness of the result showed strong support with weaknesses in the clustering of Germanic and Nordic Europe as well as Sub-Saharan Africa and the Middle East where differences had not been that eminent as between other clusters.[235]

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[233] Source: Gupta/Hanges (2004), p. 190.
[234] Cf. Gupta/Hanges (2004), p. 191.
[235] Cf. Gupta/Hanges (2004), p. 192.

Gupta and Hanges (2004) present radar graphs to show each clusters societal values and practices by cultural dimension. As Gupta and Hanges (2004) point out the "Meta-Western region (Nordic Europe, Germanic Europe, Latin Europe, Anglo, and Latin America clusters), and the Meta-Eastern region (Eastern Europe, Confucian Asia, Southern Asia, Middle East, and Sub-Saharan Africa clusters) are noticeably different from each other"[236]. Due to the significance of the uncertainty avoidance scale for this thesis, the radar graph as proposed by Gupta and Hanges (2004) is presented. The societal cluster scores for uncertainty avoidance show relatively high practices scores for the Nordic and Germanic Europe clusters, but rather low ones for the Eastern Europe and Latin America clusters.
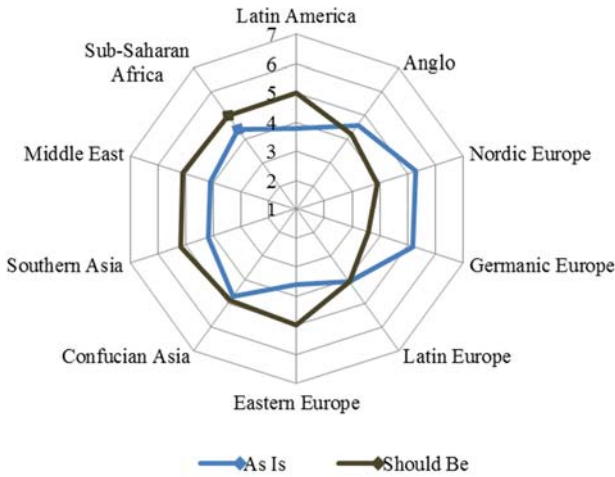
Figure 3.2.2.8-2: Societal cluster scores for uncertainty avoidance[237]

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[236] Gupta/Hanges (2004), p. 199.
[237] Source: Gupta/Hanges (2004), p. 199.

From a societal clusters viewpoint, the following conclusions can be made:

- The Germanic Europe cluster is characterized by high practices scores for performance orientation, uncertainty avoidance, future orientation and assertiveness. Relatively rather low scores could be observed for human orientation, institutional collectivism and in-group collectivism. Expressed in less cultural dimension related words, societies within the Germanic Europe cluster are rather assertive, individualistic, futuristic, well-defined, results-oriented and "often harsh"[236].

- The Nordic Europe cluster is similar to the Germanic Europe cluster.[238] High practices score can be observed for uncertainty avoidance, institutional collectivism, gender egalitarianism and future orientation and low scores for in-group collectivism, power distance and assertiveness. Expressed in less cultural dimension related words, Nordics are rather "modest, punctual, honest and high-minded, and rich people generally dress, eat and travel in the same style as the prosperous middle class"[236].

- The Latin Europe cluster is characterized by low practices scores for institutional collectivism and human orientation, which the authors consider as a sign of the "affective autonomy orientation of Latin European societies"[236].

- The Latin America cluster shows high practices scores for in-group collectivism and low practices scores for performance orientation, uncertainty avoidance, future orientation and institutional collectivism.[238] The scores describe Latin American cultures as "tend to enact life as it comes, taking its unpredictability as a fact of life, and overly worrying about results"[236]. People tend to be more concerned about family bonds than institutional collective goals.[238]

- The Anglo cluster shows high practices scores in performance orientation and lower ones in-group collectivism.[239] These scores reflect societies with high goal orientation where success is based on merits and achievements and not on family bonds.[239]

- The Eastern Europe cluster shows high practices scores for gender egalitarianism and in-group collectivism and lower scores for performance orientation, uncertainty avoidance and future orientation.[239]

- The Confucian Asia cluster reports high practices scores for performance orientation, institutional collectivism and in-group collectivism.[239] These societies tend to reward performance towards collective or family-oriented goals.[239]

- The Southern Asia cluster shows high practices scores for in-group collectivism and human orientation.[239] These societies are well-known for their deep community orientation.[239]

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[238] Cf. Gupta/Hanges (2004), p. 199.
[239] Cf. Gupta/Hanges (2004), p. 200.

- The Middle East cluster is characterized by a strong reliance on religion and family bonds when planning the future.[239] Gender egalitarianism is rather low.[239]
- The Sub-Saharan Africa cluster show high practices scores in human orientation,[239] which is based on the agricultural roots of these societies, where solidarity is can be critical to survive.

A strength of the GLOBE study is the way that it does not rely on particular previous literature how to measure culture; however, multiple measurement methods have been applied, as for example the usage of two scales measuring values and practices, the design of the independent variables through own measures and new data.[240] The GLOBE dimensions have been "validated through the use of unobtrusive measures"[241].The study has been conducted with participants from a variety of industries with different organizational sizes.[202]

The GLOBE study is raising the question if national culture is changing over time by exposure to cultures of other countries. The inclusion of the idea of cultural change has often been seen as the advantage of the GLOBE study in comparison to the work of Hofstede and Trompenaars. The scientific dispute around the impact of change on culture is discussed later in this chapter.

3.2.2.9 Schwartz (1992, 1994)

The approach of Schwartz (1992) with regards to cultural dimensions is considered a more psychological one.[195] He argued that the main difference between the cultural dimensions lies in the "motivational goals they express"[242]. With this approach, Schwartz (1994) tries to take up the criticism of Hofstede (1980) regarding his own research.[196] Hofstede (1980) had argued that not all value related cultural differences might have been captured[196] in his model as the relevant questions might have not been asked[196]. Therefore, he postulated 10 universal individual values and in addition the cultural dimensions in alignment with the approach of other scholars. His research also contains the "dimensional structure of relations among these types of values"[243].

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[240] Cf. House/Javidan (2004), p. 24.
[241] Cf. Javidan/House/Dorfman (2004), p. 30.
[242] Cf. Nardon/Steers (2009), p. 5.
[243] Schwartz (1999), p. 26.

Therefore, Schwartz (1994) gathered data from 41 cultural groups and asked for an assessment of 56 specific human values by asking every participant how much each of the values was "a guiding principle in the participant's life"[244] and assessing it on a seven-point scale[245]. The sample consisted of school teachers, who were considered as "having a number of advantages for characterizing national value priorities"[246]. The data has been analyzed using the smallest space analysis[247] method allowing a clustering of the data based on the similarities of the responses. The following 10 individual values have been found:

Value	Conceptual definition	Definition components
Self-direction	Independent thought and action-choosing, creating, exploring	Autonomy of thought Autonomy of action
Stimulation	Excitement, novelty, and challenge in life	Excitement Novelty Challenge
Hedonism Achievement	Please and sensuous gratification for oneself. Personal success through demonstrating competence according to social standards	Single component: Pleasure Personal success Demonstrating competence
Power	Social status and prestige, control or dominance over people and resources	Dominance over people Control of material resources Face: Status and prestige
Security	Safety, harmony, and stability of society, of relationships and of self	Societal security Personal security
Conformity	Restraint of actions, inclinations, and impulses likely to upset or harm others and violate social expectations or norms	Interpersonal: Avoiding upsetting others Compliance with social norms

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[244] Silverthorne (2009), p. 31.
[245] Cf. Berry/Poortinga/Segall/Dasen (2002), p. 61.
[246] Cf. Schwartz (1999), p. 34.
[247] Cf. Silverthorne (2009), p. 31.

Tradition	Respect, commitment, and acceptance of the customs and ideas that traditional culture or religion provides	Single component: Maintaining cultural and religious traditions
Benevolence	Preservation and enhancement of the welfare of people with whom one is in frequent personal contact.	Single component: Caring for ingroup members
Universalism	Understanding, appreciation, tolerance and protection for the welfare of all people and for nature	Tolerance Societal concern Protecting nature

Table 3.2.2.9-1: Schwartz's (1994) cultural conceptual definitions of 10 individual basic values (own presentation based on Schwartz, 1994)[248]

Further, Schwartz (1994) showed that these individual values can be aggregated on country level[249] and derived the following seven cultural values being: "Conservatism, affective autonomy, intellectual autonomy, hierarchy, egalitarian commitment, mastery, and harmony"[250]. Schwartz (1994) further analyzed these values and found three bipolar dimensions: "Conservatism versus autonomy, hierarchy versus egalitarianism and mastery versus harmony"[250]. The two forms of autonomy have been merged into one overall autonomy dimension. [249] Berry et al. (2002) describe these bipolar dimensions as "three basic concerns of all societies"[250] in accordance with Schwartz who referred to them as "three issues that confront all societies"[243]: "The first is how individuals relate to their group (whether they are embedded or independent); the second is how people consider the welfare of others (whether relationships are vertically or horizontally structured); and the third is the relationship of people to their natural and social world (whether they dominate and exploit it, or live with it)"[250]. Schwartz (1999) points out that in a specific culture "an emphasis on one value type is postulated to be accompanied by a de-emphasis on the polar type"[251]. The values are also "interrelated on the basis of the compatibilities among them"[251]. Therefore different value types can occur simultaneously in a specific culture. [252] The concept of compatibility is expressed in the

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[248] Source: Schwartz et al. (1999), p. 664.
[249] Cf. Berry/Poortinga/Segall/Dasen (2002), p. 62.
[250] Berry/Poortinga/Segall/Dasen (2002), p. 62.
[251] Schwartz (1999), p. 29.
[252] Cf. Schwartz (1999), p. 29.

illustration below through local proximity in the circle, whereas polar relatedness is expressed through positioning values in opposition to each other. Schwartz (1999) provides an explanation why he considers certain values as compatible, e.g. harmony and conservatism which share the importance of "avoiding change"[253].
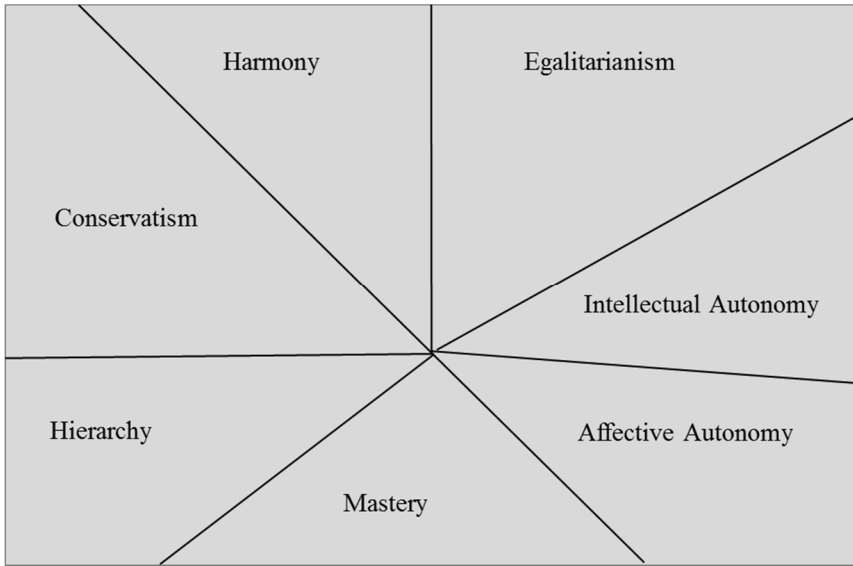
Figure 3.2.2.9-1: Schwartz's (1992, 1994) cultural dimensions[254]

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[253] Schwartz (1999), p. 30.
[254] Source: Schwartz (1999), p. 29.

Cultural Dimensions	Scale Anchors	
Conservatism – Autonomy: Extent to which individuals are integrated in groups.	Conservatism: Individuals are embedded in a collectivity, finding meaning through participation and identification with a group that shares their way of life.	Autonomy: Individuals are autonomous from groups, finding meaning and their own uniqueness. Two types of autonomy: Intellectual autonomy (independent pursuit of ideas and rights) and Affective autonomy (independent pursuit of affectively positive experience).
Hierarchy – Egalitarianism: Extent to which equally is valued and expected.	Hierarchy: Cultures are organized hierarchically. Individuals are socialized to comply with their roles and are sanctioned if they do not.	Egalitarianism: Individuals are seen as moral equals who share basic interests as human beings.
Master – Harmony: Extent to which people seek to change the natural and social world to advance personal or group interests.	Mastery: Individuals value getting ahead through self-assertion and seek to change the natural and social world to advance personal or group interests.	Harmony: Individuals accept the world as it is and try to preserve it rather than exploit it.

Table 3.2.2.9-2: Schwartz's (1992, 1994) cultural dimensions as adapted by Nardon and Steers (2009)[255]

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[255] Source: Nardon/Steers (2009), p. 7.

Schwartz (1999) considers the benefit of the below representation the possibility to directly compare the similarities of national cultures with regards to the seven value priorities.[256] It can be for example shown that intellectual autonomy is "quite important in West Germany, a little less important in Greece, rather unimportant in Poland, and very unimportant in Nepal"[257]. Further, country groups with similar values could be found: Western Europe, English-speaking countries, Eastern Europe, Far Eastern countries, Latin American and Islamic countries.[258]
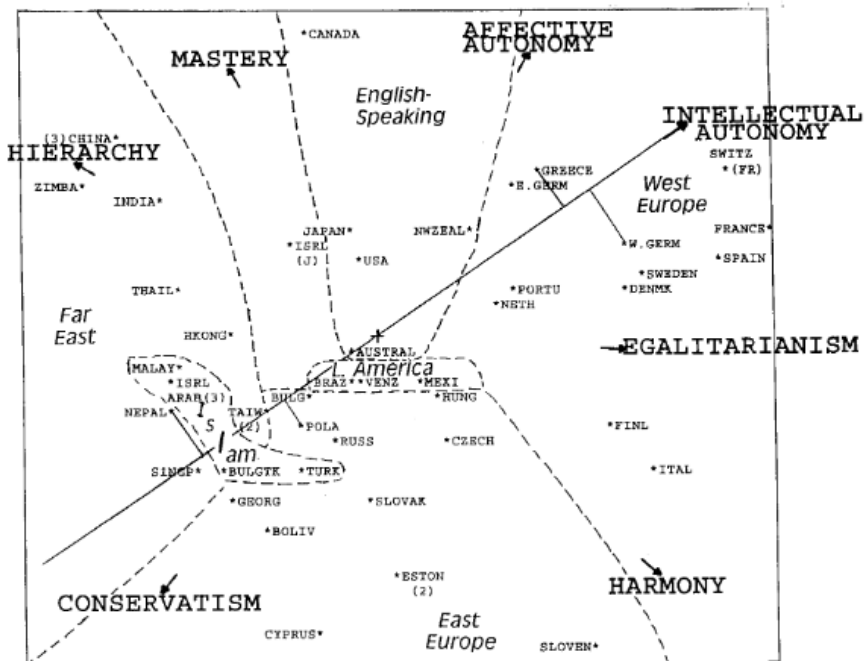
Figure 3.2.2.9-2: Schwartz's (1999) cultural dimensions[259]

Later research has demonstrated that only two bipolar dimensions exist: "Autonomy and egalitarianism (combined) versus conservatism; and hierarchy and mastery (combined) versus harmony."[249] Shortly, they are called autonomy and hierarchy.[249]

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[256] Cf. Schwartz (1999), p. 35.
[257] Schwartz (1999), p. 37.
[258] Cf. Schwartz (1999), p. 37.
[259] Source: Schwartz (1999), p. 36.

According to Schwartz (1994), individual basic values and cultural dimensions are "conceptually independent"[203]. Individual basic values reflect "psychological dynamics that individuals experience when acting on their values in the everyday life, while cultural level dimensions reflect the solutions that societies find to regulate human actions"[203]. In addition, Schwartz et al. conducted research on the degree of value homogeneity in societies and found that it strongly relates to "central structural characteristics of societies, socioeconomic development, and political democratization"[260]. It could be also shown that democratization leads to a lower consensus on basic values, meaning that democratic societies are characterized by a larger range of values as opposed to non-democratic societies.[261]

3.2.2.10   *Summary and conclusion*

Straub, Loch, Evaristo, Karahanna and Strite (2002) provided an overview on measurement methods of culture and conclude: "In reviewing the history of the conceptualization and measurement of 'culture', one quickly realizes that there is wide-ranging and contradictory scholarly opinion about which values, norms, and beliefs should be measured to represent the concept of 'culture'."[262] However, besides different opinions on how to measure the overall concept, there are commonalities amongst researchers, e.g., the "shared patterns view was still being advocated near the turn of the millennium"[263]. In addition, a research tradition has been built where researchers significantly influenced each other.

The pioneering work of Parson & Shils (1951) seems to be underestimated with regards to its influence on succeeding researchers, as so many authors[94],[92] emphasize the importance of Kluckholm & Strodtbeck (1961). With the culture patterns proposed, subsequent researchers have been influenced significantly. The self-orientation versus collectivity orientation pattern strongly influenced the individualism versus collectivism dimension of Hofstede (1980), Trompenaars (1993) and project GLOBE (2004). The remaining four culture patterns from Parson & Shils (1951), e.g., universalism versus particularism, achievement versus ascription, specificity versus diffuseness and affective versus affective-neutral have all been integrated in the work of Trompenaars (1993). One could also argue that the specificity versus diffuseness pattern influenced the high- and low-context concept from Hall (1976). The affective versus affective-neutral pattern shows similarities to the new cultural dimension from Hofstede called indulgence versus restraint.

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[260] Silverthorne (2009), p. 32.
[261] Cf. Silverthorne (2009), p. 32.
[262] Straub et al. (2002), p. 13.
[263] Straub et al. (2002), p. 16.

The work of Kluckhohn and Strodtbeck (1961) significantly influenced the work of subsequent researchers. Their cultural dimensions time orientation and relationship among people have been taken up in Hofstede's dimensions of short- versus long-term orientation and individualism versus collectivism respectively. Also the relation to nature dimension represents the basis for Trompenaar's dimension of relationship with the environment.

The high-and low context concept of Hall (1976) also significantly influenced subsequent models on cultural dimensions, including Hofstede (1980). The concept is reflected in the individualism versus collectivism dimension with individualistic cultures are communicating with low and collectivist cultures with high context.[244]

Hofstede's six cultural dimensions need to be seen partially in the context of the work of Parson and Shils (1951), Kluckhohn and Strodtbeck (1961) and Hall (1976) who performed important work with regards to the individualism versus collectivism, long-term versus short-term orientation and indulgence versus restraint dimensions. On the other hand the dimensions power distance, masculinity versus femininity, and uncertainty avoidance have not been mentioned in earlier culture models.

Trompenaars's (1993) culture dimensions are strongly influenced by Parsons and Shils (1951) with regards to individualism versus collectivism, universalism versus particularism, neutral versus affective relationships, specific versus diffuse relationships and achievement versus ascription. While the dimensions time perspective and relationship with the environment have been postulated by Trompenaars himself as outlined previously; a clear inspiration from Kluckhohn and Strodtbeck (1961) is not deniable.

The approach of Schwartz shows strong parallels to the one of Hofstede (1980), but also other models of cultural dimensions.[244] This becomes in particular evident with the reduction of the bipolar dimensions to autonomy and hierarchy.[249] The autonomy dimension, referring to the relation between the individual and the group, for example, is "often labelled as individualism-collectivism dimension"[243] as defined by Hofstede (1980). Further, the hierarchy dimension, being referred to as "a cultural emphasis on the legitimacy of an unequal distribution of power, roles and resources (social power authority, humility, wealth)"[264] shows strong similarities to Hofstede's definition of power distance.

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[264] Cf. Schwartz (1999), p. 27.

Project GLOBE (2004) has taken over the uncertainty avoidance, power distance and the redefined individualism versus collectivism dimensions from Hofstede (1980). Five additional culture dimensions have been newly defined by Project GLOBE, but at least some of them rely on work of previous researchers. The dimension gender egalitarianism builds on the drawbacks of the masculinity and femininity dimension of Hofstede (1980). The future orientation dimension shows some similarities to Hofstede's long- versus short-term orientation and its precedents. The human orientation dimension is based on the work of Kluckhohn and Strodtbeck (1961) who proposed a human nature dimension. The assertiveness and per-formance orientation dimension have not been included in previous culture models.

The above reasoning is summarized in the table below which has been initially proposed by Straub et al. (2002). The author has adapted and completed the table for recent culture models (e.g., project GLOBE) and links between patterns which have been missed.

Pattern variable value / cultural dimension	Authors
Individualism versus collectivism	Parsons & Shils (1951), Hofstede (1980), Trompenaars (1993), Project GLOBE (2004)
Masculinity versus femininity, gender egalitarianism	Hofstede (1980), Project GLOBE (2004)
Power distance	Hofstede (1980), Project GLOBE (2004)
Uncertainty avoidance	Hofstede (1980), Project GLOBE (2004)
Long-term versus short-term orientation, temporal focus	Hofstede (1980), Kluckholn et al. (1961), Trompenaars (1993)
Basic nature of human beings	Kluckholn et al. (1961), Project GLOBE (2004)
Relationship among people	Kluckholn et al. (1961)
Activity orientation	Kluckholn et al. (1961)
Relational orientation, relationship with the environment	Kluckholn et al. (1961), Trompenaars (1993)
Universalism versus particularism	Parsons & Shils (1951), Trompenaars (1993)

Achievement versus ascription	Parsons & Shils (1951), Trompenaars (1993)
Specificity versus diffuseness	Parsons & Shils (1951), Trompenaars (1993)
Affective versus affective-neutral, indulgence versus restraint	Parsons & Shils (1951), Hofstede (1980), Trompenaars (1993)

Table 3.2.2.10-1: Cultural patterns / dimensions discussed in this thesis (own presentation based on Straub et al. (2002))[265]

Nardon and Steers (2009) are seeking for convergence in the "culture theory jungle"[94] As shown above all culture models are linked through a common research history and besides that have two main commonalities: They postulate cultural dimensions as a basis for comparison of different cultures and four of these models provide numerical scores to rank different societies along these dimensions.[266] Following, the authors argue not favoring one model above the other, but to rather integrate the models based on the idea to "seek common themes that collectively represent the principal differences between cultures"[267]. This is also reflected in the following statement: "There is thus some degree of convergence among these various studies regarding the fundamental dimensions of human values across cultures, which may constitute universals."[249] According to Nardon and Steers (2009) these principal cultural characteristics could be:

- Distribution of power and authority in society
- Centrality of individuals or groups as the basis of social relationships
- People's relationship with their environment
- Use of time
- Mechanisms of personal and social control

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[265] Source: Straub et al. (2002), p. 17.
[266] Cf. Nardon/Steers (2009), p. 7.
[267] Nardon/Steers (2009), p. 8.

Common themes	Culture Models described in this thesis					
	Kluckholn / Strodtbeck	Hofstede	Hall	Tromp-enaars	Schwartz	GLOBE
Distribution of power and authority		1	1	1	1	2
Emphasis on groups or individuals	1	1		1	1	2
Relationship with environment	2	1		1	1	3
Use of time	1	1	1	1		1
Personal and social control	1	1		1		1
Other themes			1	2		

Table 3.2.2.10-2: Common themes across models of national culture (adapted from Nardon and Steers (2009))[268]

The authors suggest these themes to be the basis for future research, which should rather work on integrating models than creating new ones.[269] In a second step, the authors transpose these themes into core cultural dimensions being now presented in a more in an integrated way following a detailed assessment of similarities and differences amongst them.[270]

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[268] Source: Nardon/Steers (2009), p. 9.
[269] Cf. Nardon/Steers (2009), p. 9.
[270] Cf. Nardon/Steers (2009), p. 10.

Core Cultural Dimensions	Focus of Dimensions
Hierarchy - Equality	Power distribution in organizations and society: Extent to which power and authority in a society are distributed hierarchically or in a more egalitarian and participative fashion.
Individualism – Collectivism	Role of individuals and groups in social relationships: Extent to which social relationships emphasize individual rights and responsibilities or group goals and collective action; centrality of individuals or groups in society.
Mastery – Harmony	Relationship with the natural and social environment: Beliefs concerning how the world works; extent to which people seek to change and control or live in harmony with their natural and social surroundings.
Monochronism – Polychronism	Organization and utilization of time: Extent to which people organize their time based on sequential attention to single tasks or simultaneous attention to multiple tasks; time as fixed versus time as flexible.
Universalism - Particularism	Relative importance of rules versus relationships in behavioural control: Extent to which rules, laws, and formal procedures are uniformly applied across societal members or tempered by personal relationships, in-group values, or unique circumstances.

Table 3.2.2.10-3: Core cultural dimensions: An integrative summary[270]

In a third step, Nardon and Steers (2009) propose central tendencies on core cultural dimensions for country clusters. In comparison to other cultural dimensions models, e.g., the ones of Hofstede and Trompenaars, the authors do not postulate numeric scores by purpose. The authors consider the allocation of numeric scores to cultural dimensions of specific societies, as "imprecise science at best"[271] and think about cultures as "qualitative by definition"[271]. Further, they consider cultures as "not monolithic"[271], each culture consists of many different people and the authors consider it therefore as more appropriate to speak about tendencies than assigning numbers to cultures "only inviting errors and misunderstandings"[271]. The authors further applied country clusters instead of countries and followed the GLOBE

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[271] Nardon/Steers (2009), p. 17.

project argumentation, which based the clustering on the work of Ronan and Shenkar (1985).[272] The categorization along the core cultural dimensions has then been implemented and strongly relied on available quantitative and qualitative measurements of previous research. Furthermore, an ordinal rating scale has been introduced clustering cultures into the following categories shown at the example of individualism versus collectivism: "strongly individualistic, moderately individualistic, moderately collectivistic and strongly collectivistic"[273]. It needs to be mentioned, that within cluster variance can be significant.[272] The results of the clustering are shown in the table below.

Country clusters	Power distribution	Social relationships	Environmental relationships	Time/work patterns	Uncertainty and social control
Anglo	Moderately egalitarian	Strongly individualistic	Strongly mastery-oriented	Strongly monochronic	Moderately rule-based
Arab	Strongly hierarchical	Strongly collectivistic	Moderately harmony-oriented	Strongly polychronic	Strongly relationship-based
East European	Moderately hierarchical	Moderately collectivistic	Moderately mastery-oriented	Moderately monochronic	Moderately relationship-based
East/Southeast Asian	Strongly hierarchical	Strongly collectivistic	Strongly harmony-oriented	Moderately monochronic	Strongly relationship-based
Germanic	Moderately egalitarian	Moderately individualistic	Moderately mastery-oriented	Moderately monochronic	Strongly rule-based
Latin American	Moderately hierarchical	Moderately collectivistic	Moderately harmony-oriented	Strongly polychronic	Strongly relationship-based

[272] Cf. Nardon/Steers (2009), p. 18.
[273] Nardon/Steers (2009), p. 18.

Latin European	Moderately hierarchical	Moderately collectivistic	Moderately harmony-oriented	Moderately polychronic	Moderately relationship-based
Nordic	Moderately egalitarian	Moderately individualistic	Moderately harmony-oriented	Moderately monochronic	Strongly rule-based
Sub-Sahara African	Moderately hierarchical	Strongly collectivistic	Strongly harmony-oriented	Moderately polychronic	Strongly relationship-based

Table 3.2.2.10-4: Central tendencies on core cultural dimensions for country clusters[274]

While the clustering and the idea of core cultural dimension is an appropriate idea to see the wood for the trees in the jungle of culture models, I think the approach to see culture rather as a qualitative than a quantifiable construct will not become a success story in the research area of culture models. The beauty of the current culture models is their broad applicability as independent variables in range of research fields, including the one of this thesis. Therefore it is rather recommended to continuously improve the weaknesses of the current model landscape instead of turning away and losing a valuable research tool.

3.2.3 Discussion on culture and change

One might argue that due to the still accelerating process of globalization, communication technologies like the internet, and global brands cultural differences are vanishing. Research on cultural dimensions could be considered as running out of date fast or, drastically spoken, as completely obsolete. Project GLOBE researchers summarized this by asking if "cultural influences are a transient phenomenon in a fast changing global economy?"[275]

This idea is reflected in the term cultural convergence being the "growing similarity between national cultures, including the beliefs, values, aspirations, and the preferences of consumers, partly driven by global brands, media, and common global icons"[276]. This implies the eventual conversion of all societies' management systems to a single management model,

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[274] Source: Nardon/Steers (2009), p. 19.
[275] Dorman/House (2004), p. 53.
[276] Rugman/Collinson (2009), p. 132.

e.g., the US American one.[277] The polar-opposite of this theory is named cultural divergence.[277] The term cultural divergence implies that cultures will rather veer away from each other. It needs to be noted that cultural convergence is difficult to measure due to the "lack of historical baseline data"[278] and the fact that measurement methods – although showing some similarities – differ from each other.

Klages (2005) showed within a literature overview, that the most outstanding cultural researchers are proposing stable national cultures one the one hand and exactly the opposite on the other hand.[279] Modernization and globalization are triggering similarities in different cultures but are not able to wipe out cultural variety. Culture can be seen as mental programming which is stable across many generations.[280] The latter statement basically represents Hofstede's definition of culture. On the other hand – the GLOBE project is based on the idea of value change which depends on change in broader life circumstances (economic and physical security) of people.[281] GLOBE researchers mention studies supporting cultural convergence; management practices in Korea and Taiwan have become more similar to Japanese management in the 80ies, the US American influence on Mexican management practices or on values of Chinese and Hong Kong managers and also the adoption of Japanese management practices by US American firms in the 80s.[282]

A solution to this dispute is given in the term crossvergence, stating that both convergence and divergence are appropriate theoretical approaches.[283] Crossvergence can be "considered as lying somewhere on a continuum between convergence and divergence"[284]. But nevertheless, the problem is not solved with a more or less defined term like that. Unless a study proves that multinational organizations may have one culture in their whole organization not influenced by national cultures,[284] the dispute will go on and a final answer on the most valid theory cannot be given. While not introducing the term "crossvergence"[285], GLOBE researchers acknowledge: "In sum, we are relatively confident that there is no evidence of a single model of management practices or of cultural values towards which all nations are converging. It is most likely that there is some convergence toward US practices, some toward Western European practices, and some toward Japanese practices"[278].

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[277] Cf. Silverthorne (2005), p. 124.
[278] Dorman/House (2004), p. 54.
[279] Cf. Klages (2005), p. 276.
[280] Cf. Klages (2005), p. 277.
[281] Cf. Klages (2005), p. 278.
[282] Cf. Dorman/House (2004), p. 54.
[283] Cf. Silverthorne (2005), p. 126.
[284] Cf. Silverthorne (2005), p. 127.
[285] Silverthorne (2005), p. 126.

Also Hofstede believes "that cultural values are likely to change over time and that further research is required to assess the extent and reasons for change"[286]. While GLOBE researchers agree to a certain degree of convergence, in particular with regards to management practices and cultural values, they also argue that there is a "great deal of stability with respect to the more fundamental aspects of both cultural practices and psychological commonalities within cultural entities"[278]. Dorfman and House (2004) refer to replication studies on cultural dimensions, with very consistent results over time although up to 20 years have been passed in the meantime.[282] One example for this phenomenon are replication studies on Hofstede's work, where data gathered from 1967 to 1973 and then again in the late 1980s to 1990s was "quite resistant to convergence forces"[278]. This is rather proven through the stable relative position in the scoring, which however, does not mean that culture has not changed over time, but if the cultures of different countries changed, they changed together.[287] Other researchers even argue that management practices might converge over time; which, however does not mean that cultural values are converging.[277] This statement is supported by Hofstede who says that culture can be changed fast in the outer areas of the onion, e.g., practices, symbols and heroes, but very slow for the values – the onion's core[288,289] Culture change according to Hofstede concerns "the toys we use in playing the game"[290].

GLOBE project concludes the discussion: "Cultural diversity of employees found world-wide in multinational organizations presents a substantial challenge with respect to the design of multinational organizations and the design of effective leadership styles."[278]

Another way to study the convergence of societies is through the concept of modernization which has its roots in sociology.[291] Modernization is considered a "universal process whereby all societies work toward bettering the lives of citizens"[292]. How and what kind of psychological characteristics are influenced or not by societal trends such as modernization can be measured by thinking of psychological characteristics as rather functional or non-functional. [291] "A functional psychological characteristic is an attitude, value or behaviour that is helpful or instrumental in the adjustment of most individuals in a society to some aspects or features of the social life in that society. A non-functional psychological characteristic is an attitude, value or behaviour that does not have such a function for adjustment and is purely stylistic, expressive or terminal in nature"[292]. Functional characteristics, as for example the readiness to work with

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[286] Radebaugh/Gray/Black (2006), p. 43.
[287] Cf. Hofstede/Hofstede (2005), p. 28.
[288] Cf. Hofstede/Hofstede (2005), p. 12.
[289] Cf. Hofstede/Hofstede (2005), p. 13.
[290] Hofstede/Hofstede (2005), p. 13.
[291] Cf. Silverthorne (2005), p. 125.
[292] Silverthorne (2005), p. 125.

new technology, are more likely to be changed due to modernization, while other non-functional characteristics might even diverge.[291]

This thesis will address the possible impact of crossvergence in its research design. Most current data will be collected through a questionnaire on risk perception leading to a reflection of current cross-cultural differences in the sample. This is a major advantage to studies just using the uncertainty avoidance scale from Hofstede from (1980). In addition, the preparation of an independent variable being more up to date and being more embedded in a financial context opens up opportunities for research by using the alternative scale.

4. The impact of culture on accounting

4.1 Introduction

As outlined before, International Accounting Harmonization Research has developed within three subsequent streams since the 60ies of the last century. In its initial period, studies mainly dealt with international accounting classification topics. In the intermediate period, studies on the the influence of environmental factors, e.g., cultural and economic factors, became prominent including the Hofstede-Gray-Framework. These research streams continued until today incorporating new aspects, as for example the inclusion of multiple influence factors to explain differences in accounting systems and practices (not only culture), international accounting harmonization and its influence on share price and return[30] or on the impact of culture on accounting.

"Research has shown that accounting follows different patterns in different parts of the world"[293]. Looking at the international accounting systems landscape, "different accounting patterns of behavior can be identified which are the outcomes of many years of development influenced by factors such as cultural values, legal systems, political orientations, and economic development".[294] Cultural differences in accounting practice are closely related to national differences in accounting systems.[295]

Literature considers the classification of international accounting systems as a first step to understand "complex realities of accounting practice"[294]. International accounting classification systems may enforce the understanding of "(1) the extent to which national systems are similar to or different from each other, (2) the pattern of development of individual national systems with respect to each other and their potential for change, and (3) the reasons some national systems have a dominant influence whereas others do not".[294] Nobes and Parker (2008) point out the importance of international accounting classification systems in the framework of harmonization exercises by being able to help "to chart the progress of a country as it moves from use of one system to another"[296]. According to Nobes and Parker (2008) developing countries could use international accounting classification systems by obtaining an overview on financial reporting types available and which one would suit the particularities of their respective country best. A further advantage is to learn more easily on possible problems which might come up during and after the implementation of a new financial reporting system.

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[293] Gray (1988), p. 1.
[294] Radebaugh/Gray/Black (2006), p. 35.
[295] Cf. Radebaugh/Gray/Black (2006), p. 34.
[296] Nobes/Parker (2008), p. 55.

Other researchers provide more practical reasons for the emergence of international comparative accounting including international accounting harmonization research. Cross-cultural research could be simply a response to the needs of multinational enterprises and emerging financial markets, [297] to better understand differences in accounting systems. Multinational enterprises might have been even a driver for accounting harmonization given the huge cost and inefficiencies associated to prepare legislation specific and later on consolidated financial statements in the firms.

This chapter provides an overview on international accounting classification research prior to the Hofstede-Gray-Framework, studies prior to the Hofstede-Gray Framework dealing explicitly with the impact of culture on accounting, explains the Hofstede-Gray-Framework and research related to the framework after its publication in 1988.

4.2 International accounting classification research prior to the Hofstede-Gray-Framework

International accounting classification is characterized by two different approaches being the deductive / judgmental approach and the inductive / empirical approach.[298] In the deductive / judgmental approach first environmental factors are identified and afterwards linked to national accounting practices. In the inductive / empirical approach, national accounting practices will be analyzed as a first step resulting in an international classification framework of accounting systems; and in a second step the results will be explained by a variety of environmental factors.[299]

The idea of the deductive versus inductive approach is well-known in scientific theory. It origins in the theory of logic by Aristotle's (384-322 BC) who postulated the incorporation of empirical aspects in scientific reasoning, however put a stronger emphasis on the deductive approach.[300] Deduction was criticized by Locke (1632-1704) who said that one could only generalize from a determined number of individual cases on all cases (induction).[300] Locke's approach was hitherto criticized by Hume (1711-1776) who denied that a determined number of empirical cases is sufficient to generalize on all cases.[301] Popper (1902-1994) finally solved

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[297] Cf. Noravesh/Dilami/Bazaz, p. 255.
[298] Cf. Radebaugh/Gray/Black (2006), p. 35.
[299] Cf. Radebaugh/Gray/Black (2006), p. 36.
[300] Cf. Schülein/Reitze (2012), p. 80.
[301] Cf. Schülein/Reitze (2012), p. 83.

the problem of "complete induction" [302] by introducing the "falsification principle (the acceptance of statements until they do not have been rejected)"[302]. The falsification principle significantly influenced social science: "The most common approach used in psychology today is to combine inductive processes acknowledging the potentially subjective aspects of this in what has come to be known as the hypothetico-deductive method. In the hypothetico-deductive method predictions or hypotheses are formally stated and subjected to some form of empirical test".[303]

4.2.1 The deductive approach

The deductive approach in international accounting system classification research has been significantly influenced by Müller (1967).[299] Müller's work (1967) is considered the „pioneering starting point for discussing the deductive approach to accounting classification"[304]. It is even more appropriate to consider his book "International Accounting" (1967) as the overall starting point to combine environmental factors with accounting development. Müller (1967) basically links the accounting system of a particular country with its particular economic, politic and other environment and states that it is a product of the latter three. Müller (1967) postulated the following four different patterns to accounting development:

The first postulated pattern is the macroeconomic pattern. In the macroeconomic pattern there is a "strong link between business accounting and national economic policies"[304]. The particular characteristics of this pattern are the smoothing of accounting income to promote economic and business stability, the adjustment of depreciation rates to stimulate growth, the creation of special reserves to promote investments and social responsibility accounting to meet macroeconomic concerns.[299] This accounting development pattern can be typically found in Sweden, France and Germany.[299]

The second pattern is the microeconomic pattern. In the microeconomic pattern, accounting is considered as branch of business economics.[299] Further, there is a "fundamental orientation towards individual economic entities"[304] and a "fundamental concept is concerned with the maintenance in real terms of the monetary capital invested in the corporation"[304]. The particular characteristics of this pattern are replacement-value accounting, segmental reporting, and disclosure of employee costs, pensions and long-term commitments.[299] This accounting development pattern can be typically found in the Netherlands.[299]

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[302] Schülein/Reitze (2012), p. 83.
[303] Cf. Breakwell/Smith/Wright (2012), p. 21.
[304] Radebaugh/Gray/Black (2006), p. 36.

The third pattern is the independent discipline pattern. In the independent discipline pattern accounting is considered a service function derived from business practice.[299] The particular characteristics of this pattern are pragmatism and judgment. Accounting is considered a conceptual framework subject to further developments, driven by accounting itself.[299] Further, "full and fair disclosure is a "generally accepted accounting principle"[304]. This accounting development pattern can be typically found in the United States and the United Kingdom.[299]

The fourth and last pattern is the uniform accounting pattern. In the uniform accounting pattern accounting is considered as an "efficient mean of administration and control"[304] for managers, governments, tax authorities and all other users.[299] The main difference to the patterns above is that "a more scientific approach accounting is adopted whereby a uniform approach to measurement, disclosure and presentation"[304] is applied. This accounting development pattern can be typically found in "centrally planned economies, as well as other countries with a strong government involvement in economic planning"[304]. Countries mentioned are France, Germany, Switzerland and Sweden.[299]

Nobes and Parker (2008) also criticize that the four patterns scheme excluding any hierarchy "reduces the usefulness of the classification"[305]leading to the fact that accounting system complexities for example in the case of Germany, which is characterized by both features of the "macroeconomic accounting as well as uniform accounting"[305] cannot be reflected adequately. In the meanwhile the classification also became outdated, with for example the Netherlands having "largely abandoned its replacement value accounting"[305]. Nevertheless Müller summarized his contribution in form of the four accounting patterns as follows: "the range of four is considered sufficient to embrace accounting as it is presently known and practiced in various parts of the globe"[306].

In a second classification exercise Müller (1968) found ten country groupings with different accounting systems; and requested this to be considered in the course and preparation of international accounting harmonization attempts. However, Müller did not conduct empirical research on his postulates.[307] He also did not provide any explanation of the method how he elaborated the ten groupings.[308] We know that he used "estimates of economic development, business complexity, political and social climate, and legal system"[305].

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[305] Nobes/Parker (2008), p. 57.
[306] Müller (1967), p. 2.
[307] Cf. Radebaugh/Gray/Black (2006), p. 37.
[308] Cf. Nobes/Parker (2008), p. 57.

We can finally conclude that although Müller (1967, 1968) stated that environmental factors such as the legal and political system as well as the social climate might have an influence on accounting development, he did not specify how exactly and - even more important in the context of this thesis - did not discuss the impact of culture.[307] Nevertheless, Müller's (1967) is well appreciated in accounting research reflected in the following statement by Nobes and Parker (1992): "Perhaps it is not reasonable to expect a more sophisticated classification in a pioneering work, and perhaps Müller's informed judgement was one of the best methods of classification available"[305].

Several years later in 1975, Radebaugh "discussed major environmental factors that influence the development of accounting objectives, standards and practices and illustrated these ideas with current developments in Peru"[309]. He provided ideas how to study the accounting practice in other countries and proposed it to be "of a descriptive, conceptual, or hypothesis-testing nature"[309]. This overall reasoning implies a contribution to international accounting classification. At this point in time, Radebaugh considered Peru an economy characterized by family-owned business which "tend to be very secretive and rely more on a bookkeeping type of accountability"[309]. However, banks could trigger a more sophisticated accounting system for the country as they realized a lack of information to facilitate decision making.[310]

Watts (1977) wrote a theoretical paper arguing that corporate financial statements can be seen as a "product of the market and political processes and the interactions among individuals and groups in these processes"[311]. Although Watts (1977) did not test his hypotheses empirically, the reasoning behind his theory is closely related to the idea of international accounting classification. This becomes evident in the following hypothesis: "Hypothesis 6: The assets in corporate financial statements are more undervalued in an economy in which disclosure regulations are set by bureaucrats than in an unregulated economy"[312].

Nobes (1983) however, reverted more directly to the work of Müller (1967) and elaborated a classification of the accounting systems of Western countries based on a judgmental analysis of measurement and valuation reporting practices in 14 developed countries.[313] Statistical Analysis supported the classification of countries as either micro-based or macro-uniform and

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[309] Radebaugh (1975), p. 39.
[310] Cf. Radebaugh (1975), p. 39.
[311] Watt (1977), p. 53.
[312] Watt (1977), p. 68.
[313] Cf. Nobes (1998), p. 162.

provided further subcategories. [314] Nobes (1988) tested his classification system through "judgmental analysis of measurement and valuation reporting practices in 14 countries"[307]. Further, Nobes (1988) conducted a statistical analysis providing evidence for classifying "countries as micro-based or macro-based, but it went little beyond this"[307]. The graph below shows the nine factors Nobes (1983) considers as reasonable predictors for a classification into a particular group of countries.

Class	Sub-Class	Family	Species	
	Government, economics		Sweden	
Macro-uniform		Law-based	Japan	
			Germany	
	Continental: government, tax, legal		Spain	France
		Tax-based	Belgium	Italy
Developed Western countries		US influence	Canada	
	Business practice, pragmatic, British origin		US	
		UK influence	Canada	France
Micro-based			US	Italy
	Business economics, theory		Netherlands	
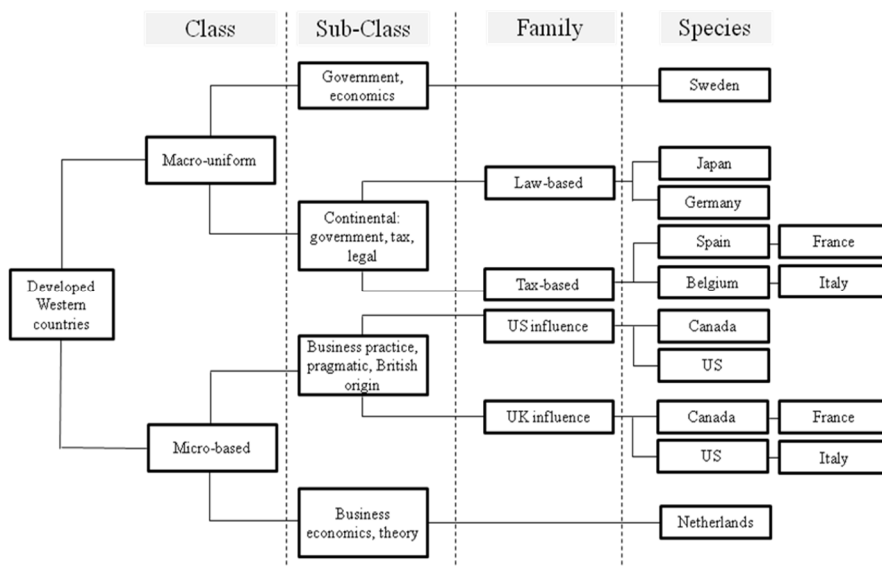
Figure 4-1: "A hypothetical classification of Financial Reporting Measurement Practices in Developed Western Countries according to Radebaugh, Gray and Black (2006)"[315]

In a study on 50 countries Doupnik and Salter (1993) found empirical support for Nobes's macro / micro classification by both measurement and disclosure practices.[316] In a follow-up study, Nobes (1998) showed that differences in financial reporting depend on the strength of the equity market.[315] However, comparable to Müller (1967) these studies did not mention culture as an influential factor. [307]

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[314] Cf. Radebaugh/Gray/Black (2006), p. 37.
[315] Source: Radebaugh/Gray/Black (2006), p. 38.
[316] Cf. Doupnik/Salter (1993), p. 41.

4.2.2   The inductive approach

Contrary to the deductive approach, the inductive approach starts with the analysis of different accounting practices and tries to derive specific accounting patterns. [315]

Following Müller in 1967, Zeff (1972) published one of the first articles which can be considered part of the inductive approach. Without mentioning culture explicitly, Zeff (1972) acknowledged that the development of national accounting systems tends to "not come from any scientific theory but from an interaction between theory, practice, and various social, economic, and potential influences"[317]. He conducted his study for Canada, England, Mexico, Scotland and the United States[318] by evaluating "published and unpublished documents"[317] which were complemented by more than 200 personal interviews with people "directly or indirectly involved in the formulation of accounting principles in the five countries studied"[317].

However, the most significant finding under this approach is the study from Nair and Frank (1980). The goal of their study was to find out whether the classification of countries into groups based on the accounting practice measurement is the same as for disclosure practice. This distinction has been made due to different patterns of development of the measurement and disclosure practice.[315] Data was derived from the Price Waterhouse surveys.[315] Empirical results showed a different grouping for the measurement compared to the disclosure practice.[319] Whereas for the seven disclosure groupings no "plausible description"[320] could be given, the identified four measurement groupings with Chile as a single-country group fit well into prior research findings on national accounting systems.

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[317] Spiller/Choi (1973), p. 651.
[318] Cf. Spiller/Choi (1973), p. 651.
[319] Cf. Nair/Frank (1980), p. 426.
[320] Radebaugh/Gray/Black (2006), p. 40.

I. British Commonwealth Model	II. Latin Amcerica / South European Model	III. Northern & Central European Model	IV. United States Model	V.
• Australia • Bahamas • Fiji • Iran • Ireland • Jamaica • Malaysia • Netherlands • New Zealand • Nicaragua • Rhodesia • Singapore • South Africa • Trinidad • United Kingdom	• Argentina • Bolivia • Brazil • Colombia • Ethiopia • Greece • India • Italy • Pakistan • Panama • Paraguay • Peru • Spain • Uruguay	• Belgium • Denmark • France • Germany • Norway • Sweden • Switzerland • Zaire	• Bermuda • Canada • Japan • Mexico • Philippines • United States • Venezuela	• Chile

Figure 4-2: Measurement Groupings according to Nair and Frank (1998)[321]

Nair and Frank (1998) "attempted to assess the relationships of these groupings with a number of explanatory variables. Although relationships were established with respect to some of the variables – which included language (as a proxy for culture), [...] it was clear that there were differences between the measurement and disclosure groupings"[320]. Further, the study is associated with some methodological issues related to data relevance and reliability[322] as the data used in the study is derived from a Price Waterhouse study being subject to "data errors, misleading answers, swamping of important questions by trivial ones [...]"[323].

4.2.3   Alternative ways of categorizing international accounting classification systems

While Radebaugh, Gray and Black proposed to classify international accounting classification system by separating them into a deductive and inductive stream, Nobes and Parker (2008) proposed to differentiate between extrinsic and intrinsic international accounting classification studies. Whether an international accounting classification system is described as extrinsic or intrinsic depends on the content of the respective system. If the content of the classification system is "influenced by economic and other factors"[296], the system will be categorized as extrinsic; if the content is "based directly on the nature of the system"[296] it would be categorized as intrinsic. According to Nobes and Parker (2008) intrinsic studies often deal

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[321] Source: Nair/Frank (1980), p. 433.
[322] Cf. Radebaugh/Gray/Black (2006), p. 41.
[323] Radebaugh/Gray/Black (2006), p. 41.

with the financial reporting rules in a particular country rather than with the accounting practices.[324]

4.2.3.1   Extrinsic classifications

Comparable to Radebaugh, Gray and Black (2006), Nobes and Parker (2008) also mention Müller's work (1967) as the "ground-breaking"[296] starting point of international accounting classification.

Another way of international accounting classification is the elaboration of morphologies. Both the American Accounting Association (AAA) (1977) and Buckley and Buckley (1974) came up with proposals. Nobes and Parker (2008) criticize morphologies as limited in relevance due to the strong emphasis on parameters as the economic and political system of a country, which "seem less relevant than actual characteristics of accounting practice"[325]. Further, they criticize the intransparency with regards to the method how the morphology is elaborated as well as the lack of empirical evidence. Contrariwise, the authors acknowledge the importance of the classification approach "in order to avoid misclassification based on temporary superficial similarities"[325].

A further international accounting classification system is called "spheres of influence"[325]. The work of Seidler (1967) and of the American Accounting Association (1977) is subsumed under this category. Seidler (1967) proposed three groups: The British model, the American model and the Continental European Model.[326] Further, the AAA's committee identified five "zones of influence"[327] being British, French-Spanish-Portuguese, German-Dutch, US and Communist. Nobes and Parker (2008) consider the "spheres of influence"[325] approach most useful "in the context of developing countries, where cultural influences from elsewhere may be overwhelming"[325]. The authors do not value it as a third approach in terms of international accounting classification, as it "has no hierarchy"[325] and does not take into account links between specific accounting systems, e.g., between British and US accounting.[325]

Nobes and Parker (2008) assess the Hofstede-Gray-Framework as a possible tool for international accounting systems classification. A further form of extrinsic classification is "classification by regulatory style"[325] characterized by three extreme types of regulation –

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[324] Cf. Nobes/Parker (2008), p. 55.
[325] Nobes/Parker (2008), p. 58.
[326] Cf. Seidler (1967), p. 775.
[327] AAA (1977), p. 105.

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"through the market, the state and the community"[325] and four mix-types being "liberalism, associationism, corporatism and legalism"[328]. The last approach to categorize international accounting systems is classification by competencies of auditors.[329] However, Nobes and Parker (2008) doubt the relevance of this approach.

4.2.3.2 Intrinsic classifications

Intrinsic classification approaches try to categorize international accounting systems by either analyzing data collected by others or by generating the data set on their own.[329] Nobes and Parker (2008) differentiate between the following forms of intrinsic classifications: Classifications using clustering, classifications using a model and new data and third, new classifications with new data.

The most important approaches in the classification using clustering category are the ones from Da Costa, Bourgeois and Lawson (1978) and Nair and Frank (1980). Da Costa, Bourgeois and Lawson (1978) took the Price Waterhouse data from 1973 and found three financial accounting models through clustering: The American, the British and the continental model.[330] The authors suggest that "most national accounting practices are identifiable with one of these models"[331] implicating that the members of countries of one specific group apply similar accounting practices.[330] The other approach from Nair and Frank (1980) has been explained before and builds on and extended the work from Frank (1979). Nobes and Parker (2008) report two different types of problems with regards to this classification approach: Data and methodology. Nobes and Parker (2008) quote the following problems with regards to the Price Waterhouse data used in all studies of the classification using clustering approach: "straightforward mistakes, misleading answers, swamping of important questions by trivial ones and exaggeration of the differences between the United States and the United Kingdom because of the familiarity of these countries (and thus their differences) to the compilers of the survey questions"[332,333]. Further, Nobes and Parker (2008) criticize that all approaches of this category use empirical statistical analysis in the form of cluster analysis and that the authors consider this approach "superior to previous subjective classifications"[333]. However, the Price Waterhouse data has not been collected for the purpose of classification of international

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[328] Nobes/Parker (2008), p. 59.
[329] Cf. Nobes/Parker (2008), p. 60.
[330] Cf. Da Costa/Bourgeios/Lawson (1978), p. 73.
[331] Da Costa/Bourgeios/Lawson (1978), p. 73.
[332] Nobes/Parker (2008), p. 61.
[333] Nobes/Parker (2008), p. 62.

accounting systems and the statistical results did sometimes did not reflect accounting reality.[334] Nobes and Parker even say that "researchers, who were generating a hypothesis from doubtful data rather than testing one, fell into trap of taking their results seriously"[333]. With this statement the authors are quite close to scientific theory and their critique of the inductive approach described earlier.

Given the above-mentioned drawbacks of the clustering method, Nobes (1980) proposed an alternative classification method based on a clear model "with which to compare the statistical results"[335]. This model has been explained earlier in this thesis.

The last intrinsic classification approach being called new data and new classifications has been developed by D'Arcy. The new data comes in from the Transnational Accounting Project (TRANSACC) from Ordelheide and KPMG in 1995. [336] Based on cluster analysis and multidimensional scaling none of the previous clusters / groups being the Anglo-American, including the UK and the US, nor a continental European accounting model could be found.[337] The multidimensional scaling even shows strong similarities between the Swiss and the UK accounting models, but Australia was found being quite dissimilar.[338] Nobes and Parker (2008) criticize these results as "counter-intuitive"[339] and ask why D'Arcy „does not question the data but accepts the results and seeks to explain it"[339]. The authors admit that D'Arcy used superior methods, but overall the conclusions remind them "of previous classifications based on data that had not been prepared for those purpose of classification"[339] and therefore summarize the approach as "new data, old problems"[339]. While Nobes and Parker (2008) acknowledge improved data quality trough enhanced currentness and a focus on accounting rules, whereas previous approaches mixed rules and practices. However, there are some well-known drawbacks, as for example the design of the survey which had not conceptualized for the purpose of accounting systems classification and the non-availability of the coding of the survey.[340] This coding had been available in the case of the Price Waterhouse data and led to a "series of errors"[341] with regards to the data D'Arcy used. Nobes (2004) even showed that "adjusted data would not lead to a classification with Australia as an outlier and would probably produce an Anglo-Saxon Group"[341]. However, it needs to be noted that there is some disagreement on the existence of an Anglo-Saxon-Group versus a Continental European Group.

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[334] Cf. Nobes/Parker (2008), p. 62.
[335] Nobes/Parker (2008), p. 63.
[336] Cf. D'Arcy (2001), p. 334.
[337] Cf. D'Arcy (2001), p. 327.
[338] Cf. D'Arcy (2001), p. 343.
[339] Nobes/Parker (2008), p. 68.
[340]Cf. Nobes/Parker (2008), p. 68.
[341] Nobes/Parker (2008), p. 69.

Among others, Cairns (1997) states that "I am increasingly persuaded, however, that the distinction between Anglo-American accounting and Continental European accounting is becoming less and less relevant and more and more confused. […] In fact, there are now probably far more similarities between American and German accounting than there are between American and British accounting"[342]. Nobes and Parker (2008) write that the distinction between these two groups was becoming "less stark"[341], however emphasize the ongoing "descriptive power"[341] and empirical support for the two-group system. The below graph shows a table of the approaches to accounting classification and is derived from Nobes and Parker (2008).
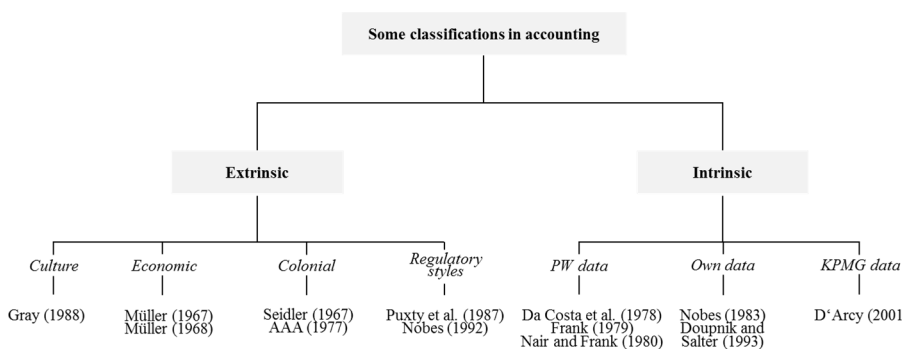
Figure 4.2.3.2-1: A taxonomy of some accounting classifications according to Nobes and Parker (2008)[343]

4.2.4 Conclusion

After having reviewed the major studies in international accounting classification research prior to the Hofstede-Gray-Framework, it can be stated that international accounting classification research is still in an "early stage"[322] with only a few groupings and accounting patterns identified. We also need to state that some approaches for international accounting classification are now only of historical interest.[344]

More important with regards to this thesis "only very general relationships between environmental factors and accounting systems have been established"[322]. Especially the "influence of culture, as a possibly more fundamental factor underlying differences in

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[342] Cairns (1997), p. 316.
[343] Source: Nobes/Parker (2008), p. 70.
[344] Cf. Nobes/Parker (2008), p. 71.

international accounting systems"[322] has been often only implicitly mentioned. Gray (1988) summarizes this fact as follows: "While prior research has shown that there are different patterns of accounting internationally and that the development of national systems tends to be a function of environmental factors, it is a matter of controversy as to the identification of patterns and influential factors involved. In this context the significance of culture does not appear to have been fully appreciated"[294].

The fact that differences in international accounting systems remain as not all countries have yet fully converged with IFRS for all accounting purposes also keeps this research topic vibrant.[344] The next section will review further studies prior to the Hofstede-Gray-Framework; however, will focus on studies examining cultural influences on accounting systems.

4.3 Early studies on cultural influences on accounting systems prior to the Hofstede-Gray-Framework

4.3.1 Early studies on the cultural influences on accounting systems

In accordance with other studies, Wallace and Gernon (1991) state that cross-national accounting literature has focused strongly on observing differences and hierarchy building, but failed in establishing a comprehensive theory to explain international differences in financial reporting, with culture being one of the potential explanatory factors.

Jaggi (1975) was one of the first researchers who examined the influence of culture on accounting systems. The author compares the reliability of financial disclosure in developed with developing countries. The findings indicate that the reliability of financial statements in developing countries is lower than in developed countries, which is a "result of managerial value orientations"[345]. Jaggi (1975) emphasizes that "if the disclosure of information in these countries is primarily left to individual firms, to be based on accounting principles developed by the professional bodies, there appears to be a very small probability that this reliability can be improved upon"[345]. The reason for this are cultural differences leading to the fact that the way developed countries elaborate and implement their accounting principles cannot be transferred as they are and "are not likely generate the same results"[345]. Therefore, the elaboration and implementation of accounting principles need to be adjusted and adapted to the cultural environment.

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[345] Jaggi (1975), p. 75.

Belkaoui (1978) studied the linguistic relativity of accounting.[346] He elaborates that "the ways of speaking are indicative of the metaphysics of a culture"[347]. As accounting is a language, its characteristics will influence the non-linguistic behavior of the humans applying it. Belkaoui (1978) postulates four propositions on the linguistic relativity of accounting: "1. The users that make certain lexical distinctions in accounting are enabled to talk and/or solve problems that cannot be easily solved by users that do not; 2. The users that make certain lexical distinctions in accounting are enabled to perform (nonlinguistic) tasks more rapidly or more completely than those users that do not; 3. The users that possess the accounting (grammatical) rules are predisposed to different managerial styles or emphases than those that do not; 4. The accounting techniques may tend to facilitate or render more difficult various (nonlinguistic) managerial behaviors on the part of users."[348] In a later study, Belkaoui (1983) argues that international differences in reporting and disclosure adequacy depend on the political, economic and demographic environment in different countries without being able to show significant results. [349]

Further work in this area has been conducted by Violet (1983). Violet considers accounting as "a social institution established by most cultures to report and explain certain social phenomena occurring in economic transactions"[350]. Violet (1983) postulates that culture is an integral part of accounting and can therefore not be "isolated and analyzed as an independent component of a culture"[350]. Accounting is a "product of culture"[350]. Violet argues that the lack of success of the IASC is related to cultural differences.

As a further response to the low attention given to culture in the international accounting classification literature, Harrison and McKinnon (1986) came up with a "methodological framework incorporating culture for analyzing changes in corporate financial reporting regulation at the nation specific level"[351]. According to the deductive approach, the framework has been proposed first and then the "use of this framework to assess the impact of culture on the form and functioning of accounting was demonstrated through an analysis of Japan's accounting system"[322]. The authors stated that culture is a key element of the framework helping to explain how social systems change. "Culture influences (1) the norms and values of such systems; and (2) the behaviour of groups in their interactions within and across systems."[352]

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[346] Cf. Belkaoui (1978), p. 97.
[347] Belkaoui (1978), p. 98.
[348] Belkaoui (1978), p. 103.
[349] Cf. Belkaoui (1983), p. 207.
[350] Violet (1983), p. 1.
[351] Gray (1988), p. 4.
[352] Harrison/McKinnon (1986), p. 239.

In the same year of the publication of the Hofstede-Gray-Framework, Soeters and Schreuder (1988) published a study on the interaction between national and organizational cultures in accounting firms. The study examined the influence of the US culture upon (at that time) Big Eight Accounting firms by evaluating cultural differences between two types of accounting firms operating in the Netherlands: The truly Dutch by origin and the international Big Eight characterized by a strong US orientation firms.[353] Hofstede's questionnaire was sent to the respective employees and the scores of the four cultural dimensions were derived from the submitted answers. For two of Hofstede's cultural dimensions - uncertainty avoidance and masculinity - a significant impact of the US culture on the organizational culture of the Big Eight firms could be shown.[354] Further analysis revealed that "the differences in work-related values of the employees of these firms do not increase over time, but appear to exist from the onset"[355]. The differences are rather determined by self-selection than socialization – socialization in the company itself only provides the "finishing touch"[355].

4.3.2 Conclusion

While culture has been undervalued in the international accounting classification literature, a number of authors incorporated culture in their research on international accounting problems before the Hofstede-Gray-Framework has been published. This clearly shows that the Hofstede-Gray-Framework was not the starting point of combining culture and accounting by examining the impact of one on the other. Not all relevant authors have been mentioned in the first and later publications on the Hofstede-Gray-Framework. These authors have been therefore missed as well in some of the literature review sections of the studies searching for empirical evidence for the Hofstede-Gray-Framework.

4.4 The Hofstede-Gray-Framework

According to Gray (1988) accounting is practiced in different ways throughout the world.[356] He postulates that previous research has acknowledged the impact of environmental factors on national accounting system; however, the cultural factor has not been adequately considered.[356] Gray (1988) further concluded that "only very broad country groupings or accounting patterns"[357] have been found and relationships identified between environmental

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[353] Cf. Soeters/Schreuder (1988), p. 76.
[354] Cf. Soeters/Schreuder (1988), p. 75.
[355] Soeters/Schreuder (1988), p. 82.
[356] Cf. Gray (1988), p. 1.
[357] Gray (1988), p. 4.

factors and accounting patterns were rather general. [358] Gray (1988) also argues that international accounting classification research did not clarify the significance of culture and has been even neglected.[358]

Based on the approach from Harrison and McKinnon (1986), Gray (1988), proposes a framework incorporating culture which "may be used to explain and predict international differences in accounting systems and patterns of accounting development internationally" [359]. In addition, Gray (1988) argued that the societal value dimensions (or cultural dimensions, as they are called by Hofstede) influence the development of accounting systems at a single country level.[360] Since its inception, the proposed framework has been widely studied and is now known as the Hofstede-Gray-Framework.[361]

The Hofstede-Gray-Framework aims to "explore the extent to which cultural differences identified by Hofstede's cross-cultural research (1980, 1983)"[362], may explain international differences in accounting systems. This is illustrated in the figure below representing an interactive model. The interactive model illustrating the influence of societal values on the accounting subculture (accounting values) is "an adaptation and extension of the model relating to the formation and stabilizing of societal cultural patterns proposed by Hofstede (1980, p. 27)"[359]. The model illustrates that societal values are influenced by ecological factors, as for example the geography, economy, demographics, etc. of a particular country.[360] Ecological factors are themselves influenced by a range of external factors, as for example forces of nature, international trade, investments and conquest.[360] The model subsequently highlights the influence of societal values on institutions, e.g., legal and political systems, nature of capital markets and others.[360] The institutions, in return, reinforce accounting systems, ecological influences and therefore societal values.[360] The values of accountants are assumed to be derived from societal values; these accounting values will then subsequently influence the accounting systems.[360]

The model in summary shows that "culture or societal values, at the national level may be expected to permeate organizational and occupational subcultures as well, though with varying degrees of integration. Accounting systems and practices can influence and reinforce societal values. With this in mind, we can perhaps obtain more fundamental insights than we hitherto

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[358] Cf. Gray (1988), p. 4.
[359] Gray (1988), p. 5.
[360] Cf. Gray (1988), p. 5.
[361] Cf. Radebaugh/Gray/Black (2006), p. 42.
[362] Radebaugh/Gray/Black (2006), p. 42.

have into why there are differences between national systems of accounting and reporting, both internal and external"[322].
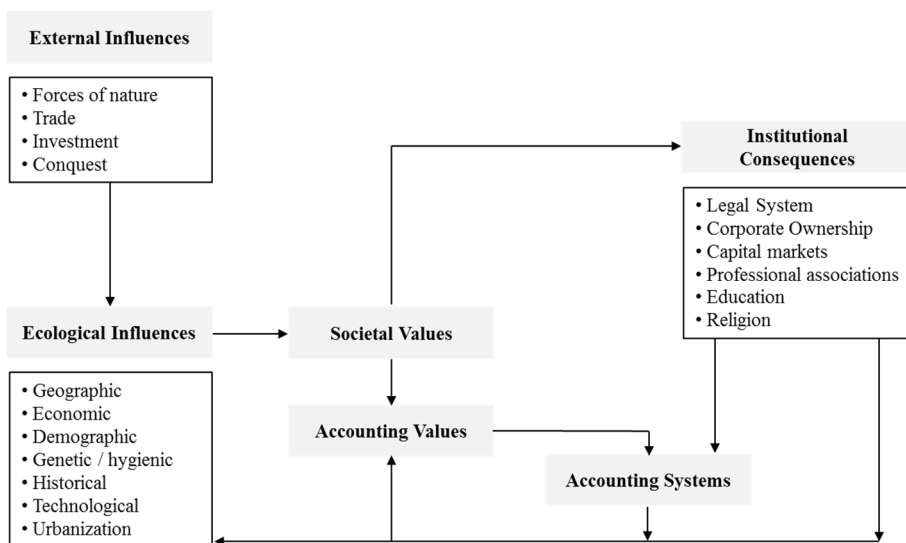
Figure 4.2.3.2-2: Culture, Societal Values, and the Accounting Subculture according to Gray (1988)[363]

Based on this interactive model, Gray (1988) argues that it should be possible to link Hofstede's cultural dimensions (societal values) with accounting values. [364] If a relation between these two variables should exist, a link between accounting systems and societal values and the impact of culture thereon could be examined.[364] Finch (2009) gives an introduction to the four accounting values identified by Gray (1988): 1. Professionalism versus statutory control: A preference for self-regulation and individual professional judgment compared to compliance with prescriptive legal requirements; 2. Uniformity versus conformity: Consistency versus individual and flexible solutions; 3. Conservatism versus optimism: A conservative versus risk-taking approach and 4. Secrecy versus transparency. The first two relate to accounting practice, the second two to accounting measurement and disclosure.[365] Gray (1998) acknowledges that this list of values is not necessarily exhaustive, but attempt to represent accounting value dimensions sensible for both practitioners and researchers.[366]

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[363] Source: Gray (1998), p. 7.
[364] Cf. Gray (1998), p. 6.
[365] Cf. Gray (1998), p. 12.
[366] Cf. Gray (1998), p. 8.

Based on the assumption that cultural values "permeate a nation's social system and there should be a close match between culture areas and patterns of accounting systems internationally" [367] , Gray combined these accounting values with Hofstede's cultural dimensions being individualism versus collectivism, large versus small power distance, strong versus weak uncertainty avoidance, masculinity versus feminity and a fith dimension which had been detected later by Hofstede and Bond (1988) which is called short-term versus long-term orientation or "Confucian Dynamism". This basically aims to answer the question how accounting values relate to societial values.[366] Also the question how accounting systems are eventually influenced will be addressed.[366]

4.4.1 Cultural dimensions

Hofstede's (1980) questionnaire was initially not determined to become a culture survey. The primary goal was to gather work-related values from employees throughout IBM. Several studies have been conducted to replicate or extent Hofstede's research and it has been shown that most of these studies confirm Hofstede's findings by acknowledging the difficulties to measure the theoretical construct culture and the limitations of Hofstede's approach. Gray (1988) summarizes the cultural dimensions as follows:

- Individualism versus collectivism:
    - Individualism: "Preference for a loosely knit social framework in society wherein individuals are supposed to take care of themselves and their immediate families only."[368]
    - Collectivism: "Preference for a tightly knit social framework in which individuals expect their relatives, clan, or other in-group to look after them in exchange for unquestioning loyalty"[368]
    - Purpose of the dimension: Examination tool for the "degree of interdependence a society maintains among individuals. It relates to people's self-concept: "I" or "we"[368].
- Large versus small power distance:
    - Large power distance: Acceptance of "a hierarchical order in which everybody has a place that needs no further justification"[368].

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[367] Gray (1998), p. 8.
[368] Radebaugh/Gray/Black (2006), p. 44.

- - Small power distance: Striving "for power equalization and demand for justification of power inequalities"[368].
  - Purpose of the dimension: Examination tool for the "extent to which members of a society accept the idea that power in institutions and organizations is distributed unequally. This has obvious consequences for the way people build their institutions and organizations"[368].
- Strong versus weak uncertainty avoidance:
  - Strong uncertainty avoidance: Maintaining "rigid codes of belief and behaviour and intolerance of deviant persons and ideas"[368].
  - Weak uncertainty avoidance: Maintaining "a more relaxed atmosphere in which practice counts more than principles and deviance is more easily tolerated"[368].
  - Purpose of the dimension: Examination tool for the "degree to which the members of a society feel uncomfortable with uncertainty and ambiguity. This feeling leads them to hold beliefs promising certainty and to maintain institutions protecting conformity. [...] The fundamental issue addressed by this dimension is how a society reacts to the fact that time only runs one way and that the future is unknown, and whether it tries to control the future or just lets it happen. Like power distance, uncertainty avoidance has consequences for the way people build their institutions and organizations"[368].
- Masculinity versus femininity
  - Masculinity: Preference for "achievement, heroism, assertiveness, and material success"[368].
  - Femininity: Preference for "relationships, modesty, caring for the weak, and the quality of life"[368].
  - Purpose of the dimension: Examination tool for the "way in which a society allocates social (as opposed to biological) roles to the sexes"[368].
- Short-term versus long-term orientation
  - Short-term orientation: Emphasis on "respect for tradition; respect for social and status obligations regardless of cost; social pressure to keep up with the Joneses, even if it means overspending; small savings levels and so little money for investment; a concern to get quick results; a concern for appearances; and a concern for truth rather than virtue"[369].
  - Long-term orientation: Emphasis on "adaptation of traditions to meet modern needs; a respect for social and status obligations within limits; a thrifty and sparing approach to resources; large savings levels and funds available for investment;

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[369] Radebaugh/Gray/Black (2006), p. 45.

perseverance toward achieving gradual results; a willingness to subordinate personal interests to achieve purpose; and a concern for a virtuous approach to life"[369].

- Purpose of the dimension: Examination tool for the examination of "identification with the teachings of Confucius"[369].

While acknowledging the difficulties to develop a theory and measurement technique for culture, Radebaugh, Gray and Black (2006) argue that replications or extensions of Hofstede's (1980) work confirm the practicability of his cultural dimensions as a good indicator for examining cultural differences between countries.

If societal value orientations are closely related to the development of accounting systems and practices, then it should be possible to observe linkages between cultural areas and the development of specific accounting systems around the world. Furthermore, Radebaugh, Gray and Black (2006) state that if Hofstede (1980) has accurately factored out the above mentioned five cultural dimensions from the answers to his questionnaire, it should be possible to link these to the construct of accounting values. The authors summarize that "if such a relationship exists, then a link between societal values and accounting systems can be established and the influence of culture assessed"[368]. The accounting values are described in the following section.

4.4.2   Accounting values

As outlined before, the first accounting value is called professionalism versus statutory control. According to Radebaugh, Gray and Black (2006) "this value reflects 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"[369]. Gray (1988) considers this accounting value as significant, as "accountants are perceived to adopt independent attitudes and to exercise their individual professional judgments, to a greater or lesser extent through the world"[369].

The accounting value of professionalism versus statutory control roots in the different development and perception of the accounting profession in Anglo-Saxon countries in contrast to the one in Continental Europe, in particular France and Germany. Whereas the latter see the accounting profession as an implementation function of "relatively prescriptive and detailed legal requirements"[370], in the UK "the concept of presenting a true and fair view of a company's

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[370] Radebaugh/Gray/Black (2006), p. 46.

financial position and results depends heavily on the judgment of the accountant as an independent professional"[370].   Therefore the establishment of professional accounting bodies or associations has a long history in Anglo-Saxon countries and are well-known and established there, which rather less the case in Continental European and less developed countries.[366] With financial statements deemed to provide an objective view of the financial situation of the firm, postulating such an accounting value implies that comparing financial statements without taking into account cultural differences might be questionnable. Consequently, Gray (1988) considers this a significant accounting value "because accountants are perceived to adopt independent attitudes and to exercise their individual professional judgements to a greater or lesser extent everywhere in the world"[367].

The next accounting value is called uniformity versus flexibility. "This value reflects 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."[370] According to Radebaugh, Gray and Black (2006) this is an important accounting value, as "attitudes about uniformity, consistency, or comparability are a fundamental feature of accounting principles worldwide"[370]. The authors state that the description of this accounting value offers some room for interpretation, e.g., "strict intercompany and intertemporal uniformity"[370], "consistency within companies over time and some concern for comparability between companies"[369] or only "flexibility of accounting practices to suit the circumstances of individual companies"[369]. Strict intercompany and intertemporal uniformity has been applied in countries as for example France and Spain to "facilitate national planning and the pursuit of macroeconomic goals"[370]. Particular characteristics of this approach in the before-mentioned countries are a "uniform accounting plan as well as the imposition of tax rules for measurement purposes"[370]. According to Radebaugh, Gray and Black (2006), the opposite tendency can be observed in countries as the United Kingdom and the United States, where "more concern with intertemporal consistency and some degree of intercompany comparability because of perceived need for flexibility"[369] has been demonstrated.

The third accounting value is called conservatism versus optimism. "This value reflects a preference for a cautious approach to measurement that enables one to cope with the uncertainty of future events as opposed to a more optimistic, laissez-faire, risk-taking approach"[369]. Radebaugh, Gray and Black (2006) and Sterling (1967) consider this accounting value as the most important one being "the most ancient and probably the most pervasive princinple of

accounting valuation"[371]. The accounting value of conservatism or prudence is considered a "fundamental attitude of accountants the world over"[372], with regards to for example the measurement of assets and the reporting of profits.[373] However, according to Radebaugh, Gray and Black (2006) accounting conversativsm strongly depends on the country and its culture. Japan along with some European countries, as for example, Germany, France and Switzerland is considered to be the most conservative countries in the world, whereas the United States, the United Kingdom and the Netherlands are following a less conservative, "risk-taking attitude"[372]. It has been found that such cultural differences are reinforced by the development of capital markets, tax laws and differing user interests. This will be outlined in the section on empirical studies on the Hofstede-Gray-Framework.

The fourth accounting value is called secrecy versus transparency. "This value reflects a preference for confidentiality and the disclosure of information about the business only to those who are most closely involved with its management and financing as opposed to a more transparent, open, and publicly accountable approach"[369]. Nevertheless, Gray (1988) acknowledges according to Arpan and Radebaugh (1985) that secrecy or confidentiality is considered to be a fundamental accounting attitude.[374] The major difference of this accounting value compared to the others above, is the significant influence top management has on the „quality and quantity of information disclosed to outsiders"[372]. On the other hand, secrecy is closely linked to conservatism from a theoretical construct perspective, as "both values imply a cautious approach to corporate financial reporting"[372], whereas "secrecy relates more to the disclosure dimension and conservatism relates to the measurement dimension"[372]. Countries with a strong tendency to secrecy are Japan, France, Germany and Switzerland, whereas in the United States and the United Kingdom a strong preference for transparency can be observed.[375] Radebaugh, Gray and Black (2006) state that "differential development of capital markets and the public ownership of shares, which often provide incentives for the voluntary disclosure of information"[376].

The following section describes Gray's (1988) linking the accounting values postulated by himself with the cultural dimensions found by Hofstede or the societal values according to Gray (1988).

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[371] Sterling (1967), p. 110.
[372] Radebaugh/Gray/Black (2006), p. 47.
[373] Cf. Gray (1998), p. 10.
[374] Cf. Gray (1998), p. 11.
[375] Cf. Radebaugh/Gray/Black (2006), p. 48.
[376] Radebaugh/Gray/Black (2006), p. 48.

4.4.3   Hypotheses

Gray (1988) formulated the following four hypotheses linking his accounting values with Hofstede's four cultural dimensions. In the publication from Radebaugh, Gray and Black (2006) a fifth cultural dimension has been added, being long-term versus short-term orientation.

For the first accounting value professionalism versus statutory control, Gray (1988) postulates the following hypothesis: "The higher a country ranks in terms of individualism and the lower it ranks in terms of uncertainty avoidance and power distance then the more likely it is to rank in terms of professionalism"[377]. In a later publication, Radebaugh, Gray and Black (2006) outlined that professionalism versus statutory control is "most closely related with the invididualism and uncertainty avoidance dimensions"[370]. Favouring professional judgment is the eminent sign of societies with a "loosely knit social framework"[370] which are characterized by a high degree of "independence, a belief in individual decisions and respect for individual endeavour"[370]. These societal traits are closely related to low levels of uncertainty avoidance with "practice being all-important, where there is a belief in fair play and as few rules as possible and where a variety of professional judgements tend to be more easily tolerated"[370]. The authors also reconfirm the link of professionalism to power distance while considering it as "less strong"[370]. "Professionalism is more likely to be accepted in a small power distance society where there is more concern for equal rights, where people at various power levels feel less threatened and more prepared to trust each other, and where there is a belief in the need to justify the imposition of laws and codes"[370]. Finally, the authors state a link to masculinity and short-term orientation "to the extent that this implies a concern with individual assertiveness and social status"[370].

For the second accounting value uniformity versus flexibility, Gray (1988) hypothesized that "the higher a country ranks in terms of uncertainty avoidance and power distance and the lower it ranks in terms of individualism then the more likely it is to rank highly in terms of uniformity"[378]. In a later publication, Radebaugh, Gray and Black (2006) outlined that uniformity versus flexibility is "most closely related with the uncertainty avoidance and individualism dimensions"[372]. Favouring uniformity is the eminent sign of societies with a strong preference for uncertainty avoidance, "which leads in turn to concern for law and order and formity, and search for ultimate, absolute truths and values"[372]. This way of thinking in one specific culture is furthermore closely related to a "preference for collectivism, as opposed to individualism"[372], a "tightly knit social framework"[372], "belief in organization and order"[372] as

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[377] Gray (1988), p. 9.
[378] Gray (1988), p. 10.

well as a "respect for group norms"[372]. The authors also reconfirm the link of uniformity to power distance while considering it as "less strong"[372]: "Uniformity is more easily facilitated in a large power distance society in that the imposition of laws and codes promoting uniformity are more likely to be accepted[372].

For the third accounting value conservatism versus optimism Gray hypothesizes, that "the higher a country ranks in terms of uncertainty avoidance and the lower it ranks in terms of individualism and masculinity then the more likely it is to rank highly in terms of conservatism"[378]. In a later publication, Radebaugh, Gray and Black (2006) outlined that conservatism versus optimism is "most closely related with the uncertainty avoidance and short-term versus long-term orientation dimensions"[372]. A high degree of uncertainty avoidance leads to "more conservative measurement of profits and assets"[372] based on the idea of need for security and a "cautious approach to cope with the uncertainty of future events"[372]. A low degree of uncertainty avoidance is also linked with "short-term orientation where quick results are expected and hence a more optimistic approach is adopted relative to conserving resources and investing for long-term results"[372]. Finally, the authors reconfirm the link to masculinity and individualism – even if "less strong"[372]. High degrees of masculinity and individualism linked with weak uncertainty avoidance are supposed to lead to an "emphasis on individual achievement and performance"[372] which leads to a "fostering of a less conservative approach to measurement"[372].

And, for the fourth and last accounting value, secrecy versus transparency Gray (1988) hypothesized that the "higher a country ranks in terms of uncertainty avoidance and power distance and lower it ranks in terms of individualism and masculinity then the more likely it is to rank highly in terms of secrecy"[378]. In a later publication, Radebaugh, Gray and Black (2006) confirmed the link of secrecy to uncertainty avoidance, as it "stems from the need to restrict the disclosure of information to outsiders to avoid conflict and competition and to preserve security"[375]. The authors also reconfirm the close link of secrecy to power distance as in societies with a high tendency to secrecy, a stronger need for "restriction of information to preserve power inequalities"[375] is observable. Further, a high degree of secrecy is linked to collectivism, "in that its concern is for the interests of those most closely involved with the firm rather than external parties"[375]. Finally, secrecy is linked to long-term orientation reflected "in the need to conserve resources within the firm and to ensure that funds are available for investment relative to the demands of shareholders and employees for higher payments"[375]. A less strong link exists with regards to masculinity: "Societies that place more emphasis on achievement and material success will have a greater tendency to publicize such achievements and success"[375].

According to Gray (1988) hypotheses "are not operationalized, and empirical tests have not been carried out. They are proposed as a first step in the development of a theory of cultural influence on the development of accounting systems"[293]. How the accounting values are linked in terms of a positive or negative correlation to the cultural dimensions / societal values is illustrated in the tables below. These links are represented in two tables: The first table has been built based on the first publication of the Gray-Hofstede Framework from 1988 and the second one has been included in the publication of Radebaugh, Gray and Black on international accounting patterns, culture and development from 2006.

In the first publication the link of accounting values with societal values has been formulated in the form of four hypotheses explaining one accounting value and its relation to the four cultural dimensions.

	Professionalism	Uniformity	Conservatism	Secrecy
Individualism	+	-	-	-
Large Power Distance	-	+	n/a	+
Strong Uncertainty Avoidance	-	+	+	+
Masculinity	n/a	n/a	-	-

Table 4.2.3.2-1: Linking of societal values / cultural dimensions and accounting values in the Hofstede-Gray-Framework as published in 1988 (own presentation based on Gray (1988))[379]

The second publication does not postulate four explicit hypotheses anymore, but rather explains the relation of accounting values with societal values by discussing the link between an accounting value with one cultural dimension in an isolated way. Further, it needs to be noted that short-term versus long-term orientation has not been included in the very first publication of the Hofstede-Gray-Framework, but has been added in the overview below, when the respective dimension had been shown as fith cultural dimension by Hofstede. It can be also observed that some links have been changed: Whereas in the 1988 publication, no link between professionalism and masculinity has been postulated, the 2006 publication shows a positive relationship. The 2006 publication does not indicate that this link has been postulated based on empirical research, but was rather described as part of a theoretical reasoning comparable to the 1988 publication.

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[379] Source: Gray (1988), p. 9-11.

	Profess-ionalism	Statutory Control	Unif-ormity	Flexi-bility	Conser-vatism	Opt-imism	Sec-recy	Trans-parency
Ind-ividualism	+	-	-	+	-	+	-	+
Collect-ivism	-	+	+	-	+	-	+	-
Large PD[380]	-	+	+	-	n/a	n/a	+	-
Small PD	+	-	-	+	n/a	n/a	-	+
Strong UA[381]	-	+	+	-	+	-	+	-
Weak UA	+	-	+	+	-	+	-	+
Masculinity	+	n/a	n/a	n/a	-	+	-	+
Femininity	-	n/a	n/a	n/a	+	-	+	-
STO[382]	+	-	n/a	n/a	-	+	-	+
LTO[383]	-	+	n/a	n/a	+	-	+	-

Table 4.2.3.2-2: Linking of societal values / cultural dimensions and accounting values in the Hofstede-Gray-Framework according to Radebaugh, Gray and Black (2006)[384]

Having linked the accounting values from Gray (1988) with the cultural dimensions / societal values from Hofstede (1980), it is possible to make projections on the development of specific characteristics of accounting systems and practices. To support respective analysis appropriately, a distinciton between authority and enforemcent of accounting systems and measurement and disclosure aspects of accounting systems is made.

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[380] PD = Power distance.
[381] UA = Uncertainty avoidance.
[382] STO = Short-term orientation.
[383] LTO = Long-term orientation.
[384] Source: Radebaugh/Gray/Black (2006), p. 49.
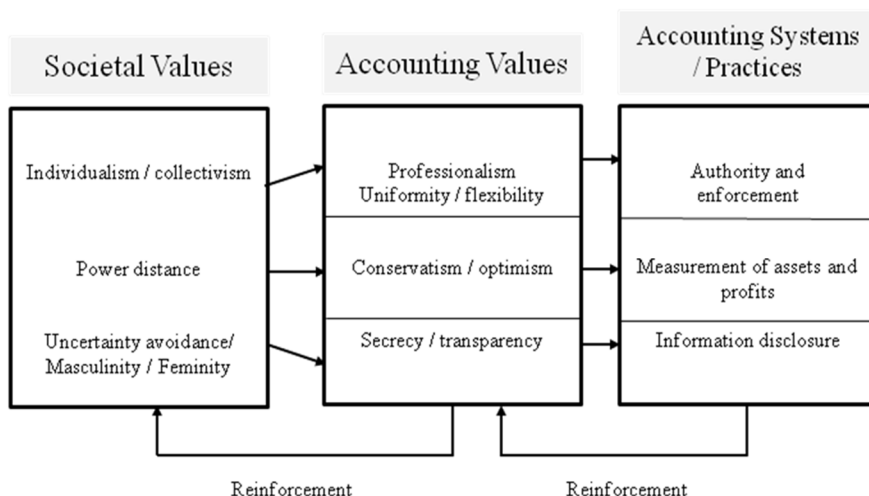
Figure 4.2.3.2-3: Linking of cultural dimensions and accounting values in the Hofstede-Gray Framework according to Radebaugh, Gray and Black (2006)[385]

According to Radebaugh, Gray and Black (2006), the most important accounting values for the professional or statutory authority and the enforcement of accounting systems and practices are professionalism and uniformity as they both deal with "regulation and the degree of enforcement or conformity"[375]. Given this reasoning, a classification of cultural areas can be conducted on a judgmental basis. These judgments are based on statistical analyses from Hofstede (1980) who evaluated correlations between societal values / cultural dimensions and afterwards found clusters of countries along the cultural dimensions. The authors conclude that "from this classification it seems clear that the Anglo and Nordic culture areas can be contrasted with Germanic and more developed Latin culture areas as well as the Japanese, Near Eastern, less developed Latin, less developed Asian, and African culture areas. The former colonial Asian countries are separately classified because they represent a mixture of influences"[375].

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[385] Source: Radebaugh /Gray/Black (2006), p. 50.

Statutory Control

Less developed
Latin

Asian-   Less   Near Eastern
Colonial developed
          Asian
                  Japan

          African

Flexibility   Uniformity

                More developed
                Latin

        Nordic   Germanic

Anglo

Professionalism
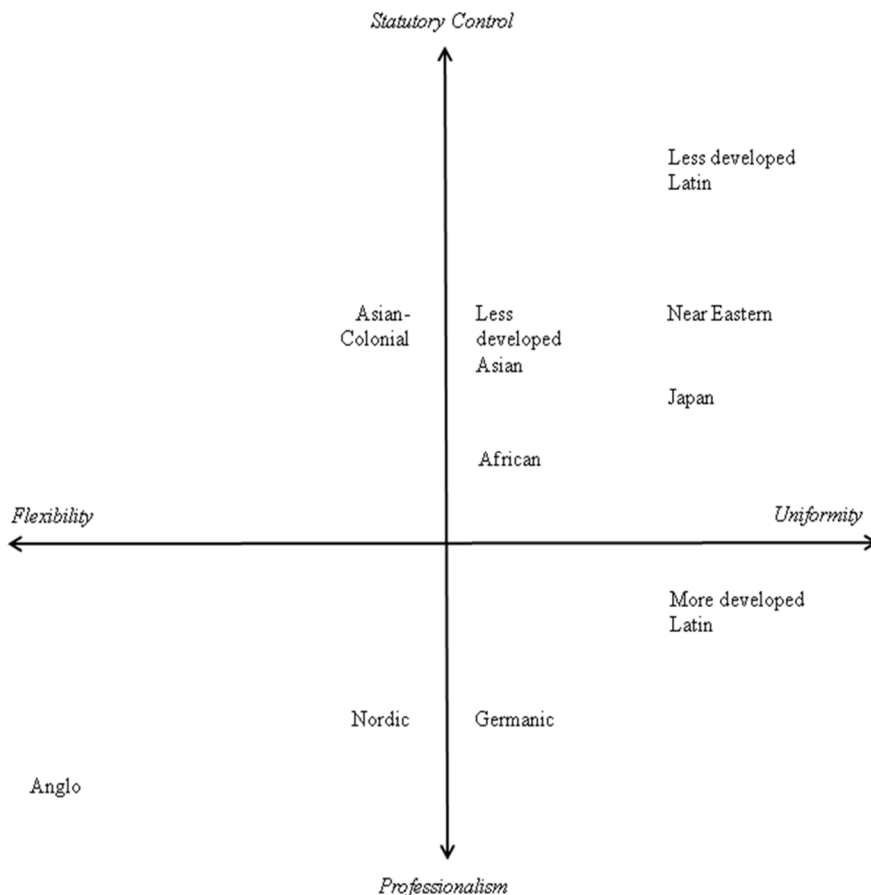
Figure 4.2.3.2-4: Accounting Systems – Authority and Enforcement according to Gray (1988)[386]

A classification of cultural areas can be conducted on a judgmental basis also for the measurement and disclosure practice. The accounting values which are most relevant for the measurement practice of assets and profits as well as the disclosure practice are conservatism and secrecy. Linking these with the societal values / cultural dimensions from Hofstede it can be argued that the "former Asian colonial is relating more closely with the Anglo and Nordic

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[386] Source: Gray (1988), p. 12.

groupings"[387]. "This can be contrasted with the Germanic and more developed Latin groupings, which are related to the Japanese, less developed Asian, African, less developed Latin, and Near Eastern-area groupings. In broad terms, countries can be grouped as either relatively optimistic and transparent or relatively conservative and secretive."[387]
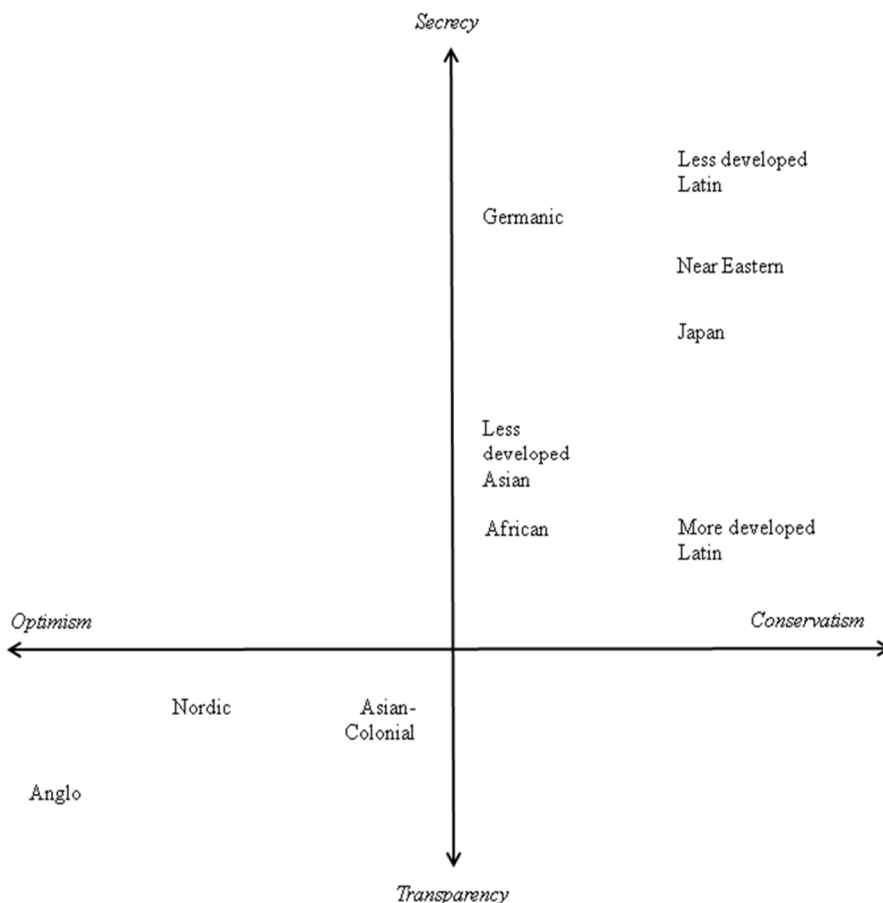
Figure 4.2.3.2-5: Accounting Systems – Measurement and Disclosure according to Gray (1988)[388]

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[387] Radebaugh/Gray/Black (2006), p. 51.
[388] Source: Gray (1988), p. 13.

4.4.4   **Conclusion**

Gray (1988) provides a concise and comprehensible framework aiming to establish a relationship between accounting values and the cultural dimensions of Hofstede. This theoretical concept marks the starting point for studies examining the cultural impact on accounting. Besides that, his contribution manifests itself in embedding this relationship into a broader explanatory model which helps to understand changes in accounting values in a broader context. It does not only show the relationship between societal values / cultural dimensions on accounting values, but also the influence of external or ecological influences on societal values. The interactive character of the model also highlights that societal values can influence the work and strategy of institutions, who could then together with accounting systems change accounting values or even the ecological environment.

Radebaugh, Gray and Black (2006) emphasize that besides culture, international pressures trigger accounting change and therefore the development of accounting systems and practice. In the 2006 publication, the authors replace in principle the external influences factor from the interactive model published by Gray in 1988, rename it to international forces for change and strengthen its importance in the interactive model. Whereas in the interactive model from 1988, external influences, e.g., international trade and investment, conquest and forces of nature, were rather a modifying factor for ecological influences, they are now fully integrated in the model. They now influence both environmental factors and institutional consequences. International forces for change are "growing international economic / political interdependence, new trends in foreign direct investment (FDI), changes in multinational corporate strategy, the impact of new technology, the rapid growth of international financial markets, the expansion in business services, and the activities of international regulatory organizations"[389]. The new interactive model is outlined below.

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[389] Radebaugh/Gray/Black (2006), p. 52.

International Forces for Change

- Economic / political interdependence
- Foreign direct investment
- Multinational corporate strategy
- New technology
- International financial markets
- Business and financial services
- International regulatory organizations

Physical Environment Factors

Societal Values

Institutional Consequences

Accounting Values

Accounting Systems

Figure 4.2.3.2-6: Change and development of accounting values and systems internationally according to Radebough, Gray and Black (2006)[390]

One example for international forces for change is the European Union (EU).[391] With the overarching aim to promote „free movement of goods, people, and capital between countries"[389,392] a "major program of harmonization"[392] has been put on the agenda: Harmonization measures encompass "company law, accounting, taxation, capital market, and monetary systems in the EU countries"[392]. Further influential organizations are the United Nations (UN) and the Organization for Economic Cooperation and Development (OECD) as well as plenty of associated organizations being the World Bank, the International Monetary Fund (IMF) and others.[391] The International Accounting Standards Board (IASB) and the International Federation of Accountants (IFAC) have been participated in the respective projects to "provide a professional counterpoint to the activities of intergovernmental organizations such as the UN, OECD and the EU"[393].

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[390] Source: Radebaugh/Gray/Black (2006), p. 53.
[391] Cf. Radebaugh/Gray/Black (2006), p. 52.
[392] Radebaugh/Gray/Black (2006), p. 53.
[393] Radebaugh/Gray/Black (2006), p. 54.

Besides this significant merit to cultural accounting research, there are also areas for criticism. As Gray (1988) did not empirically test his hypotheses, more research was needed to examine "the extent to which culture influences the development of international accounting practices and whether the hypothesized country groupings can be empirically supported"[387]. Obviously, this led to the fact, that no scores for national differences of accounting values were available. Consequently, no numeric representation of the dependent variable existed and the classification of countries along the dependent variables of authority and enforcement as well as measurement and disclosure remained purely judgemental. Nevertheless it is widely accepted that although Gray's (1998) hypotheses "are not operationalized, and empirical tests have not been carried out. They are proposed as a first step in the development of a theory of cultural influence on the development of accounting systems."[293]

It also needs to be stated that there are differences between Gray's publication from 1988 and the later publication from 2006. Whereas, in the 1988 paper four explicit hypotheses had been formulated to link different cultural dimensions with a specific accounting value, the publication from 2006, is different in multiple ways (please refer to table: Linking of societal values / cultural dimensions and accounting values in the Hofstede-Gray-Framework): First, it includes a fifth cultural dimension called long-term versus short-term orientation, which has been added by Hofstede at a later stage to its overall culture model. Second, the explicit formulation of hypotheses has been dropped in the later publication without any reasoning for this significant change. Third and this is a consequence of the second change, the explicit linkage of a specific accounting value to a set of cultural dimensions has been alleviated allowing research on not only four, but rather 20 hypotheses (five cultural dimensions multiplied by four accounting values).

Finally, one further significant item to mention is the sixth cultural dimension recently proposed by Hofstede, which is called indulgence versus restraint. This cultural dimension has not been included in any of the publications on the Hofstede-Gray-Framework so far. This fact does not only provide room for further empirical research on the extended Hofstede-Gray-Framework, but also an opportunity to undertake qualitative reasoning on possible hypotheses and individual associations to particular accounting values to be examined empirically at a later stage by other researchers. One could hypothesize that societies scoring high on indulgence would favour professionalism over statutory control, flexibility over uniformity, optimism over conservatism and transparency over secrecy. This would imply a similar pattern in terms of accounting values as societies scoring high in individualism versus collectivism. The next section describes the research findings on the Hofstede-Gray-Framework up to the submission day of this doctoral thesis.

4.5 Research on the Hofstede-Gray-Framework

4.5.1 Introduction

Following the publication of the Hofstede-Gray-Framework, several researchers have worked on finding empirical evidence for the framework or provided proposals for refinement or extension of the framework. This section provides an overview on empirical research on the Hofstede-Gray-Framework by differentiating on comprehensive testing of the framework and the testing of particular hypotheses. Further, sections on case studies and applications as well as theoretical reviews of the framework are presented. In addition this section indicates which studies have been conducted before and after the implementation of IFRS.

4.5.2 Empirical research

4.5.2.1 Comprehensive testing of the Hofstede-Gray-Framework

Eddie (1990) was the first researcher who empirically tested the Hofstede-Gray-Framework.[394] He conducted a study in 13 Asian-Pacific countries to test all four hypotheses. The author used Hofstede's cultural dimension scores as independent variables and accounting values as independent variables and calculated correlations.[395] All hypotheses were confirmed. The study was heavily criticized for the selection of dependent variables: Eddie (1990) had used an eclectic approach to construct accounting value indices based on a literature review.[394] Doupnik and Tsakumis (2004) consider the measurement of the dependent variables as a main issue, as both the selection of items and the assignment of scores has been determined by the author with no independent valuation.[394] The authors recommend viewing Eddie's result "with caution"[396].

In 1995, Salter and Niswander conducted the potentially most comprehensive study on testing the Hofstede-Gray-Framework with the objective to achieve the following:

- "Operationalize the accounting values described in Gray, thereby creating a series of dependent variables;
- test the hypotheses developed within the article linking accounting values as defined by Gray and cultural constructs (societal values) as defined by Hofstede determining if a relationship in fact exists between these items;

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[394] Cf. Doupnik/Tsakumis (2004), p. 14.
[395] Cf. Doupnik/Tsakumis (2004), p. 15.
[396] Doupnik/Tsakumis (2004), p. 14.

- suggest additional variables that may not be culture based but may reinforce or subsume cultural effects."[397]

The authors started with operationalizing Gray's accounting values representing the dependent variables in the research setup. The accounting value professionalism versus statutory control was measured by two subconstructs being auditor judgment (audit variable) measured on a continuum from conformity with legal requirements to true and fair view and professional structure (exam variable) measured by the longevity of the profession, professional control over entry into the profession and professional control over ethical and other audit behavior standards.[398] A sum of the audit and exam variables has also been tested, called professionalism (professionalism variable).[398] The accounting value uniformity versus flexibility was tested with a legal variable measuring if the country has a code or common legal system and with a uniformity variable which counted "the number of financial reporting practices for which a country utilized a single method of reporting less than 25% or more than 75% of the time"[399].[398,400] The accounting value conservatism versus optimism was measured by two variables conservatism and pessimism, which were tested with a set of questions measuring the country's financial reporting practices to reduce assets or income wherever possible (conservatism variable) and the complementary set of questions measuring the country's optimistic financial reporting practices to increase assets or income (pessimism variable).[400] The fourth accounting value secrecy versus transparency has been operationalized through an index showing how informative disclosure across industries and countries actually is and has been applied by previous researchers.[400] The second variable was as well a disclosure index based on the data set from Doupnik and Salter (1993).[400] Independent variables were the cultural dimensions scores as published by Hofstede (1980).[401] In addition to Gray's (1988) hypotheses, the authors proposed an extension by postulating the following: First, "the more developed a country's capital markets, the higher the degree of professionalism, effective uniformity, and the lower the degree of legal uniformity, pessimism and secrecy"[402] and second "the higher a country's marginal tax rate, the lower the degree of professionalism and the higher the degree of legal uniformity, conservatism and secrecy"[402].

The two authors gathered data from 29 countries and tested the relationship between independent and dependent variables with an OLS regression analysis.[401] In a first step

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[397] Salter/Niswander (1995), p. 380.
[398] Cf. Salter/Niswander (1995), p. 384.
[399] Salter/Niswander (1995), p. 386.
[400] Cf. Salter/Niswander (1995), p. 386.
[401] Cf. Salter/Niswander (1995), p. 387.
[402] Salter/Niswander (1995), p. 387.

univariate regression analyses were calculated between each of Hofstede's cultural dimensions and all dependent variables.[401] Due to the strong negative correlation between power distance and individualism a multicollinearity test has been conducted, with no evidence being found.[401] For the extension of Gray's model, the same statistical analyses have been conducted.[401] The results are as follows:

- Professionalism, e.g., the respective dependent variables, is significantly negatively correlated with uncertainty avoidance, which is in line with Gray's (1988) hypothesis. Further significant correlations to other cultural dimensions could not be found, although a positive link to individualism and a negative one to power distance had been hypothesized.[403]

- Uniformity, e.g., the respective dependent variable legal is significantly positively and negatively related to uncertainty avoidance and masculinity respectively, whereas the first finding is in line with Gray's hypotheses.[403] For the uniformity variable either non-significant relations or results contradictory to Gray's hypotheses were found.[403] Based on the work of other researchers, the authors think that for law mandated principles Gray's hypotheses hold, whereas for principles with a market in information the hypotheses may not hold.[403] One reason for this might be that markets with low uncertainty avoidance, e.g., the United States, want to be sure and certain to provide an optimal disclosure to the market.[403] Previous studies also suggest that in countries with high uncertainty avoidance are rather characterized by legal systems with a small number of rules exist which are not changed very often as the legislative process is rather slow.[404] For areas with no rules, a lot of discretion is then with the accountant in charge.[404]

- Conservatism, e.g., the two dependent variables conservatism and pessimism have been tested as well against the cultural dimensions. For the conservatism variable no significant regression results could be found although hypothesized differently by Gray (1988).[404] For the pessimism variable the hypothesized positive correlation to uncertainty avoidance could be shown.[404] Therefore, the hypothesis as postulated by Gray (1988) could only be proven partially by the underlying data.

- Secrecy, e.g., the two dependent disclosure variables, has also been tested for a relationship to the cultural dimensions. The significant positive relationship to uncertainty avoidance could be shown by both two dependent variables and the hypothesized negative correlation to the individualism dimension was evident for one

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[403] Cf. Salter/Niswander (1995), p. 389.
[404] Cf. Salter/Niswander (1995), p. 390.

dependent variable.[404] Overall, and as outlined already above, the hypothesis as postulated by Gray (1988) could only be partially proven by the underlying data.

Dimension / Variable	Individ-ualism	Uncertainty Avoidance	Power Distance	Masculinity
Professionalism (hypothesized correlation with cultural dimensions according to Gray (1988))	+	-	-	None
Audit variable	Not significant	-.0048	Not significant	Not significant
Exam variable	Not significant	-.0023	Not significant	Not significant
Professionalism variable	Not significant	-.0019	Not significant	Not significant
Uniformity (hypothesized correlation with cultural dimensions according to Gray (1988))	-	+	+	None
Legal variable	Not significant	.0001	Not significant	-.0013
Uniformity variable	Not significant	-0.147	Not significant	.0030
Conservatism (hypothesized correlation with cultural dimensions according to Gray (1988))	-	+	Not significant	-
Conservatism variable	Not significant	Not significant	Not significant	Not significant
Pessimism variable	Not significant	.0064	Not significant	-.0080
Secrecy (hypothesized correlation with cultural dimensions according to Gray (1988))	-	+	+	-
Dislosure index 1	-.00176	.0001	Not significant	Not significant
Disclosure index 2	Not significant	.0001	Not significant	Not significant

Table 4.5.2.1-1: Gray's (1988) hypothesized relationships between cultural dimensions and accounting values: Operationalized hypotheses and results (own presentation based on Salter and Niswander (1995))[405]

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[405] Source: Based on Salter/Niswander (1995), p. 388.

Salter and Niswander conclude that there is a significant relationship between accounting values and cultural dimensions. [406] The uncertainty avoidance dimension seems to be the cultural dimension most strongly linked with accounting values.[406] If countries are grouped in quadrants, the uncertainty avoidance dimension is even able to predict a country's characteristics with regards to the accounting values professionalism, uniformity, conservatism and secrecy in almost 80% of the cases.[407] The authors consider "the desire for certainty or, conversely, the willingness to manipulate an uncertain future [...] the strongest cultural construct in determining the overall structure of the accounting profession, the nature of regulation, the nature of measurement and the volume of information"[408]. Uncertainty avoidance is enforced by the degree of the development of the financial markets, whereas tax while being uncorrelated to cultural dimensions, impacts market development.[407] Market Capitalism also significantly influences professionalism.[407] The authors take Germany as an example, which at that time began developing an open stock market. The country might face a "constant battle [...] between economics and culture"[408]: The relatively high degree of uncertainty avoidance in Germany together with the high taxes, will direct the profession and the accounting practice in companies in a rather conservative direction.[407]

Overall, the authors could conclude that the Hofstede-Gray-Framework "provided a workable theory to explain cross-national differences in accounting structure and practice which is particularly strong in explaining different financial reporting practices"[404] however, is rather "weak in explaining extant professional and regulatory structures from a cultural base"[397]. Eventually, Salter and Niswander were only able to confirm six out of 13 relationships Gray (1988) hypothesized. The strength of Salter and Niswander's work does not only lay in its comprehensiveness, but also in the introduction of some control variables, "such as the development of financial markets and levels of taxation"[387]. The authors raise follow-up questions for further discussion and research including the inclusion of other factors in the model, such as "level of development, gross national product, economic and political alliances"[409] or how countries or multinational firms could maximize or change their cultural advantages. In terms of enhancements to the approach, the authors say that data improvement for the dependent variables would increase the explanatory value of the model.[410] In the context of this study, it needs to be noted that the variables used for the measurement of conservatism were gathered through questionnaires and not from disclosed, publically available data.

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[406] Cf. Salter/Niswander (1995), p. 391.
[407] Cf. Salter/Niswander (1995), p. 392.
[408] Salter/Niswander (1995), p. 392.
[409] Salter/Niswander (1995), p. 394.
[410] Cf. Salter/Niswander (1995), p. 395.

MacArthur (1996) examined the influence of culture in the lobbying of the IASC in the case of E32, comparability of financial statements to test the Hofstede-Gray-Framework.[411] Cultural and accounting values have been tested separately.[411] Content analyses were conducted to "identify statements that indicate the cultural values identified by Hofstede (1980, 1983) and the related accounting subcultural values suggested by Gray (1988)"[412].[411] The hypotheses on the impact of cultural values in the comment letters were based on the power distance, uncertainty avoidance, masculinity and individualism scores of the respective countries. [413] With regards to the accounting values, the author hypothesizes that comments from Anglo and Nordic companies mention professionalism, flexibility, optimism and transparency, whereas comments from Germanic and more developed Latin companies prefer the opposite.[414] The sample size was 47 companies in 9 countries.[415] For the cultural dimensions, support was found for the power distance and individualism but only partly for masculinity and uncertainty avoidance.[411] Impact on accounting values could be observed for Anglo and Nordic companies, whereas support for Germanic and more developed Latin countries was weaker.[411] It is questionable if the limited number of companies and countries examined in the study and the research method allow a valid testing of the Hofstede-Gray-Framework.

Suderwan and Fogarty (1996) test Gray's four hypotheses in Indonesia over a 12 year period from 1981 to 1992 including the fifth cultural dimension of time orientation. Indonesia underwent a period of significant changes during that time and was therefore taken as an example to study whether "the development of accounting standards and disclosure practices are patterned by change in cultural norms"[416]. Therefore the authors hypothesized that changes in power distance, uncertainty avoidance, individualism, masculinity and time orientation are related to changes in accounting values in the case of the Indonesian sample. [417] The independent variables, e.g., the cultural dimensions of Hofstede (1980) have been operationalized with proxy variables.[417] Power distance has been operationalized through indicators driving wealth creation, as for example educational characteristics or technological development.[417] Uncertainty avoidance has been operationalized by the amount and coverage of codified laws (e.g., number of economic deregulation policy packages, number of economic sectors being deregulated[418]).[417] Individualism has been measured through the urbanization rate and income per capita.[417] Time horizon has been operationalized through the percentage of

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[411] Cf. MacArthur (1996), p. 213.
[412] MacArthur (1996), p. 217.
[413] Cf. MacArthur (1996), p. 218.
[414] Cf. MacArthur (1996), p. 218.
[415] Cf. MacArthur (1996), p. 217.
[416] Sudarwan/Fogarty (1996), p. 463.
[417] Cf. Sudarwan/Fogarty (1996), p. 465.
[418] Cf. Sudarwan/Fogarty (1996), p. 467.

gross fixed investment in the gross domestic product to reflect a conservative use of resources.[419] The accounting values have been operationalized as follows: Professionalism (e.g., deviation from national accounting standards found in financial reports, number of accounting or auditing standards)[420], uniformity (e.g., number of accounting changes, comparability of accounting policies across firms), conservatism (e.g., accounting policy on asset and income measurement, accounting methods permitted for accelerating expenses and decelerating income and making assets undervalued and liabilities overvalued[421]) secrecy (number of balance sheet and income statement items required in the national accounting standards).[419] The sample size was 108 firms.[419] LISREL was used to analyze the data. Sudarwan and Fogarty found a link between three cultural dimensions (power distance, uncertainty avoidance and individualism) and different accounting values.[422] With regards to power distance, a positive relationship to conservatism and uniformity could be shown; uncertainty avoidance is positively linked to professionalism, conservatism and uniformity and negatively linked to secrecy; finally, it could be shown that individualism positively relates to professionalism, conservatism and a negative one to secrecy.[423] The link between individualism is significantly positive contrary to the postulation in the Gray-Hofstede-Framework. No significant relationships could be found for masculinity. [424] The huge merit of the work of the authors is the ccomprehensive operationalization of the dependent variables. In particular the conservative accounting value measures have been applied in later conservative accounting research as well. However, the operationalization of the independent variables seems to miss some face validity or "intuitive appeal"[425] and it can be questioned why the scores from Hofstede (1980) have not applied or if not available at least newly collected. Doupnik and Tsakumis (2004) criticize that no statistical analyses has been provided to assess "how well a set of indicators load onto a latent theoretical construct"[426] with is true for both the dependent and independent variables.

In the post-IFRS implementation era, further studies have been conducted being for example the one from Noravesh, Dilami and Bazaz (2007) trying to find evidence for the statement if the Hofstede-Gray-Framework also applies to Iran during the period of 1993 to 2002.[427] Their work is based on a case study conducted by Pourjalali and Meek (1995), which is described as well in this thesis. Instead of directly using the scores of Hofstede's cultural

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[419] Cf. Sudarwan/Fogarty (1996), p. 470.
[420] Cf. Sudarwan/Fogarty (1996), p. 468.
[421] Cf. Sudarwan/Fogarty (1996), p. 469.
[422] Cf. Sudarwan/Fogarty (1996), p. 463.
[423] Cf. Sudarwan/Fogarty (1996), p. 473.
[424] Cf. Sudarwan/Fogarty (1996), p. 474.
[425] Doupnik/Tsakumis (2004), p. 20 (example: Power distance has been operationalized by variables as for example telephone lines per capita or ratio of non-agricultural sector to GDP).
[426] Doupnik/Tsakumis (2004), p. 22.
[427] Cf. Noravesh/Dilami/Bazaz (2007), p. 257.

dimensions, the variables are considered as "not readily measurable"[428], the authors create proxy variables based on previous research. Dependent variables are the accounting values as defined by Gray (1980).[427] Hypotheses are in line with Gray (1988) implying that power distance in Iran has a negative relationship with professionalism and positive ones with secrecy and uniformity, uncertainty avoidance in Iran has a negative relationship with professionalism and negative ones with conservatism, secrecy and uniformity, individualism has a positive relationship with professionalism and negative ones with conservatism, secrecy and uniformity and finally masculinity in Iran has negative relationships with secrecy and conservatism.[429] The operationalization rationale of the independent variables has been derived from Suderwan and Fogarty (1996).[430] Proxy variables for power distance were ratio of agricultural sector to Gross Domestic Product, ratio of telephone lines to total of population, urbanization rate and literacy rate.[430] Proxy variables for the uncertainty avoidance dimension were volume of transaction on Teheran Stock Exchange, fluctuations of foreign currency rate, changing rate in Gross Domestic Product; for the individualism versus collectivism dimension rate of divorce, ratio of population who never got married to total of adult people, average number of children per family and Gross National Product per capita.[430] Finally, proxy variables for the masculinity dimension were literacy rate, ratio of social budget to total budget, ratio of national defensive budget to total budget, ratio of budget for protecting living environment to total budget; and for the long- versus short-term orientation dimension proxy variables were rate of gross fixed investment to Gross Domestic Product and ratio of education budget to total budget.[431] The dependent variables were defined as follows: The accounting value of professionalism has been operationalized by types of auditors of firm's financial reports (government versus professional), types of auditors' opinion on firms' financial reports and the degree of government's intervention in setting accounting standards and legislation (binary yes / no variable).[432] The accounting value of conservatism has been operationalized through the accounting policies on asset (the lower cost or market values, historical cost, current cost, market value) and income measurement (timing when costs are charged to current expenses and receipts into revenues).[432] The accounting values secrecy and uniformity have been operationalized with the percentage of disclosure in different years and the number of accounting changes respectively.[433] The data was analyzed with Linear Structural Relationship (LISREL) aiming to analyze covariance between the variables.[433] It has been found that power distance is positively correlated to professionalism (in contradiction to the Hofstede-Gray-

[428] Noravesh/Dilami/Bazaz (2007), p. 257.
[429] Cf. Noravesh/Dilami/Bazaz (2007), p. 258.
[430] Cf. Noravesh/Dilami/Bazaz (2007), p. 259.
[431] Cf. Noravesh/Dilami/Bazaz (2007), p. 260.
[432] Cf. Noravesh/Dilami/Bazaz (2007), p. 261.
[433] Cf. Noravesh/Dilami/Bazaz (2007), p. 262.

Framework), secrecy and uniformity (in line with the framework).[434] For uncertainty avoidance the predicted negative relationship with professionalism has been confirmed, the positive ones with conservatism, secrecy and uniformity could not be confirmed.[435] In the case of individualism versus collectivism, the hypothesized positive correlation to professionalism could not be confirmed; however the negative correlation to conservatism, secrecy and uniformity has been confirmed.[436] Finally, the predicted negative relationships between masculinity and the accounting values of conservatism and secrecy could be shown.[437] Also a positive association with time orientation and all accounting values has been found.[437] However, this result has not been further commented by the authors although Gray et al. (2006) had provided hypotheses for the relationship between time orientation and the accounting values with positive relationships having been predicted only for conservatism and secrecy, but not for professionalism and uniformity. The authors think that one reason for the support of only 8 from 13 hypotheses is due to the immaturity of the accounting system in Iran. The researchers suggest using other models than the Hofstede-Gray-Framework for future research which allow studying the influence of environmental factors on accounting practices.[438] Further, the authors propose to replicate the study in other countries to search for answers to questions as if the cultural dimensions from Hofstede are introduced common to all nations and if the accounting values are useful to analyze the accounting development in different countries.[438] At least, the first part of the suggestions for further research could be challenged, as we know that the five cultural dimensions from Hofstede have been introduced for a significant number of countries and that this study did not use the available scores for Iran without any reasoning.

4.5.2.2 Conclusion

The years after the publication of the Hofstede-Gray-Framework were characterized by finding empirical evidence for the framework as such. Consequently, the majority of the studies was conducted in the 1990ies. The review of the studies published so far, clearly shows that the findings around comprehensive testing of the Hofstede-Gray-Framework are mixed. Only one study could confirm all hypotheses proposed by Gray (1988), whereas the others could only partially confirm the hypotheses. It also needs to be noted that the study from Eddie (1996) has been criticized for the quality of its dependent variables.

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[434] Cf. Noravesh/Dilami/Bazaz (2007), p. 263.
[435] Cf. Noravesh/Dilami/Bazaz (2007), p. 265.
[436] Cf. Noravesh/Dilami/Bazaz (2007), p. 266.
[437] Cf. Noravesh/Dilami/Bazaz (2007), p. 268.
[438] Cf. Noravesh/Dilami/Bazaz (2007), p. 270.

Significant amount of work has been invested in the operationalization of independent and dependent variables. Two studies did not utilize the cultural dimension scores from Hofstede (1980), but proposed new proxy independent variables. These efforts have been rather criticized by the scientific community despite the well-known drawbacks of the Hofstede model. Except for Eddie (1990), the operationalization of the dependent variables had been sensible and supported the search for empirical evidence of the Hofstede-Gray-Framework where the main work was required on the dependent variable, the accounting values, side.

From a methodological viewpoint, a variety of statistical analyses has been applied ranging from regression to linear structural relationship analysis. Control variables were only included by Salter and Niswander (1995). Salter and Niswander's (1995) work sticks out in terms of country coverage as well. Whereas two studies only cover one country, MacArthur (1999) covers only nine and Eddie (1990) is strongly focused on the Asia-Pacific region. Salter and Niswander (1995) include 29 countries in their study allowing a meaningful assessment of a framework on cultural impact on accounting. However, the study from Salter and Niswander (1995) becomes outdated as well: With regards to accounting conservatism, it does not reflect the most recent research anymore.

Only one study on comprehensive testing of the Hofstede-Gray-Framework has been conducted after the adoption of IFRS in the European Union in 2004 and following the adoption of IFRS in 105 jurisdictions in the world as per April 2014. This study has been conducted in Iran where IFRS has not been adopted. However, given international accounting standards harmonization efforts are still ongoing, cross-national information on accounting values, such as uniformity, professionalism, conservatism and secrecy would still be valuable. In addition, the examination of cross-cultural differences in a post-IFRS implementation setting represents a worthwhile exercise to find out if despite harmonized accounting standards culture still impacts accounting values and practices, e.g., measurement and disclosure. The table below provides an overview of the studies.

Author (Year)	Title	Hypotheses	Findings	Independent Variables	Dependent Variables	Control Variables	Statistical Method	Number of countries
Eddie (1990)	Asia Pacific cultural values and accounting systems	All hypotheses according to Gray (1988)	**All hypotheses were confirmed**	Four cultural dimensions from Hofstede	Accounting value indices based on literature review	None	Correlation	13 (Asia-Pacific)
Salter/Niswander (1995)	Cultural influence on the development of accounting systems internationally: A test of Gray's (1988) theory	All hypotheses according to Gray (1988)	**6 out of 13 hypotheses were confirmed**	Four cultural dimensions from Hofstede, market capitalization, tax rate	Operationalized accounting values	None	Simple regression analysis, robustness test	29
MacArthur (1996)	An investigation into the influence of cultural factors in the international lobbying of the International Accounting Standards Committee: The case of E32, comparability of financial statements	Comment letter statements to be consistent with scores of power distance, uncertainty avoidance, masculinity and individualism. Comments from Anglo and Nordic companies mention professionalism, flexibility, optimism and transparency; whereas comments from Germanic and more developed Latin companies prefer the opposite	**The hypotheses were partially confirmed**	Four cultural dimensions from Hofstede	Comment letter statements related to cultural and accounting values	None	Content analysis	9

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Author (Year)	Title	Hypotheses	Findings	Independent Variables	Dependent Variables	Control Variables	Statistical Method	Number of countries
Sudarwan/Fogarty (1996)	Culture and accounting in Indonesia: An empirical examination	All hypotheses according to Gray (1988)	4 out of 13 hypotheses were confirmed	Proxy variables for four cultural dimensions from Hofstede	Professionalism (deviation from national accounting standards found in financial reports), uniformity (number of accounting changes), conservatism (accounting policy on asset and income measurement,), secrecy (number of income statement and balance sheet items)	None	Structural Equation Modeling	1
Noravesh/Dilami/ Bazaz (2007)	The impact of culture on accounting does Gray's model apply to Iran?	Power distance has a negative link to professionalism and positive to secrecy, uniformity; uncertainty avoidance has a negative link to professionalism and negative to conservatism, secrecy, uniformity; individualism has a positive link to professionalism and negative to conservatism, secrecy, uniformity and finally masculinity has negative link to secrecy and conservatism	8 out of 13 hypotheses were confirmed	Proxy variables according to Sudarwan and Fogarty (1996)	Operationalized accounting values: Professionalism (types of auditors of firm's financial reports), conservatism (accounting policies on asset and income measurement), secrecy and uniformity (percentage of disclosure in different years and the number of accounting changes respectively)	None	Linear Structural Relationship	1 (Iran)

Table 4.5.2.2-1: Comprehensive testing of the Hofstede-Gray-Framework: Overview of studies (own presentation)

4.5.2.3   Testing particular hypotheses of the Hofstede-Gray-Framework

Gray and Vint (1995) conducted a study on examining the relationship between culture and accounting disclosure in an international context. A survey, based on a disclosure database developed by Gray, has been conducted to learn about the disclosure practices of the firms.[426] Independent variables were the cultural dimension scores from Hofstede.[426] Dependent variable the mean disclosure scores by country.[426] The sample size encompassed 27 countries.[426] A linear regression analysis has been calculated.[426] The authors found that individualism and masculinity are positively related with financial disclosure, whereas uncertainty avoidance and power distance are negatively related.[426] Uncertainty avoidance and individualism have the strongest explanatory power.[426]

Zazerski (1996) conducted a study to examine the impact of culture on financial disclosure in seven industrialized countries. She found that besides cultural values (excluding power distance) together with market forces have a significant impact on financial disclosures.[589] She included the variables of firm size, debt ratio and percentage of foreign sales (multi-nationality) into her analysis and showed that for firms with a high percentage of foreign sales the impact of culture on financial disclosure is rather weak.[589] Zarzeski (1996) tested if cultural and market forces correlate with corporate disclosure and if there is a difference between local and international enterprises.[439] The dependent variable is the level of disclosure measured based on a collection of items from previous studies.[440] The independent variables are represented through three market forces (foreign sales, firm size, and debt ratio) and the four cultural dimensions from Hofstede (1988).[441] Zarzeski hypothesizes that higher levels of foreign sales, lower debt ratios, larger firm size, a low degree of uncertainty avoidance, high individualism, a high degree of masculinity and low power distance in a country lead to higher levels of disclosure. [442,443] The author finally hypothesizes that less internationally oriented firms show a significant relationship between the accounting value secrecy and level of disclosure.[444] The study has been conducted for 256 companies in France, Germany, Hong Kong, Japan, Norway, the United Kingdom and the United States.[439] A multiple regression analysis has been calculated.[445] The author could show that the degree of secrecy of a society is positively linked disclosure and the same is true market forces measured as relative foreign sales, firm size whereas the level of debt ratio is negatively linked to disclosure.[439] Multinational enterprises disclose more than local enterprises whose practice is strongly linked to its cultural

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[439] Zarzeski (1996), p. 18.
[440] Zarzeski (1996), p. 23.
[441] Zarzeski (1996), p. 24.
[442] Zarzeski (1996), p. 26.
[443] Zarzeski (1996), p. 27.
[444] Zarzeski (1996), p. 28.
[445] Zarzeski (1996), p. 32.

background.[439] Zazerski (1996) reports that uncertainty avoidance is deemed to be the most important cultural dimension for explaining differences in disclosure practice.

Wingate (1997) conducted a study on the secrecy hypothesis involving 39 countries. Comparable to other researchers the author uses CIFAR's International Financial Reporting Index as dependent variable and Hofstede's cultural dimension scores as independent variable.[446] She could show that all cultural dimensions except for power distance have a significant impact on financial disclosure.[446] Following further analysis, the author recommends using culture areas instead of countries for future research, as they explain a greater variance in the disclosure index.[447]

Williams and Towers (1998) investigated differential reporting practices in Singapore and Australia from a small business managers' perspective. The authors examined the "perceived level of cost and benefits associated with small business financial statements accounting disclosures" [448] and "the degree of support for differential accounting disclosure requirements"[448] and if there is a difference between Singapore and Australian managers. The purpose of this study directly links to the accounting value of secrecy, which is related to uncertainty avoidance, power distance and individualism according to the Hofstede-Gray-Framework; in addition, the long-term orientation dimension impact will be tested. [449] Independent variables were the five cultural dimensions from Hofstede.[450] Dependent variables were collected through a questionnaire on preferred level of disclosure and the perceived costs versus benefits.[451] A univariate regression analysis has been conducted. The authors could show that uncertainty avoidance and to some extent power distance have significant impact on the managers' perception.[452]

Williams (1999) tested the secrecy hypothesis by examining voluntary environmental and social accounting disclosure practice in the Asia-Pacific region. Seven countries were included in the study and a multiple regression analysis has been calculated.[453] With regards to culture, the author hypothesizes a negative relation between the degree of uncertainty avoidance and masculinity and the amount of voluntary disclosure.[454,455] Williams (1999) further hypothesized

[446] Cf. Doupnik/Tsakumis (2004), p. 25.
[447] Cf. Doupnik/Tsakumis (2004), p. 26.
[448] Williams/Tower (1998), p. 263.
[449] Cf. Williams/Tower (1998), p. 264.
[450] Cf. Williams/Tower (1998), p. 266.
[451] Cf. Williams/Tower (1998), p. 265.
[452] Cf. Williams/Tower (1998), p. 263.
[453] Cf. Williams (1999), p. 209.
[454] Cf. Williams (1999), p. 212.
[455] Cf. Williams (1999), p. 213.

that the association between the volume of disclosure and the level of political and civil repression is negative;[455] the relation with the Roman-Germanic legal system,[456] the level of economic development,[457] the size and turnover of the equity market,[458] is hypothesized to be positive. The dependent variable is represented by the amount of voluntary disclosure based on a checklist.[459] The independent variables are represented by the uncertainty avoidance and masculinity scores of Hofstede (1980), the legal system and economic development of a country as per classification in the World Development Report[460], size and turnover of the equity market,[461] organizational size,[461] economic performance and industry type[461]. The author found that uncertainty avoidance and masculinity as well as political and civil systems are main drivers of quantity of voluntary disclosure, whereas the legal system and the development of the equity market have no influence.[453]

Roberts and Salter (1999) examine if the accounting value uniformity versus flexibility is driven by cultural or economic factors. The authors hypothesize that the strength of desire for a single mandatory treatment of a particular accounting issue is associated with the culture and the importance of the stock market in the respective country.[462] A questionnaire was designed measuring disclosure practices and desirability of uniform accounting rules.[463] The dependent variable was represented by the responses in the questionnaire.[464] Independent variables were the cultural dimensions from Hofstede combined into two composite cultural variables.[465] The sample consists of Big 6 auditors from 23 countries.[466] Control variables were extant corporate financial reporting practices (level of current uniformity) and importance of capital markets measured through market capitalization.[465] A logit analysis has been calculated.[467] The authors could show that auditors favor single mandated treatment in the majority of the cases and that this attitude is driven by both culture and the importance of the stock market in the respective country.[466] These results are controlled for the current level of uniformity in the respective country.[466]

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[456] Cf. Williams (1999), p. 214.
[457] Cf. Williams (1999), p. 215.
[458] Cf. Williams (1999), p. 216.
[459] Cf. Williams (1999), p. 217.
[460] Cf. Williams (1999), p. 218.
[461] Cf. Williams (1999), p. 219.
[462] Cf. Roberts/Salter (1999), p. 125.
[463] Cf. Roberts/Salter (1999), p. 127.
[464] Cf. Roberts/Salter (1999), p. 132.
[465] Cf. Roberts/Salter (1999), p. 133.
[466] Cf. Roberts/Salter (1999), p. 121.
[467] Cf. Roberts/Salter (1999), p. 135.

Jaggi and Low (2000) examine differences in financial disclosures in common ad code law countries and test the impact of culture on these differences.[468] They hypothesized that the impact of culture on financial disclosures will be significantly lower in common law countries in comparison to code law countries, which is due to the lower demand for information in code law countries due to ownership concentration.[469] The authors include further variables in their analysis given their proven influence on financial disclosure: Firm size (large firms disclose more), debt ratio (positive correlation between disclosure and debt ratios), capital markets (the more developed the capital market the more disclosure is required leading to a positive correlation between financial disclosures and market capitalization) and multinational firms (positive correlation between multi-nationality of firm and financial disclosure due to internationalization of business with stake- and shareholders of various nationalities).[470] The dependent variable financial disclosure is "based on the mean disclosure scores of 90 items on a sample of largest industrial firms in each country"[471] obtained from the International Financial Reporting Index for Industrial Companies (IFRI). Independent variables were the cultural dimensions scores per country from Hofstede (1980). A regression model was formulated. 505 firms from 28 countries were included in the sample. The authors found that the impact of culture on financial disclosure in common law countries is not significant, the results for code law countries are mixed.[468]

Ratmono and Mas'ud (2000) tested the cultural influence on perceived usefulness of the Islamic corporate reporting model. Based on the Hofstede-Gray-Framework, the authors hypothesized that the higher a country ranks in terms of uncertainty and power distance, the more likely it shows higher levels of conservatism and secrecy and the lower the degree of conservatism and secrecy, the more important Islamic to conventional accounting reporting is perceived.[472,473,474] Also the influence of background of the firm (Islamic versus conventional) has been examined.[472] Independent variables were the cultural dimensions uncertainty avoidance and power distance measured with a non-Hofstede instrument.[475] Dependent variables were the conservatism and secrecy measures as applied by Salter and Niswander (1995) and an instrument by previous researchers examining the perceived usefulness of Islamic Reporting.[475] The sample consisted of Moslem accounting academicians from Java with a

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[468] Cf. Jaggi/Low (2000), p. 496.
[469] Cf. Jaggi/Low (2000), p. 502.
[470] Cf. Jaggi/Low (2000), p. 503.
[471] Jaggi/Low (2000), p. 505.
[472] Ratmono/Mas'ud (2000), p. 95.
[473] Ratmono/Mas'ud (2000), p. 102.
[474] Ratmono/Mas'ud (2000), p. 103.
[475] Ratmono/Mas'ud (2000), p. 104.

questionnaire being sent to them.[475]   A multiple regression analysis was calculated.[476] The results showed that power distance best predicts the accounting values of conservatism and secrecy and uncertainty avoidance has a positive impact on perceived usefulness of the Islamic corporate reporting model.[472] The impact of uncertainty avoidance on secrecy and conservatism could not be shown.

Arnold et al. (2001) "examine the differences in materiality estimates for a sample of 181 experienced auditors from Big-Six firms located in Denmark, Ireland, Italy, Spain, Sweden, The Netherlands, and the UK".[477] With regards to culture, and based on the Hofstede-Gray-Framework, Arnold et al. hypothesized that materiality estimates are associated with a country's uncertainty avoidance. [478] In terms of client integrity and level of litigation, a positive association with materiality estimates is hypothesized. [479,480] Research instrument was an audit case scenario. [481] The materiality estimates represent the dependent variable, whereas the independent variables were client integrity, litigation level and uncertainty avoidance.[482] A multivariate regression analysis was calculated. The authors found that low client integrity ratings led to lower materiality estimates, whereas in the case of higher levels of litigation and high uncertainty avoidance materiality estimates increased.[483]

Schultz and Lopez (2001) examined the role of uncertainty avoidance in the context of accounting measurements and disclosures, e.g., the measurement of warranty expense.[484] In the context of this study the accounting value conservatism is the most relevant one given "that warranty expense relies on future outcomes and accountants surrounded by societal values stressing conservatism are more likely to adopt a more cautionary measure than those in other, less conservative settings"[485]. The authors hypothesized that US accountants will resolve warranty estimates at lower US dollar levels then individual French and German accountants and further postulated that the framing effect according to Kahneman and Tversky (1979) will be higher for French than German accountants and for German higher than for US accountants. [486,487] Case studies were prepared and presented to experienced accountants in an experimental

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[476] Ratmono/Mas'ud (2000), p. 105.
[477] Arnold et al. (2001), p. 459.
[478] Cf. Arnold et al. (2001), p. 465.
[479] Cf. Arnold et al. (2001), p. 464.
[480] Cf. Arnold et al. (2001), p. 466.
[481] Cf. Arnold et al. (2001), p. 468.
[482] Cf. Arnold et al. (2001), p. 470.
[483] Cf. Arnold et al. (2001), p. 465.
[484] Cf. Schultz/Lopez (2001), p. 276.
[485] Schultz/Lopez (2001), p. 276.
[486] Cf. Schultz/Lopez (2001), p. 277.
[487] Cf. Schultz/Lopez (2001), p. 279.

setting in one of the offices of the respective firms.[488]   The total number of participants amounted to 48 across all countries.[489] Both hypotheses could be confirmed.

Ding (2002) investigated differences in disclosure adequacy between French and Chinese firms. Ding hypothesized that French companies satisfy user demand better,[490] have larger reports in volume and are fuller in content,[491] disclose more information on innovation and segment earnings and revenues,[491] and show shorter depreciation methods.[492] Based on the Hofstede-Gray-Framework Ding hypothesized that French companies disclose more information on indebtedness, less information on future trends, are less homogenous and show more information on environmental protection.[492,493] The author found that French compared to Chinese annual reports are more user friendly, bigger in volume, fuller in content, report shorter depreciation periods and focus more on innovations, corporate stock, segment earnings and revenues, debt and environmental protection, whereas Chinese companies disclosed more on future trends and prospects.[494] The findings are in line with the economic and cultural differences of the countries.[495]

Haniffa and Cooke (2002) explored the cultural impact on reporting practices in Malaysia. Besides other hypotheses not directly linked to the Hofstede-Gray-Framework, the authors tested if there is a negative correlation between a Malay managing director, a Malay Finance director, a Malay chairperson, the proportion of Malay directors on the board and the proportion of Malay shareholdings with voluntary disclosure.[496] The nationality of the directors and shareholders of the sample firms have been used as a proxy for culture. Dependent variable has been a disclosure checklist.[497] A regression analysis was calculated together with a test for multicollinearity, e.g., variance inflation factors, and showed that culture does not impact disclosure.[498] The authors discuss possible reasons and highlight that the Islamic background fostering transparency in business, might lead to less secrecy and higher disclosure.[498]

Hope (2003) investigated the relative roles of legal origin and national culture in explaining firm-level disclosure internationally. Hope hypothesizes that cultural and legal

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[488] Cf. Schultz/Lopez (2001), p. 279.
[489] Cf. Schultz/Lopez (2001), p. 280.
[490] Cf. Ding (2002), p. 163.
[491] Cf. Ding (2002), p. 164.
[492] Cf. Ding (2002), p. 165.
[493] Cf. Ding (2002), p. 165.
[494] Cf. Ding (2002), p. 155.
[495] Cf. Ding (2002), p. 156.
[496] Cf. Haniffa/Cooke (2002), p. 326.
[497] Cf. Haniffa/Cooke (2002), p. 330.
[498] Cf. Haniffa/Cooke (2002), p. 343.

origin both influence disclosure levels, that the latter vary with cultural values after controlling for legal origin and that the role of legal origin diminishes with the number of analysts following the firm.[499] The sample size is between 39 to 42 countries depending on the analysis.[500] The dependent variable disclosure is measured through disclosure scores of the Center for International Financial Analysis and Research.[500] A further dependent variable is the number of analysts following.[501] Control variables are number of stock exchange listings, firm size, leverage and industry membership.[502] Univariate and multivariate regression analyses were calculated.[503] The author could show that both culture and legal origin influence corporate disclosure.[503]

Archambault and Archambault (2003) developed a set of cultural, national and corporate factors potentially influencing financial disclosure of firms. Based on the Hofstede-Gray-Framework, the authors hypothesize that national culture influences the amount of corporate disclosure.[504] The disclosure volume is further supposed to be influenced by national political systems, [505] national economic systems (e.g., economic development, inflation, capital markets),[506] corporate financial systems (e.g., ownership, exchange listings, dividends, auditor, leverage)[507] and corporate operating systems (firm size, number of industries, foreign sales)[508]. Further independent variables were the cultural dimension scores from Hofstede (1988). [509] The sample consisted of 1000 leading industrial companies from 41 countries.[508] The dependent variable disclosure is based on an index derived from variables in the areas of general information, income statement, balance sheet, funds-flow statement, accounting policies, stockholders' information and supplementary information.[508] A regression analysis with heteroskedasticity-consistent standard errors were calculated.[510] The authors could show that each system significantly contributes to the disclosure model.[511]

Doupnik and Richter (2004) examined the impact of culture on the interpretation of in context verbal probability expressions testing the conservatism hypothesis from the Hofstede-Gray-Framework. The authors hypothesize that German compared to US accountants assign a

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[499] Cf. Hope (2003), p. 226.
[500] Cf. Hope (2003), p. 219.
[501] Cf. Hope (2003), p. 228.
[502] Cf. Hope (2003), p. 229.
[503] Cf. Hope (2003), p. 218.
[504] Cf. Archambault/Archambault (2003), p. 178.
[505] Cf. Archambault/Archambault (2003), p. 179.
[506] Cf. Archambault/Archambault (2003), p. 180.
[507] Cf. Archambault/Archambault (2003), p. 181.
[508] Cf. Archambault/Archambault (2003), p. 182.
[509] Cf. Archambault/Archambault (2003), p. 183.
[510] Cf. Archambault/Archambault (2003), p. 185.
[511] Cf. Archambault/Archambault (2003), p. 192.

higher numerical probability to positively framed verbal probability expressions in the context of recognition of assets and increases in net income, lower probability for positive probability expressions regarding recognition of liabilities and decreases in net income and higher probability to negative expressions regarding de-recognition of assets or recognition of decreases in net income. [512] Significant differences between US American and German accountants could be found with regards to several verbal probability expressions. [513] Independent variables were 14 excerpts from various IASs containing probability expressions and demographic characteristics, dependent variables were the responses (mean probabilities) to it.[514] The authors tested if firm size, years of experience, familiarity with IASs or primary speciality had an influence on the responses provided. [515] Only the variable primary speciality had an impact on the responses of the German group.[516] T-tests were calculated.[517] In most cases, German accountants were more conservative than their US counterparts.[513] Given the cultural influence on interpretation of verbal probability expressions, the authors, question if "a common set of accounting standards can be applied consistently across cultures"[518].

In 2004, Ding, Entwistle and Stolowy compared the disclosure practices on research and development (R&D) in French and Canadian firms. Based on the Hofstede-Gray-Framework, the authors hypothesize that Canadian firms disclose more information on R&D activities, capitalize R&D expenses more frequently, show a stronger link between R&D disclosure and intensity, and provide more non-financial information and present more information on future R&D expenses. [519 , 520 , 521] The four cultural dimension scores of France and Canada represented the independent variable, dependent variables were disclosure, capitalization, disclosure and intensity, financial versus non-financial information, and future expenditures, control variable was firm size. Descriptive statistics, a Student t-test and a regression analysis were calculated.[522] The authors could show that Canadian disclose more information compared to the French high-tech companies.[523] In addition, Canadian companies show a strong link between R&D intensity and disclosure, use non-financial information to resolve information

[512] Cf. Doupnik/Richter (2004), p. 8.
[513] Cf. Doupnik/Richter (2004), p. 1.
[514] Cf. Doupnik/Richter (2004), p. 9.
[515] Cf. Doupnik/Richter (2004), p. 10.
[516] Cf. Doupnik/Richter (2004), p. 11.
[517] Cf. Doupnik/Richter (2004), p. 12.
[518] Doupnik/Richter (2004), p. 1.
[519] Cf. Ding/Entwistle/Stolowy (2004), p. 59.
[520] Cf. Ding/Entwistle/Stolowy (2004), p. 61.
[521] Cf. Ding/Entwistle/Stolowy (2004), p. 62.
[522] Cf. Ding/Entwistle/Stolowy (2004), p. 63.
[523] Cf. Ding/Entwistle/Stolowy (2004), p. 55.

asymmetries with French using rather traditional accounting information and inform more on future R&D expenses.[523] The study represented a test of the secrecy hypothesis.

The following study represents the first study on the Hofstede-Gray-Framework after the adoption of IFRS in the European Union in 2004. In 2005, Ding, Jeanjean and Stolowy studied the role of culture as a possible reason for differences between national GAAP and IAS. National GAAP can differ from IAS by divergence, e.g., the accounting method between the two standards is different or through absence, e.g., the national GAAP does not cover a specific topic being covered by IAS.[524] To measure this, the authors proposed indices based on data from Nobes (2001).[525] Based on the assumption that the implementation of IAS reflects the accounting values of increased uniformity and les conservatism and secrecy and that common law countries favor full disclosure, the authors hypothesized: 1. Culture is an explanatory factor for divergences to IAS and the absence of specific topics in national GAAPs, 2. Common law countries show less divergence from IAS and 3. Common law countries have more highly developed, e.g., extensive regulation systems in terms of IAS than code law countries.[526] Independent variables were Hofstede's four cultural dimension scores.[527] Univariate and multi-variate regression analyses were calculated.[528] The univariate analysis showed that the divergence index is significantly negatively correlated with power distance and positively with uncertainty avoidance showing that cultural dimensions have an impact on the accounting values measured, which supported the first hypothesis.[529] Also divergence with IAS can be explained by culture as it is significantly related to uncertainty avoidance and individualism.[530] However, in contrast to Gray (1988) countries with higher uncertainty avoidance have less need for uniformity which is in line with the findings of Salter and Niswander (1995).[530] The results indicate that culture explains more than legal origin (common law / civil law) divergences from IAS.[524] The absence index is not explained by cultural variables.[531] While the study is a contribution to the accounting harmonization discussion by highlighting the cultural factor,[532] the operationalization of three of Gray's accounting values through the diversification and absence index stays a bit imprecise and vague.

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[523] Cf. Ding/Jeanjean/Stolowy (2005), p. 325.
[524] Cf. Ding/Jeanjean/Stolowy (2005), p. 326.
[526] Cf. Ding/Jeanjean/Stolowy (2005), p. 335.
[527] Cf. Ding/Jeanjean/Stolowy (2005), p. 336.
[528] Cf. Ding/Jeanjean/Stolowy (2005), p. 337.
[529] Cf. Ding/Jeanjean/Stolowy (2005), p. 338.
[530] Cf. Ding/Jeanjean/Stolowy (2005), p. 339.
[531] Cf. Ding/Jeanjean/Stolowy (2005), p. 340.
[532] Cf. Ding/Jeanjean/Stolowy (2005), p. 344.

Doupnik and Riccio (2006) examined the influence of conservatism and secrecy on the interpretation of verbal probability expressions in the Anglo and Latin cultural areas. The authors hypothesized that accountants in Brazil, a high conservatism country, assign higher (lower) numerical to verbal probability expressions that determine the threshold for the recognition of items that increase (decrease) income than US accountants, a low conservatism country.[533] Accountants in a high secrecy country are expected to assign higher numerical probabilities to verbal probability expressions for probability thresholds for financial disclosure.[533] The independent variables are the five culture dimension scores derived from the Hofstede survey questions which were included in the questionnaire distributed to the participants.[534] Dependent variables were the numerical probabilities assigned to five different probability expressions taken from IFRS excerpts.[535] Control variable was affiliation to a Big 4 accounting firm, which might lead to acculturation of Brazilian accountants to the US culture.[535] A MANOVA has been calculated to test significant differences between the two nationalities.[536] Support was found for the conservatism hypothesis related to income increase, but not for income decrease; the secrecy hypothesis could be confirmed.[533]

Tsakumis (2007) examined the influence of national culture on the application of accounting rules by accountants. The author hypothesized that Greek compared to US accountants are more likely to recognize contingent liabilities and will less likely disclose the existence of contingent assets and liabilities.[537] The study tests the conservatism and secrecy hypothesis of the Hofstede-Gray-Framework. A questionnaire has been developed which included the questions from Hofstede for the four cultural dimensions and a case study on contingent assets and liabilities.[538] The questionnaire contains a number of control variables, e.g., equity market context, assumption that the respondent works for a Western European company to eliminate home country influence, controls for current accounting practice, taxation and litigation risk.[539] The participants were asked to decide on the recognition and disclosure on a one to ten scale.[540] An ANOVA has been calculated.[541] Whereas for the conservatism hypothesis no evidence was found, the secrecy hypothesis was confirmed.[537]

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[533] Cf. Doupnik/Riccio (2006), p. 237.
[534] Cf. Doupnik/Riccio (2006), p. 249.
[535] Cf. Doupnik/Riccio (2006), p. 247.
[536] Cf. Doupnik/Riccio (2006), p. 250.
[537] Cf. Tsakumis (2007), p. 27.
[538] Cf. Tsakumis (2007), p. 34.
[539] Cf. Tsakumis (2007), p. 37.
[540] Cf. Tsakumis (2007), p. 35.
[541] Cf. Tsakumis (2007), p. 40.

Hooi (2007) investigated the influence of culture on banking disclosures. 17 countries have been covered in the study.[542] The author hypothesizes a significant positive relationship between individualism, masculinity and long-term orientation as well as a significant negative relationship between uncertainty avoidance and power distance and banking disclosures.[543] Independent variables were the cultural dimension scores from Hofstede.[544] The dependent variable was the financial disclosure level of the firms benchmarked against the 2001 Basel survey checklist.[545] An OLS regression analysis was calculated.[546] The study results confirm the secrecy hypothesis of the Hofstede-Gray-Framework and its link to the original four cultural dimensions in line with the results of Gray and Vint (1995).[542] An influence of the long-term orientation dimension could not be shown.[542]

In 2007, Dahawy and Conover published a paper on accounting disclosure in companies listed on the Egyptian stock exchange testing the degree of compliance with disclosures required by IAS which were introduced in Egypt in 1996.[547] Based on Gray (1988) the authors expect the Egyptian culture to score high on the accounting value secrecy as it is considered a society characterized by large power distance, strong uncertainty avoidance and collectivism.[548] Dahawy and Conover therefore hypothesized that the disclosure level of publicly traded companies will be lower than required as per IAS.[549] Publicly available financial statements of the most active companies in the Egyptian stock market have been selected and compliance to IAS has been reviewed against a checklist generated by the national capital market authority.[549] The authors tested if a disclosure was required but had not been included or included and if a disclosure had been included which was not required.[549] A number of descriptive statistics were calculated. The authors found that the disclosure level of listed companies compared against the required level averaged 61% and that non-compliance was explainable by cultural reasons.[549] They argue that „the propensity for secrecy that is embedded in the Egyptian culture overrides the IASB requirements"[550]. Companies mostly failed with compliance to accounting standards related to consolidation, leasing and treatment of intangible assets.[551] Overall the study lacks solid quantitative analysis, e.g., a regression analysis with the cultural dimensions related to the accounting value of secrecy. Consequently, a link of the gathered data to Egypt's relative score of relevant cultural dimensions is missing.

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[542] Cf. Hooi (2007), p. 7.
[543] Cf. Hooi (2007), p. 14.
[544] Cf. Hooi (2007), p. 15.
[545] Cf. Hooi (2007), p. 17.
[546] Cf. Hooi (2007), p. 18.
[547] Cf. Dahawy/Conover (2007), p. 7.
[548] Cf. Dahawy/Conover (2007), p. 11.
[549] Cf. Dahawy/Conover (2007), p. 13.
[550] Dahawy/Conover (2007), p. 14.
[551] Cf. Dahawy/Conover (2007), p. 16.

Askary, Pounder and Yazdifar (2008) investigated the effects of cultural values on the accounting value uniformity in Arab countries. Based on the Hofstede-Gray-Framework, the authors hypothesized that the presentation of financial information is rather reported in a uniform way.[552] Dependent variable was the extent of accounting enforcement ranging from flexibility to uniformity.[552] Independent variables were a range of measures for uniformity versus flexibility on a dummy scale from zero to one, e.g., no accounting changes within the firms in a certain period, uniformity in using accounting policies, and uniformity in presenting income statement items.[553] A cluster analysis was calculated to classify the countries according to their uniformity.[554] Six Arabic nations were included in the study.[555] The uniformity hypothesis of the Hofstede-Gray-Framework could be confirmed for Arab countries.[554]

Hope et al. (2008) tested if the auditor choice of companies is impacted by national culture. Hope et al. hypothesized a negative relationship between secrecy and the choice of Big 4 audit firms and this association is impacted by the exposure of the firm to foreign markets.[556] The independent variable secrecy was operationalized through the cultural dimension scores from Hofstede, e.g., the sum of uncertainty avoidance and power distance reduced by the individualism score.[556] Dependent variable was the choice of a Big 4 firm. A regression model including a number of control variables was formulated, e.g., investor protection, level of capital market development, disclosure levels, ownership concentration, economic development in a country, firm size, absolute value of latest year's short term and long-term accruals, the latest yearend inventory, and accounts receivable as percentage of total assets, leverage, loss, debt or equity issuance and return on equity.[557] Firms from over 37 countries were included.[558] A multivariate regression was calculated.[559] The authors found that firms from more secretive countries less likely hire Big 4 auditors and that this link is mitigated by the firm's degree of internationalization.[560] This strongly supports the secrecy hypothesis of the Gray-Hofstede-Framework.[561]

Guillamon-Saorin and Sousa (2010) conducted a study on the decision of British and Spanish firms to release annual results press releases in relation to earnings performance, the

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[552] Cf. Askary/Pounder/Yazdafir (2008), p. 148.
[553] Cf. Askary/Pounder/Yazdafir (2008), p. 149.
[554] Cf. Askary/Pounder/Yazdafir (2008), p. 145.
[555] Cf. Askary/Pounder/Yazdafir (2008), p. 146.
[556] Cf. Hope/Kang/Thomas/Yoo (2008), p. 361.
[557] Cf. Hope/Kang/Thomas/Yoo (2008), p. 363.
[558] Cf. Hope/Kang/Thomas/Yoo (2008), p. 364.
[559] Cf. Hope/Kang/Thomas/Yoo (2008), p. 365.
[560] Cf. Hope/Kang/Thomas/Yoo (2008), p. 357.
[561] Cf. Hope/Kang/Thomas/Yoo (2008), p. 358.

existence of an investor relations department, company size and ownership concentration.[562] The authors hypothesized that UK companies are more likely to issue press releases than Spanish ones based on the assumption that secrecy increases with higher levels of uncertainty avoidance and power distance and lower levels of individualism and masculinity.[563] The authors further hypothesized that higher ownership concentration will lead to less press releases,[564] increased earnings performance and the existence of an investor relations department with higher disclosure[565] and the larger companies are more likely to issue press releases[566]. The sample size across both countries was 246.[562] Dependent variable was the number of press releases, independent variables country, block holder ownership, company performance, firm size and investor relations department.[567] Control variables were industry and leverage.[567] A multivariate analysis was calculated using logistic regression.[567] The authors could show that both countries have significant differences with regards to the disclosure of press releases.[562] Firm size and ownership structure were mitigating factors.[562] The study provides a good example for testing the secrecy hypothesis; however, the study only takes the cultural dimensions scores only implicitly into account and just introduces the country as independent variable.

Salter and Lewis (2011) tested the conservatism hypothesis by using actual reported data from SEC Form 20-F. The authors hypothesized that the higher the degree of individualism and masculinity the less conservative income measurement practices will be, and the higher the degree of uncertainty avoidance the more conservative practices will develop.[568] Dependent variable was Gray's index of conservatism which is measuring the optimism of a firm's income calculation of one national GAAP relative to the GAAP of another country.[569] Independent variables were the four cultural dimension scores from Hofstede (1988).[569] As further independent variables they included the tax rate rate (positive relation to conservatism), relative size of capital markets (negative relation to conservatism) and membership to the European Union.[570] 14 countries were included in the study covering cultural differences pre-IFRS conversion leading to the exclusion of some countries.[571] Two multiple regression analyses were calculated: One for the cultural influence factors only and the second one included

[562] Cf. Guillamon-Saorin/Sousa (2010), p. 1.
[563] Cf. Guillamon-Saorin/Sousa (2010), p. 3.
[564] Cf. Guillamon-Saorin/Sousa (2010), p. 4.
[565] Cf. Guillamon-Saorin/Sousa (2010), p. 5.
[566] Cf. Guillamon-Saorin/Sousa (2010), p. 6.
[567] Cf. Guillamon-Saorin/Sousa (2010), p. 7.
[568] Cf. Salter/Lewis (2011), p. 135.
[569] Cf. Salter/Lewis (2011), p. 136.
[570] Cf. Salter/Lewis (2011), p. 132.
[571] Cf. Salter/Lewis (2011), p. 138.

institutional factors. [572] The authors found a significant positive influence of the cultural dimension individualism on income measurement; also the tax rate and membership to the European Union had an influence.[570] No influence of the market development variable could be shown.[570] Main area of criticism with regards to this study is the dependent variable, which does not take into account current measurement techniques of unconditional conservatism.

Chand, Cummings and Patel (2012) investigated if "culture influences student interpretation and application of uncertainty expressions, which are used as recognition and disclosure thresholds in IFRS"[573]. Chand et al. (2012) hypothesized that Chinese compared to Australian students will "tend to defer the recognition of assets and increases in net income whilst accelerating the recognition of liabilities and decreases in net income"[574] and will "be less willing to provide accounting disclosure in financial reports"[575]. 336 students from Australia and China were included in the analysis.[576] Dependent variable was a survey similar to Doupnik and Richter (2004) including an assessment of the numerical probability on a scale from 0 to 100% of 15 different uncertainty expressions covering a wide range of accounting contexts (e.g., de-/recognize assets, disclosure of accounting information) and some general questions on age, gender, nationality and education. [577] Independent variables were the uncertainty avoidance, power distance, individualism, masculinity and long-term orientation scores collected from the students in the same survey based on Hofstede's questions.[576] A MANOVA was calculated to test if the responses on the Hofstede test of Australian and Chinese students were different. [578] A MANOVA and ANOVA were also calculated for the mean numerical probabilities to test if they significantly differ, completed by a Mann-Whitney U-test.[579] The authors could show that Chinese showed more conservatism and secrecy related judgements than Australian students and that these effects are not mitigated by educational similarities.[576] The authors conclude that regulators involved in international convergence projects need to take into account cultural factors leading to different interpretation and application of IFRS.[576]

The most recent study on the Hofstede-Gray-Framework was on determining the influence of social values and institutions determining accounting conservatism was published by Salter, Kang, Gotti and Doupnik in 2013. The authors measure both conditional and unconditional

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[572] Cf. Salter/Lewis (2011), p. 139.
[573] Chand/Cummings/Patel (2012), p. 153.
[574] Chand/Cummings/Patel (2012), p. 161.
[575] Chand/Cummings/Patel (2012), p. 162.
[576] Cf. Chand/Cummings/Patel (2012), p. 153.
[577] Chand/Cummings/Patel (2012), p. 166.
[578] Chand/Cummings/Patel (2012), p. 167.
[579] Chand/Cummings/Patel (2012), p. 170.

conservatism.[580] The authors explain the differences of the two types of conservatism and state that unconditional conservatism is used in most studies with creditor protection being the reason for its existence; it is described as a socio-political phenomenon.[581] Former studies found that institutional variables or the importance of the equity market have no influence on unconditional conservatism.[581] In the case of conditional conservatism institutional as well as economic variables had an influence on cross cultural differences.[581] The authors hypothesized that unconditional conservatism is positively related to the accounting value of conservatism and higher in uncertainty avoidant, collectivist and feminine countries; conditional conservatism is driven by economic and institutional variables and the accounting value of conservatism and will be higher in countries which are uncertainty avoidant, collectivist and feminine.[582] Dependent variables were conditional and unconditional conservatism measured through the ratio of non-operating accruals over total assets according to Givoly and Hayn (2000) and the mean reported income conditional on stock returns showing the number of firms suffering from an economic loss (indicator takes value of one) respectively.[583] Independent variables were a composite value of conservatism (uncertainty avoidance score minus individualism and masculinity scores) and the values from Hofstede (1980).[580] The authors controlled for several legal variables, e.g., legal origin, law and order tradition, corruption, creditor rights, anti-director rights (minority shareholders protection), insider dealing index, investor protection as per World Bank and economic variables as for example market capitalization and book to market ratio.[584] The sample size encompassed 22 countries; an OLS regression has was calculated.[580] The authors found that both forms of conservatism are greater in countries with more conservative societal and accounting values.[580] Femininity also has a significant influence on both forms of conservatism.[580]

4.5.2.4   Conclusion

Since the publication of the Hofstede-Gray-Framework, I have found 28 studies testing single hypotheses of the framework. The majority of these studies focused on disclosure, e.g., the testing of the accounting value secrecy. Only a minority of these studies dealt with the accounting values of conservatism and uniformity. A study on the accounting value pro-fessionalism in the context of the Hofstede-Gray-Framework testing could not be found.

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[580] Salter/Kang/Gotti/Doupnik (2013), p. 607.
[581] Salter/Kang/Gotti/Doupnik (2013), p. 610.
[582] Salter/Kang/Gotti/Doupnik (2013), p. 614.
[583] Salter/Kang/Gotti/Doupnik (2013), p. 616.
[584] Salter/Kang/Gotti/Doupnik (2013), p. 617.

The studies show mixed results.[585] The support of the secrecy hypothesis is stronger than the support for other hypotheses, in particular the conservatism hypothesis. Most studies used the four cultural dimension scores from Hofstede. The fifth dimension as introduced in the publication of Radebaugh, Black and Gray (2004) was only rarely used, even in more recent studies. The sixth dimension from Hofstede has not been used in any study. Some authors have replicated the work of Hofstede for the countries covered in their studies; no study made an attempt to replace the Hofstede dimensions. Dependent variables are derived from surveys, questionnaires, case studies or actually reported data. The quality of the operationalization of the dependent variables has significantly improved compared to the studies described in the section on comprehensive testing of the Hofstede-Gray-Framework. A high percentage of studies does not include control variables in their research design. With regards to the statistical method, the most popular analyses are univariate and multivariate regressions. Robustness tests were rarely calculated. The number of countries covered ranges from one to 52.

The majority of the studies were conducted before the adoption of IFRS in the European Union in 2004. The mentioning of IFRS in the research design is limited to case studies integrated in the research design, which include questions on specific standards and survey participants are asked to do specific assessments, e.g., Doupnik and Richter (2006) and Tsakumis (2007). Also the most recent study on the accounting value conservatism, published by Salter, Kang, Gotti and Doupnik (2013) does not separate jurisdictions who did not adopt IFRS (e.g., United States, Japan, Thailand) from countries who adopted them (e.g., Denmark, Netherlands). Ding, Jeanjean and Stolowy (2005) are the only researchers mentioning IFRS as part of their research design as they examine divergence to them. This opens research gaps allowing the examination of the persistence of a cultural impact on accounting practices following the adoption of IFRS with countries who have not adopted the standard so far being excluded from the sample.

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[585] Cf. Noravesh/Dilami/Bazaz (2007), p. 268.

Author (Year)	Title	Hypotheses	Findings	Independent Variables	Dependent Variables	Control Variables	Statistical Method	Number of countries
Gray/Vint (1995)	The impact of culture on accounting disclosure: Some international evidence	Examination of the relationship between culture and accounting disclosure in an international context	**All hypotheses were confirmed**	Four cultural dimensions from Hofstede	Mean disclosure scores by country	None	Linear regression	27
Zarzeski (1996)	Spontaneous harmonization effects of culture and market forces on accounting and disclosure practices	Higher levels of foreign sales, lower debt ratios, larger firm size, a low degree of uncertainty avoidance, high individualism, a high degree of masculinity and low power distance in a country lead to higher levels of disclosure	The hypotheses were mostly confirmed	Four cultural dimensions from Hofstede	Level of disclosure measured based on a collection of items from previous studies	Three market forces (foreign sales, firm size, debt ratio)	Multiple regression analysis	28
Wingate (1997)	An examination of cultural influence on audit environments	Influence of cultural dimensions on corporate disclosure	The hypotheses were partially confirmed	Four cultural dimensions from Hofstede	CIFAR's International Financial Reporting Index	None	Regression	39
Williams/Towers (1998)	Differential reporting in Singapore and Australia: A small business managers' perspective	Examination if there is a difference between Singapore and Australian managers in the perceived level of cost and benefits associated with small business financial statements accounting disclosures and degree of support for differential accounting disclosure requirements	**All hypotheses were confirmed**	Five cultural dimensions from Hofstede	Questionnaire on preferred level of disclosure and the perceived costs versus benefits	None	Univariate regression analysis	2 (Australia and Singapore)

Author (Year)	Title	Hypotheses	Findings	Independent Variables	Dependent Variables	Control Variables	Statistical Method	Number of countries
Williams (1999)	Voluntary environmental and social accounting disclosure practices in the Asia-Pacific region: An international empirical test of political economy theory	Negative relation between the degree of uncertainty avoidance and masculinity and the amount of voluntary disclosure	All culture related hypotheses were confirmed	Uncertainty avoidance and masculinity scores of Hofstede, the legal system and economic development of a country, size and turnover of the equity market, organizational size, economic performance and industry type	Amount of voluntary environmental and social accounting disclosure according to a checklist	None	Multiple regression analysis	7
Roberts/Salters (1999)	Attitudes towards uniform accounting: Cultural or economic phenomena?	The strength of desire for a single mandatory treatment of a particular accounting issue is associated with the culture and the importance of the stock market in	All hypotheses were confirmed	Cultural dimensions from Hofstede summarized into two composite cultural variables	A questionnaire was designed measuring disclosure practices and desirability of uniform accounting rules. The dependent variable was represented by the responses in the questionnaire	Extant corporate financial reporting practices (current uniformity), importance of capital markets measured through market capitalization	Logit analysis	23
Jaggi/Low (2000)	Impact of culture, market forces and legal system on financial disclosures	Less cultural impact on financial disclosure in common law compared to code law countries	The hypotheses were not confirmed	Five cultural dimensions from Hofstede	Composite financial disclosure variable	Firm size, debt ratio, multinationality, legal system, market capitalization	Regression	6
Ratmono/Mas'ud (2000)	Cultural influence on perceived usefulness of Islamic corporate reporting model	The higher a country ranks in terms of uncertainty and power distance, the more likely it shows higher levels of conservatism and secrecy and the lower the degree of conservatism and secrecy, the more important Islamic to conventional accounting reporting is perceived	The hypotheses were partially confirmed	Independent variables were the cultural dimensions uncertainty avoidance and power distance measured with a non-Hofstede instrument	Conservatism and secrecy measures as applied by Salter and Niswander (1995) and previous researchers examining the perceived usefulness of Islamic Reporting	None	Multiple regression analysis	1 (Java)

Author (Year)	Title	Hypotheses	Findings	Independent Variables	Dependent Variables	Control Variables	Statistical Method	Number of countries
Arnold et al. (2001)	The association between European materiality estimates and client integrity, national culture and litigation	Materiality estimates are associated with a country's uncertainty avoidance. For client integrity and level of litigation there is a positive association with materiality	All hypotheses were confirmed	Client integrity, litigation level and uncertainty avoidance	Materiality estimates collected in an audit case scenario	None	Multivariate regression analysis	7
Schultz/Lopez (2001)	The impact of national influence on accounting systems: Implications for international accounting standard setters	US accountants will resolve warranty estimates at lower US dollar levels than French and German	The hypothesis was confirmed	Nationality, case study	Amount of warranty estimate	None	Cat mod calculating mean of warranty estimates including significance test	3 (Germany, France, USA)
Ding (2002)	International differences in disclosure adequacy: Empirical evidence from annual reports of French and Chinese listed firms	French companies satisfy user demand better, have larger reports in volume and are fuller in content, disclose more information on innovation and segment earnings and revenues, and show shorter depreciation methods	The hypotheses were confirmed	None (comparison of dependent variables between countries)	44 items list on accounting disclosure requirements	None	F-test	2 (France and China)
Haniffa/Cooke (2002)	Culture, corporate governance and disclosure in Malaysian corporations	Negative correlation between a Malay managing director, a Malay Finance director, a Malay chairperson, the proportion of Malay directors on the board and the proportion of Malay shareholdings with voluntary disclosure	The Hofstede-Gray Framework related hypotheses were not confirmed	The nationality of the directors and shareholders of the sample firms have been used as a proxy for culture	Disclosure checklist	None	Descriptive statistics, multiple regression, variance inflation factors	1 (Malaysia)

Author (Year)	Title	Hypotheses	Findings	Independent Variables	Dependent Variables	Control Variables	Statistical Method	Number of countries
Hope (2003)	Firm-level disclosures and the relative roles of culture and legal origin	Cultural and legal origin both influence disclosure levels	The hypotheses were partially confirmed	Four cultural dimensions from Hofstede and legal origin	Disclosure as measured through disclosure scores of the Center for International Financial Analysis and Research	Number of stock exchange listings, firm size, leverage and industry membership	Univariate and multivariate regression analyses, robustness test	39-42
Archam-bault/Ar-chambault (2003)	A multinational test of determinants of corporate disclosure	National culture influences the amount of corporate disclosure. The disclosure volume is further supposed to be influenced by national political systems, national economic systems, corporate financial systems and corporate operating systems	Each system significantly contributes to the disclosure model	Four cultural dimensions from Hofstede	Disclosure index derived from variables in the areas of general information, income statement, balance sheet, funds-flow statement, accounting policies, stockholders' information and supplementary information	None	Regression	41
Doupnik/Richter (2004)	The impact of culture on the interpretation of "in context" verbal probability expressions	German compared to US accountants assign a higher numerical probability to positively framed verbal probability expressions in the context of recognition of assets and increases in net income, lower probability for positive probability expressions regarding recognition of liabilities and decreases in net income and higher probability to negative expressions regarding derecognition of assets or recognition of decreases in net income	The hypotheses were mainly confirmed	14 excerpts from various IASs containing probability expressions and demographic characteristics (national culture)	Probability assessments (0-100%)	Firm size, years of experience, familiarity with IASs, primary speciality	T-test	2 (Germany and US)

Author (Year)	Title	Hypotheses	Findings	Independent Variables	Dependent Variables	Control Variables	Statistical Method	Number of countries
Ding/Entwistle/Stolowy (2004)	International differences in research and development reporting practices: A French and Canadian comparison	Canadian firms disclose more information on R&D activities, capitalize R&D expenses more frequently, show a stronger link between R&D disclosure and intensity, provide more non-financial information and present more information on future R&D expenses	All hypotheses were confirmed	Four cultural dimension scores from Hofstede	Disclosure, capitalization, disclosure and intensity, financial versus non-financial information, future expenditures	Firm size	Descriptive statistics, Student t-test and regression analysis	2 (France, Canada)
Ding/Jeanjean/Stolowy (2005)	Why do national GAAP differ from IAS? The role of culture	1. Culture is an explanatory factor for divergences to IAS and the absence of specific topics in national GAAPs. 2. Common law countries show less divergence from IAS and 3. Common law countries have more highly developed, e.g., extensive regulation systems in terms of IAS than code law countries	The hypotheses were mainly confirmed	Four cultural dimension scores from Hofstede	Divergence to / absence of IAS	None	Univariate and multivariate regression	52
Doupnik/Riccio (2006)	The influence of conservatism and secrecy on the interpretation of verbal probability expressions in th Anglo and Latin cultural areas	Accountants in Brazil assign higher (lower) numerical to verbal probability expressions that determine the threshold for the recognition of items that increase (decrease) income than US accountants, a low conservatism country. Accountants in a high secrecy country are expected to assign higher numerical probabilities to verbal probability expressions for probability thresholds for financial disclosure	The hypotheses were mainly confirmed	Four cultural dimension scores from Hofstede	Numerical probabilities assigned to five different probability expressions taken from IFRS excerpts	Affiliation to a Big 4 accounting firm	MANOVA	2 (Brazil, US)

Author (Year)	Title	Findings	Independent Variables	Dependent Variables	Control Variables	Statistical Method	Number of countries
Hooi (2007)	The effects of culture on international banking disclosures	All hypotheses were confirmed	Five cultural dimension scores from Hofstede.	Financial disclosure level of the firms benchmarked against the 2001 Basel survey checklist	None	OLS regression analysis	17
Dahawy /Conover (2007)	Accounting Disclosure in companies listed on the Egyptian stock exchange	The hypothesis was confirmed	None (Hofstede scores not applied either)	Checklist on disclosure requirements from national Capital Market Authority	None	Descriptive statistics	1 (Egypt)
Tsakumis (2007)	The influence of culture on accountants' application of financial reporting rules	The hypotheses were partially confirmed	Four cultural dimension scores from Hofstede collected through a questionnaire	Responses on case study on contingent assets and liabilities (decision on recognition and disclosure)	Equity market context, current accounting practice, and others	ANOVA	2 (Greece and USA)
Hope /Kang /Thomas/Yoo (2008)	Culture and auditor choice: A test of the secrecy hypothesis	All hypotheses were confirmed	Secrecy is operationalized through the cultural dimension scores from Hofstede, e.g., the sum of uncertainty avoidance and power distance reduced by the individualism score	Choice of a Big 4 firm	Investor protection, level of capital market development, disclosure levels, and others	Multivariate regression	37

Author (Year)	Title	Hypotheses	Findings	Independent Variables	Dependent Variables	Control Variables	Statistical Method	Number of countries
Askary/Pounder/Yazdifar (2008)	Influence of culture on accounting uniformity among Arabic nations	Presentation of financial information is rather reported in a uniform way	The hypothesis was confirmed	Range of measures of uniformity versus flexibility on a dummy scale from 0 to 1, e.g., no accounting changes within the firms in a certain period, uniformity in using accounting policies, uniformity in presenting income statement items	Extent of accounting enforcement ranging from flexibility to uniformity	None	Cluster analysis	6 (Arab countries)
Guillamon-Saorin/Sousa (2010)	Press release disclosures in Spain and the UK	UK companies are more likely to issue press releases than Spanish ones based on the assumption that secrecy increases with higher levels of uncertainty avoidance and power distance and lower levels of individualism and masculinity	The hypothesis was confirmed	Country, blockholder ownership, company performance, firm size and investor relations department	Number of press releases	Industry and leverage	Multivariate logistic regression	2 (UK and Spain)
Salter/Lewis (2011)	Shades of Gray: An empirical examination of Gray's model of culture and income measurement practices using 20-F data (1998-2004)	The higher the degree of individualism and masculinity, the less conservative income measurement practices will be; the higher the degree of uncertainty avoidance, the more conservative practices will develop	The hypotheses were partially confirmed	Four cultural dimension scores from Hofstede (1988), the tax rate (positive relation to conservatism), relative size of capital markets (negative relation to conservatism) and membership to the European Union	Gray's index of conservatism which is measuring the optimism of a firm's income calculation of one national GAAP relative to the GAAP of another country	Dummy variable	Multiple regression analysis, robustness test	14

Author (Year)	Title	Hypotheses	Findings	Independent Variables	Dependent Variables	Control Variables	Statistical Method	Number of countries
Chand/Cummings/Patel (2012)	The effect of accounting education and national culture on accounting judgments: A comparative study of Anglo-celtic and Chinese culture	Chinese compared to Australian students will tend to defer the recognition of assets / increases in net income whilst accelerating the recognition of liabilities / decreases in net income; and are less willing to provide accounting disclosure in financial reports	The hypotheses were confirmed	Five cultural dimension scores collected from the students based on Hofstede's questions	Survey including an assessment of the numerical probability on a scale from 0 to 100% of 15 different uncertainty expressions covering a wide range of accounting contexts	None	ANOVA, MANOVA, Mann-Whitney U-test	2 (Australia and China)
Salter/Kang/Gotti/Doupnik (2013)	The role of social values, accounting values and institutions in determining accounting conservatism	Unconditional conservatism is positively related to the accounting value of conservatism and higher in uncertainty avoidant, collectivist and feminine countries; conditional conservatism is driven by economic and institutional variables and the accounting value of conservatism and will be higher in countries which are uncertainty avoidant, collectivist and feminine	The hypotheses were mostly confirmed	Composite value of conservatism (uncertainty avoidance score minus individualism and masculinity scores) and four cultural dimension scores from Hofstede (1980).	Conditional and unconditional conservatism measures	Legal variables, e.g., legal origin, law and order tradition, corruption, creditor rights; economic variables, e.g., example market capitalization and book to market ratio	Multiple regression	22

Table 4.5.2.4-1: Testing of single hypotheses of the Hofstede-Gray-Framework: Overview of studies (own presentation)

methods triggering lower tax payments to build reserves for unpredictable events in the future.[590] In addition, the need for confidentiality became stronger leading to an increase in the accounting value of secrecy.[590] The authors did not gather empirical data, which was done almost 20 years later – however for a different period due to data availability issues - by Noravesh, Dilami and Bazaz who published their study in 2007.

Craves and Goad Oliver (2000) studied the influence of culture on employee benefits, e.g., in pension plans.[591] The authors hypothezised culture to be a determining factor of the funding level of pension plans and the employer contributions to the plan.[592] Five country groups according as described in the Hofstede-Gray-Framework were examined serving as independent variable together with the rate used to calculate the liability.[593] Dependent variables were funding level percentage, rate used to calculate the liability, receivables (non-interest-bearing cash, employer contribution receivable, participant contribution receivable, income receivable) and revenues (receivd or receivable from employer.[594] A Pearson correlation and multivariate regression analysis was calculated.[595][594] In addition a Kruskal-Wallis test was performed to test the differentiation of country groups.[595] The authors could show a cultural impact with regards to the determination of the "funding level percentage of the plan, employer contributions receivable, and revenues received or receivable from employers"[596]. If a firm origins in the Anglo culture, quick payments in the plan are more likely than in Germanic or Nordic countries.[597] While the authors provide a very interesting application of the Hofstede-Gray-Framework, the link to the model does not go very much beyond the country groupings and the need for an overall framework to locate the discussion. A more detailed application and discussion of differences in cultural dimension scores and accounting valuables is missing.

Buhr and Freedman (2001) examined differences in corporate disclosure between Canada and the United States focusing on environmental reporting in a longitudinal study from 1988 to 1994.[598] While the authors used the Hofstede-Gray-Framework in their theoretical reasoning, they do not use the framework for the formulation of their research questions.[599] The authors

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[591] Cf. Cravens/Goad Oliver (2000), p. 521.
[592] Cf. Cravens/Goad Oliver (2000), p. 529.
[593] Cf. Cravens/Goad Oliver (2000), p. 530.
[594] Cf. Cravens/Goad Oliver (2000), p. 532.
[595] Cf. Cravens/Goad Oliver (2000), p. 533.
[596] Cravens/Goad Oliver (2000), p. 521.
[597] Cf. Cravens/Goad Oliver (2000), p. 534.
[598] Cf. Buhr/Freedman (2001), p. 313.
[599] Cf. Buhr/Freedman (2001), p. 302.

found that Canadian companies report more environmental information which the authors explain largely with institutional factors, while the cultural differences are rather small.

Sulaiman and Willett (2003) used the Hofstede-Gray-Framework to argue normatively for an extension of islamic corporate reports.[600] Islamic societies score rather low in uncertainty avoidance and power distance, implying an accounting system that is low in secrecy and conservatism; however, low masculinity and individualism scores rather imply the opposite.[601] Given the findings of other researchers including Salter and Niswander (1995), the need to avoid uncertainty outweighs other cultural dimensions.[602] This scoring profile also favors a less uniform accounting system.[603] Further, the low masculinity scores imply according to Gray (1988) more openness to socially related information and the emphasis of accountability (which includes the environment[604]) despite the need for secrecy.[602] Previous research has considered the addition of the current value balance sheet and the value added statement as satisfying.[600] The work of the authors supports this approach while they suggest adding social and environmental reporting as well.[600]

Christopher and Hassan (2005) provided a case study on the influence of culture on corporate governance statement disclosure in the annual reports of Malaysian Airlines and the Australian carrier Qantas. The difference in power distance being relatively high in Malaysia and low in Australia implies that Qantas is disclosing more information than Malaysian Airlines.[605] The independent variable was operationalized through the power distance scores of Malaysia and Australia and Hofstede (1980). The dependent variable was an item based list in order to undertake a qualitative comparison and constructive analysis of the corporate governance statements of both carriers.[606] Not quantitaive analyis has been conducted. It could be shown that on a netted basis Qantas provided more information than Malaysian Airlines.[605] The results encourage a discussion with the regulatory of both countries to foster aligned governance reporting.[605]

Richardson (2007) postulated a framework for the influence of culture on tax systems internationally based on the Hofstede-Gray-Framework. The author postulates key values for tax systems being equity, simplicity, neutrality and visibility and links them theoretically and

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[600] Cf. Sulaiman/Willett (2003), p. 1.
[601] Cf. Sulaiman/Willett (2003), p. 20.
[602] Cf. Sulaiman/Willett (2003), p. 21.
[603] Cf. Sulaiman/Willett (2003), p. 22.
[604] Cf. Sulaiman/Willett (2003), p. 24.
[605] Cf. Christopher/Hassan (2005), p. 1.
[606] Cf. Christopher/Hassan (2005), p. 5.

empirically with the four initial cultural dimensions from Hofstede (1980).[607] The following hypotheses were formulated with regards to the link of tax values with cultural dimensions:

- Equity: Positive relationship with individualism, negative relationships with power distance and uncertainty avoidance[608]
- Tax: Positive relationship with individualism and power distance, negative relationship with uncertainty avoidance[609]
- Neutrality: Positive relationship with individualism, negative relationships with power distance, uncertainty avoidance and masculinity[610]
- Visibility: Positive relationship with individualism, negative relationships with power distance, uncertainty avoidance and masculinity[611]

The tax values represented the dependent variables, whereas the independent variables were the cultural dimension scores from Hofstede.[612] Control variables were the degree of democracy and the legal system of the country (common law versus code law).[613] The sample size encompassed 43 countries.[607] An OLS regression analysis was calculated and revealed that individualism is significantly correlated to all tax values, power distance to equity, neutrality and visibility, uncertainty avoidane to simplicity, neutrality and visibility – masculinity is not correlated to any tax value.[607] Overall the author could show that culture influences tax systems.[607]

Chatterjee and Hawkes (2008) used the Hofstede-Gray-Framework to explain differences in the financial information provided by New Zealand and Indian companies on their websites. They state that the "accessability of business reporting, including financial reports on company websites is not necessarily increased by providing more information on websites. The quality of Internet-based information is affected by both the accessibility and quantity of information provided"[614]. Research method was a collection and comparison of different disclosure items published at the home page level, in the investor information section or the number of annual reports being available (and others) differentiated by country. Only descriptive statistics were calculated (percentage numbers). Overall, the authors found that Indian companies published less information than New Zealand companies, which the authors relate to the accounting value

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[607] Cf. Richardson (2007), p. 57.
[608] Cf. Richardson (2007), p. 63.
[609] Cf. Richardson (2007), p. 65.
[610] Cf. Richardson (2007), p. 66.
[611] Cf. Richardson (2007), p. 67.
[612] Cf. Richardson (2007), p. 70.
[613] Cf. Richardson (2007), p. 71.
[614] Chatterjee/Hawkes (2008), p. 33.

of secrecy. [615] The type of information provided is also different, with Indian companies showing more analytical information.

Sarens and Abdolmohammdi (2009) examined the relationship between cultural dimensions and professionalism of the internal auditing community in 45 countries as well as uniformity of internal auditing practice in 32 countries.[616] The hypotheses of the Hofstede-Gray-Framework were adapted and more recent cultural dimension data from the GLOBE project were used.[616] The following hypotheses were postulated: Uncertainly avoidance and power distance are negatively linked with internal auditing professionalism and institutional and in-group collectivism are negatively linked to internal auditing professionalism with assertiveness having no impact.[617] Uncertainty avoidance, power distance, institutional and in-group collectivism are positively linked with uniformity in internal auditing practices, again no association with assertiveness was hypothesized.[618] Three macro variables being legal system, economic development and different sources of financing were also tested.[619] A cluster analysis and ANOVA were calculated.[620] The authors found that a professional internal auditing community is more likely in countries with low uncertainty avoidance, collectivism and assertiveness.[616] Further, internal auditing practice is more uniform in low power distance and collectivism.[616] Culture has more influence in civil law than common law countries and economic development is negatively associated with uniformity.[616]

Yusoff and Lehmann (2009) used the Hofstede-Gray-Framework to understand the link between culture and environmental reporting in Malaysia and Australia.[621] Interviews with corporate accountants from listed companies in Australia and Malaysia have been conducted.[621] Eleven Malaysian and nine Australian companies participated in the study.[622] "Hofstede's (1980) cultural dimensions and Gray's subcultural accounting dimensions were used as the framework in identifying and interpreting the cultural influences on environmental reporting practice"[623]. The authors could not find a clear link between culture and environmental reporting and consequently question the relevance of the Hofstede-Gray-Framework in understanding corporate environmental reporting.[621] Only a link of individualism versus collectivism and uncertainty avoidance with disclosure on environmental reporting could be partially obser-

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[615]Cf. Chatterjee/Hawkes (2008), p. 50.
[616] Cf. Sarens/Abdolmohammi (2009), p. 2.
[617] Cf. Sarens/Abdolmohammi (2009), p. 9.
[618] Cf. Sarens/Abdolmohammi (2009), p. 11.
[619] Cf. Sarens/Abdolmohammi (2009), p. 13.
[620] Cf. Sarens/Abdolmohammi (2009), p. 15.
[621] Cf. Yusoff/Lehman (2009), p. 1.
[622] Cf. Yusoff/Lehman (2009), p. 6.
[623] Yusoff/Lehman (2009), p. 7.

ved.[624] With regards to individualism versus collectivism consistent findings with national culture could be found for Malaysia, but nor for Australia; with regards to uncertainty avoidance both countries have a high degree of uncertainty avoidance with regards to environmental reporting which is inconsistent with their national culture.[625,626] Furthermore, the authors could show the influence of the accounting values of uniformity (favoured by both Malaysia and Australia), conservatism (favoured by both Malaysia and Australia) and secrecy (favoured by both Malaysia and Australia).[627,628,629,630] However, it needs to be noted that the findings in relation to the accounting values are inconsistent with the correlations as hypothesized in the Hofstede-Gray-Framework in the case of Australia.[631] Besides the lack of (quantitative) insights to measure the relative difference between Malaysia and Australia in terms of cultural impact on environmental disclosure, the testing of the Hofstede-Gray-Framework stays fragmented given the lack of an exact operationalization of the accounting values. Further, a clear reference to the Hofstede-Gray-Framework is lacking in the argumentation, given the lack of formulated hypotheses linking both cultural dimensions and accounting values and the strong focus on linking environmental disclosure with either the cultural dimensions or the accounting values.

Adnan, van Staden and Hay (2010) tested the interaction of culture with governance structure and its influence on corporate social responsibility disclosure in four countries: China, India, Malaysia and the UK.[632] The authors hypothesized that quality and quantity of disclosed information is different across countries and is influenced by culture; the latter is hypothesized to be influenced by companies' governance structure and finally by government ownership. [633,634,635] The dependent variable was the quantity and quality of reporting obtained through content analysis of annual reports benchmarked with a checklist from Global Reporting Initiatives indicators – a framework for social responsibility reporting.[636] Independent variables were corporate social responsibility board committees, board compositions, government affiliation and culture. Control variables were corporate social responsibility assurance statement, Big 4 auditor, listing status, proportion of overseas subsidiaries and market

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[624] Cf. Yusoff/Lehman (2009), p. 13.
[625] Cf. Yusoff/Lehman (2009), p. 15.
[626] Cf. Yusoff/Lehman (2009), p. 16.
[627] Cf. Yusoff/Lehman (2009), p. 18.
[628] Cf. Yusoff/Lehman (2009), p. 19.
[629] Cf. Yusoff/Lehman (2009), p. 20.
[630] Cf. Yusoff/Lehman (2009), p. 21.
[631] Cf. Yusoff/Lehman (2009), p. 24.
[632] Cf. Adnan/van Staden/Hay (2010), p. 0 (unnumbered abstract page).
[633] Cf. Adnan/van Staden/Hay (2010), p. 6.
[634] Cf. Adnan/van Staden/Hay (2010), p. 7.
[635] Cf. Adnan/van Staden/Hay (2010), p. 8.
[636] Cf. Adnan/van Staden/Hay (2010), p. 10.

capitalization as proxy for firm size.[637] Multivariate regression analysis and robustness tests were calculated.[632,638] Significant effects could be found for China, a collectivist culture, where disclosure increases with the existence of respective board committees and Malaysia where disclosure is higher with government companies.[632] The results therefore show that the accounting value of secrecy can to a certain degree be mitigated by institutional arrangements in a country.

Schutte and Buys (2011) examined if the "accounting values considered to be important in the process of adopting a prescriptive global set of accounting standards may not be consistent with the accounting values required to adopt the IFRS for SMEs"[639]. A survey based on the Hofstede-Gray-Framework was conducted: The cultural dimensions scores of the students were collected separately and not taken from Hofstede (1980) and an assessment of the importance of accounting values when adopting a global set of standards and in particular in the case of SMEs was required. The sample consisted of accounting students from the UK and South Africa.[640] The authors found that students of both countries consider the four accounting values necessary to adopt a global set of accounting standards.[641] They further showed that different accounting values are an important factor when adopting IFRS in the SME sector being professionalism, flexibility and secrecy.[640,641] UK students would be "better equipped to deal with the unique nature of SMES due to a preference for professionalism and flexibility"[642].

Perera, Cummings and Chua (2012) recently provided a study on the cultural relativity of accounting professionalism in case of New Zealand and Samoa. Different models, including the Hofstede-Gray-Framework, have been used to explain the links between culture and accounting values.[643] The authors hypothesized that the larger the power distance, uncertainty avoidance and individualism in a society, the lower the degree of professionalism is expected to be.[644] The independent variable was the results from the Rokeach Value Survey conducted in both New Zealand and Samoa.[645] Hofstede's cultural dimensions were linked to these results and a factor analysis was calculated to group these values into Hofstede's three cultural dimension categories.[646] The results indicate major differences in accounting professionalism

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[637] Cf. Adnan/van Staden/Hay (2010), p. 14.
[638] Cf. Adnan/van Staden/Hay (2010), p. 15.
[639] Schutte/Buys (2011), p. 20.
[640] Cf. Schutte/Buys (2011), p. 19.
[641] Cf. Schutte/Buys (2011), p. 26.
[642] Schutte/Buys (2011), p. 26.
[643] Perera/Cummings/Chua (2012), p. 138.
[644] Perera/Cummings/Chua (2012), p. 143.
[645] Perera/Cummings/Chua (2012), p. 142.
[646] Perera/Cummings/Chua (2012), p. 144.

in both countries.[643] However, it needs to be stated that the focus of this study stops with linking values from Rokeach and cultural dimensions and then only makes suggestions with regards to the links to the accounting value of professionalism.

4.5.3.1   Conclusion

The analysis shows that the Hofstede-Gray-Framework is widely used in the scientific community for a number of purposes, e.g., research on internal auditing, tax, pension plans, and case studies on accounting reforms and development or adoption of IFRS.

Author (Year)	Title	Hypotheses	Findings	Independent Variables	Dependent Variables	Control Variables	Statistical Method	Number of countries
Powell/Strickl/Burnaby (1992)	Internal Auditing: The emergence of an international profession?	The study examines the degree of professionalism in the internal auditing practice of 11 countries. A survey has been conducted. Response s show wide compliance with the internal auditing standards and that professionalism is present in the countries surveyed. This result is not fully in line with the hypotheses, which were based on the professionalism and uniformity characteristics according to the					Descriptive statistics (percentages)	11
Chow/Chau/Gray (1995)	Accounting reforms in China: Cultural constraints on implementation and development	According to the Hofstede-Gray-Framework China's accounting system should be characterized by statutory control uniform practices, a conservative measurement approach and secrecy. Accounting reforms aim to develop the Chinese accounting system into an Anglo-Saxon oriented one. The authors show that China's culture and accounting values will represent a significant hurdle to this reform. The development of standards is argued to remain a governmental and legalistic function, accountants will remain rules focused						1 (China)
Doupnik/Salter (1995)	External environment, culture and accounting practice: A preliminary test of a general model of international accounting development	Testing the influence of the legal system, nature of the relationship between business enterprises and providers of capital, tax laws, inflation levels, level of education, level of economic development and the four cultural variables from Hofstede	The hypotheses were mainly confirmed	Legal system, nature of the relationship between business enterprises and providers of capital, tax laws, inflation levels, level of education, level of economic development	Four cultural dimension scores from Hofstede	None	Canonical analysis	50

Author (Year)	Title	Hypotheses	Findings	Independent Variables	Dependent Variables	Control Variables	Statistical Method	Number of countries
Pourjalali/Meek (1995)	Accounting and culture: The case of Iran	All four hypotheses according to Gray (1988)	All hypotheses were confirmed	Development of four cultural dimension driven by civil and external wars, inflation, embargos	Not explicitly provided	Not applicable	Not applicable (no empirical validation)	1 (Iran)
Bloom/Fuglister/Myring (1998)	The state of Accounting in Armenia: A case	The authors outline that Armenia has a rather bureaucratic government and secrecy is a tradition in business. The accounting system needs to be developed further in order to support the privatization and growth of its economy. Armenia is a rather individualist and short-term oriented society characterized by a high degree of power distance, uncertainty avoidance, and masculinity. With regards to the accounting values, the authors argue that professionalism is very low, uniformity, secrecy and conservatism are high. The authors think that the accounting system reflects the Armenian culture and recommend to adopt generally accepted business accounting standards.	The hypotheses were confirmed					1 (Armenia)
Craves/Goad Oliver (2000)	The influence of culture on pension plans	Culture is hypothesized to be a determining factor of the funding level of pension plans and the employer contributions to the plan	The hypotheses were confirmed	5 country groups	Funding level percentage, rate used to calculate the liability, receivables (non-interest bearing cash, employer contributions receivable, participant contributions receivable, income receivable), revenues received or receivable from employers	None	Pearson correlation, multivariate regression analysis, Kruskal Wallis test	5 country groups

Author (Year)	Title	Hypotheses	Findings	Independent Variables	Dependent Variables	Control Variables	Statistical Method	Number of countries
Kim (2001)	Determinants of financial reporting system: The case of South Korea			The financial reporting system is influenced by six key factors being government, accounting profession, economic factors, international influences, cultural factors and business enterprises. The authors argue that bureaucracy is linked to the confucianist culture. The strong collectivist characteristics lead to relative secrecy in financial disclosure			None	1 (Korea)
Dalawy/Merino/Conover (2002)	The conflict between IAS disclosure requirements and the secretive culture in Egypt			The authors argue that while Egyptian companies officially adopt IAS standards, non-compliance with certain IAS standards could be observed. The authors consider the accounting value secrecy as the main reason which occurs due to the relatively high degree of uncertainty avoidance and power distance in the Egyptian culture			Content analysis / interviews	1 (Egypt)
Sulaiman/Willett (2003)	Using the Hofstede-Gray-Framework to argue normatively for an extension of Islamic corporate reports			Previous research has considered the addition of the current value balance sheet and the value added statement as satisfying. The work of the authors supports this approach while they suggest adding social and environmental reporting as well			None	Islamic countries
Christopher/Hassan (2005)	Culture and corporate governance statement disclosure	The difference in power distance being relatively high in Malaysia and low in Australia implies that Qantas is disclosing more information than Malaysian Airlines	The hypothesis was confirmed	Power distance scores according to Hofstede	Item based list in order to undertake a qualitative comparison and constructive analysis of the corporate governance statements of both carriers	None	Qualitative analysis	2 (Malaysia and Australia)

Author (Year)	Title	Hypotheses	Findings	Independent Variables	Dependent Variables	Control Variables	Statistical Method	Number of countries
Richardson (2007)	The influence of culture on tax systems internationally: A theoretical and empirical analysis	Linking cultural dimensions and tax values	**The hypotheses were mainly confirmed**	Four cultural dimension scores from Hofstede	Four tax values	Degree of democracy, legal system	OLS regression analysis	43
Fang (2007)	On Accounting and Culture	Analysis of the link between accounting and culture in the case of China. Professionalism is rather low, whereas statutory control and uniformity and secrecy are high. The author suggest that these values might be subject to change with the economy further developing						1 (China)
Chatterjee/Hawkes (2008)	Does internet reporting improve the accessibility of financial information in a global world? A comparative study of New Zealand and Indian companies	Usage of the Hofstede-Gray-Framework to explain differences in the financial information provided by New Zealand and Indian companies on their websites	**The hypotheses were confirmed**	Country	Different disclosure items published at the home page level, in the investor information section or the number of annual reports being available (and others) differentiated by country	None	Descriptive statistics (percentages)	2 (New Zealand and India)
Saeens/Abdolmohammadi (2009)	Cultural dimension and professionalism and uniformity of internal audit practice	Uncertainty avoidance and power distance are negatively linked with internal auditing professionalism and institutional and in-group collectivism are negatively linked to internal auditing professionalism with assertiveness having no impact. Uncertainty avoidance, power distance, institutional and in-group collectivism are positively linked with uniformity in internal auditing practices	**The hypotheses were mainly confirmed**	Assertiveness, uncertainty avoidance, power distance and collectivism scores from Project GLOBE	Professionalism (age of audit community), uniformity (degree of compliance to a list of internal audit practices)	Legal system, economic development and different sources of financing have also been tested	Cluster analysis, ANOVA	Up to 45

Author (Year)	Title	Hypotheses	Findings	Independent Variables	Dependent Variables	Control Variables	Statistical Method	Number of countries
Yusoff/Lehmann (2009)	Culture and environmental reporting in Malaysia and Australia	Hofstede's cultural dimensions and Gray's accounting values were used as the framework in identifying and interpreting the cultural influences on environmental reporting practice	Questioning the relevance of the Gray-Hofstede-Framework for corporate environmental reporting	Four cultural dimension from Hofsted	Operationalization of accounting values lacking	None	Qualitative approach (Grounded Theory)	2 (Malaysia and Australia)
Adnan/van Staden/Hay (2010)	Does the Interaction of National Culture with Governance Structure Influence Quality and Quantity of CSR Disclosure?	Quality and quantity of disclosed information is different across countries and is influenced by culture, companies' governance structure which interacts with culture and by government ownership which interacts with culture	The hypotheses were partially confirmed	Corporate social responsibility board committees, board compositions, government affiliation and the four cultural dimension scores from Hofstede	Quantity and quality of reporting obtained through content analysis of annual reports benchmarked with a checklist from Global Reporting Initiatives indicators – a framework for social responsibility reporting	Corporate social responsibility assurance statement, Big 4 auditor, listing status, proportion of overseas subsidiaries, capitalization market	Multivariate regression analysis, robustness tests	4
Schutte/Buys (2011)	Cultural considerations and the implementation of IFRS: A focus on small and medium entities	Examination whether accounting values considered to be important in the process of adopting IFRS may not be consistent with the accounting values required to adopt the IFRS for SMEs	The hypothesis was confirmed	Survey based on the Gray-Hofstede-Framework (the cultural dimensions scores of the students were collected separately)	Assessment of the importance of accounting values when adopting a global set of standards and in the case of SMEs	None	Descriptive statistics	2 (UK and South Africa)
Perera/Cummings/Chua (2012)	Cultural relativity of accounting professionalism: Evidence from New Zealand and Samoa	The authors hypothesized that the larger the power distance, uncertainty avoidance and individualism in a society, the lower the degree of professionalism is expected to be	There are major differences in accounting professionalism in both countries	Results from the Rokeach Value Survey conducted in both New Zealand and Samoa	Professionalism	None	Factor analysis	2 (New Zealand and Samoa)

Table 4.5.3.1-1: Case studies and applications of the Hofstede-Gray-Framework: Overview of studies (own presentation)

4.5.4   Theoretical reviews of the Hofstede-Gray-Framework

Perera (1989) and Perera and Matthews (1990) proposed extensions to the Hofstede-Gray-Framework by postulating hypotheses between societal values (cultural dimensions) and accounting values.[647] Their main contribution is showing the influence of accounting values (professionalism, uniformity, conservatism, secrecy) on accounting practices (authority, application, measurement, disclosure).[647] Mathews (1990) think that accounting values may have a strong impact on overall accounting practice.[648] However, "he remained silent on the nature, magnitude and direction of the relationship between accounting values and practice. [...] Nevertheless, Perera's work must be credited as an attempt to develop ideas of cultural relevance which were then in a stage of infancy."[649] Perera (1989b) also suggests that societal values or cultural dimensions are impacted by economic variables. With regards to the societal dimensions, Perera and Matthews (1990) consider them as strongly affected by environmental factors; and state that uncertainty avoidance and individualism appear the most important cultural dimensions influencing accounting.[650] The influence of environmental factors is presented in the case of Germany and France who developed similar accounting systems influenced by legal prescriptions; this view is supported by the similar cultural dimensions scores of both countries.[651] They postulate that the development of accounting skills in developing countries is rather challenging due to the lack of adequate professional subcultures which results in the fact that governments take over the role as standard setter and auditor ensuring the reliability of financial statements.[648] According to Perera and Matthews (1990) also global organizations like the United Nations or the European Union influence accounting standards and support standardization leading to a reduction of national influences on accounting practices.[648]

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[647] Cf. Chanchani/MacGregor (1999), p. 11.
[648] Cf. Dahawy/Conover (2007), p. 9.
[649] Chanchani/MacGregor (1999), p. 12.
[650] Cf. Chanchani/MacGregor (1999), p. 12.
[651] Cf. Chanchani/MacGregor (1999), p. 11.

Societal Values	Accounting Values	Accounting Practice
• Individualism • Uncertainty Avoidance • Power Distance • Masculinity	• Professionalism • Uniformity • Conservatism • Secrecy	• Authority • Application • Measurement • Disclosure
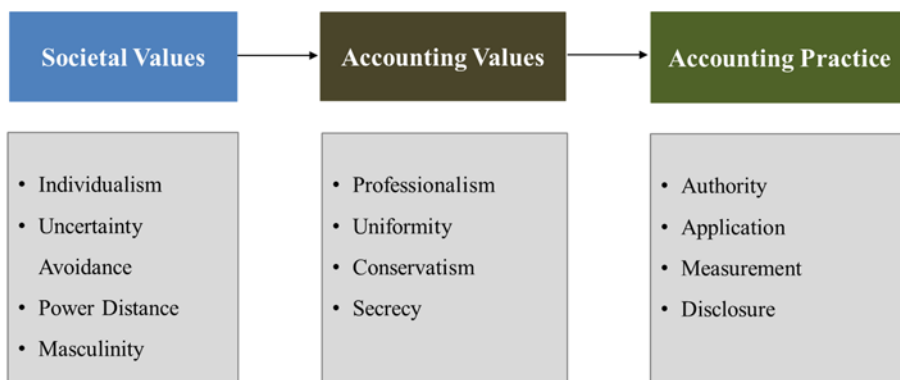
Figure 4.5.3.1-1: "Societal values and accounting practices adapted from Perera (1989)"[652]

Fechner and Kilgore (1994) proposed a modified framework to explain cultural influences on accounting. The authors present cultural factors as a variable which can have a moderating effect on the link between accounting values and accounting practice which is a difference to Perera (1989) who considers cultural factors as part of the societal values leading to changes in accounting values. [653] Also economic factors are proposed to have a moderating influence on the relation of accounting values / subculture and accounting practice.[653] Main criticism with regards to the work of Fechner and Kilgore is that they have not provided aspects of the different accounting practices and how they are expected to differ between countries; they provided no hypotheses and no operationalization of the variables used in the framework.[653]

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[652] Source: Chanchani/MacGregor (1999), p. 11.
[653] Cf. Chanchani/MacGregor (1999), p. 14.
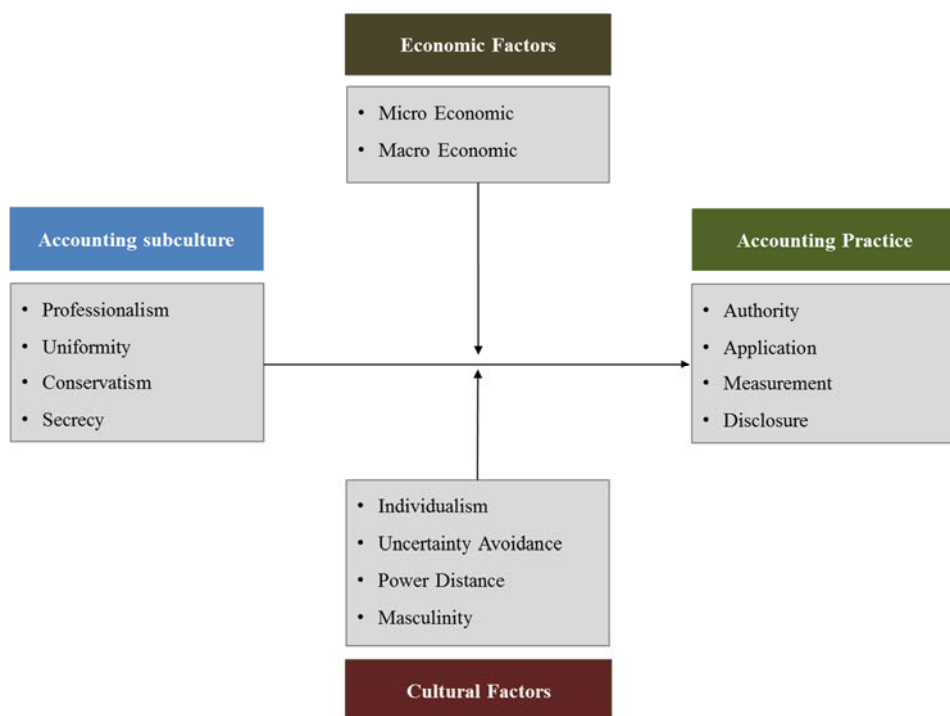
Figure 4.5.3.1-2: "Modified theoretical framework according to Fechner and Kilgore (1994)"[654]

Chanchani and McGregor (1999) published one of the first reviews on research on culture and accounting and structured their study into a pre-Hofstede-Gray-Framework, description of the Hofstede-Gray-Framework and post-Hofstede-Gray-Framework section. [655] The pre-Hofstede-Gray-Framework studies are categorized into antropological studies (e.g., Violet (1983)) and international classification studies (e.g., Müller (1967), Choi and Müller (1984), Nobes (1983) and Nair and Frank (1980). [656] The post-Hofstede-Gray-Framework studies section presents theoretical reviews (e.g., Perera (1989), Matthews and Perera (1990), Fechner and Kilgore (1994), Baydoun and Willett (1995)) and applications of the framework (e.g., Eddie (1991), Chow et al. (1995), Salter and Niswander (1995)).[657] Doupnik and Tsakumis consider

[654] Source: Chanchani/MacGregor (1999), p. 13.
[655] Cf. Chanchani/MacGregor (1999), p. 1.
[656] Cf. Chanchani/MacGregor (1999), p. 2.
[657] Cf. Chanchani/MacGregor (1999), p. 11.

their work as rather conceptual development related with less focus of review of empirical research on the framework.[655]

In 2004, Doupnik and Tsakumis provided one of the most comprehensive reviews of empirical studies on testing the Hofstede-Gray-Framework built on the work of Chanchani and MacGregor (1999). The authors assessed the validity of the framework by reviewing relevant empirical studies and provided suggestions for future research.[658] The authors could show that most studies find support for the secrecy hypothesis and suggest to conduct replication studies to examine if the influence of culture on disclosure has remained stable over time.[659] Only a few studies have tested the link between cultural dimensions and the other accounting values. The study of Salter and Niswander (1995) is considered the most solid so far given the methodological problems associated with the work of Eddie (1990) and Sudarwan and Fogarty (1996). [660] The authors suggested researchers to concentrate their work on conservatism: "Conservatism is the accounting value that affects the recognition and measurement of items that appear in financial statements and therefore would have the greatest implication for the cross-national comparability of financial statements. Professionalims, on the other hand, is the least important accounting value from a financial reporting perspective." [661] It was also recommended to question the applicability of the cultural dimension scores of Hofstede given their outdatedness and the fact that the data has been collected from non-accountants.[660] Accountants might have higher uncertainty avoidance scores than other professions.[660] Alternatives to Hofstede were also suggested, e.g., the cultural dimension model of Schwartz.[662] The authors admit: "We do not claim that Schwartz's cultural framework is necessarily more relevant for acounting than Hofstede's. However, this alternative set of quantitatively measured cultural dimensions gives accounting researchers an opportunity to empirically explore the links between accounting and different perhaps more refined dimensions that characterize national culture" [663] . Doupnik and Tsakumis also suggest to develop adequate measures for the dependent variables, e.g., accounting conservatism. [664] For the latter the authors proposed specific measurement techniques, as for example, reporting inventory at the lower of cost or market value, immediate write-off rather than capitalization of research and development costs or the recognition of losses on construction contracts as soon as they become probable.[664]

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[658] Doupnik/Tsakumis (2004), p. 2.
[659] Cf. Doupnik/Tsakumis (2004), p. 34.
[660] Cf. Doupnik/Tsakumis (2004), p. 35.
[661] Doupnik/Tsakumis (2004), p. 35.
[662] Cf. Doupnik/Tsakumis (2004), p. 44.
[663] Doupnik/Tsakumis (2004), p. 44.
[664] Cf. Doupnik/Tsakumis (2004), p. 36.

Chanchani and Willett (2004) presented research to operationalize and evaluate the empirical usefulness of all four accounting values proposed by Gray (1988). The authors showed the results from an accounting values survey with 16 questions related to Gray's accounting values conducted in New Zealand and India. [665] Each accounting value was represented by four different questions, e.g., conservatism was measured through the following questions: "Profits and assets should be valued downwards in case of doubt"[666], "market values are generally less relevant than historic costs",[666] "market values should be generally used instead of historic costs"[666] and "in times of rising prices LIFO instead of FIFO should be used in calculations as estimates"[666]. A multivariate analysis revealed some support for Gray's accounting values.[665] The authors consider professionalism as the most clearly defined construct, which is mostly true for uniformity as well. While appearing slightly confounded with the secrecy construct, secrecy also appears to be a well-defined construct.[665] Conservatism seems to be fragmented into two subdimensions being the measurement and disclosure aspect of the construct.[665] The study ends with suggestions for research on further not yet recognized accounting value constructs.[665]

In his paper "Towards an understanding of cultural influence on the international practice of accouting", Finch (2009) gave an introduction to the four accounting values identified by Gray (1988) and the idea to combine these accounting values with Hofstede's cultural dimensions. Gray (1998) formulated four hypotheses linking his accounting values with Hofstede's dimensions. Finch (2009) provided an overview on the empirical studies of the Hofstede-Gray-Framework being the work of Eddie (1990), Gray and Vint (1995), Salter and Niswander (1995), Sudarwan and Fogarty (1996), Zarzeski (1996), Wingate (1997), Jaggi and Low (2000) and Hope (2003).[667] Finch (2009) postulated that research has not "demonstrated satisfactorily any proof to support the hypotheses" [668] . Finch (2009) pointed out that understanding the impact of culture on accounting practice and financial disclosure is an important factor in international accounting harmonization.[667] Finch recommended the testing of "independent data on financial disclosure prepared under IFRS, as the dependent variable, against Hofstede's (1980) index score as the independent variable among IFRS jurisdictions. This research could potentially make a significant contribution toward better understanding the role and influence of culture in contemporary international accounting practice"[669].

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[665] Cf. Chanchani/Willett (2004), p. 125.
[666] Chanchani/Willett (2004), p. 151.
[667] Cf. Finch (2009), p. 5.
[668] Finch (2009), p. 5.
[669] Finch (2009), p. 6

Dima and Dima (2009) critized the Hofstede-Gray-Framework by highlighting issues around the measurement of cultural and accounting value variables. While the authors referenced their work to difficulties with IFRS implementation in Eastern European countries, they also intend to contribute to the general discussion on the connetion between culture and accounting regulation and practice.[670] With regards to accounting values, the authors proposed to describe accounting values from a functional perspective.[671] In the case of IFRS implementation, accounting values would then be defined based on the actual endorsement and not based on the description of the financial reporting system.[671] The authors also addressed the criticism around Hofstede's cultural dimensions, highlighted the problems with operationalization and its Western focused nature and suggest to consider alternative culture models.[672] Based on the World Values Survey, the authors adapted the questions with a strong influence on financial reporting for the purpose of their study.[673] The following cultural variables were set: Freedom of initiative, work significance, social hierarchy significance, social justice significance and risk aversion.[674] The accounting values are based on the cultural variables and were proposed as follows: functional conformism, functional transparency, hierarchical selectivity, social subordination and cautious approach.[675]

In her bachelor thesis Merinda (2011) examined if the cultural impact on accounting practices disappears after the introduction of IFRS. Through literature review, the author tried to find out if societal and accounting values influence the professional assurance of IFRS, differences in IFRS measurement and IFRS disclosure.[676] The author states that "even after IFRS adoption, many companies still preserved their national accounting practices in a way that minimizes as far as possible changes in the form of financial reporting that they applied under their previous national GAAPs"[677]. The author stated that "until now, there is no empirical study available that examines the influence of culture after the implementation of IFRS due to the recentness of IFRS adoption"[678], therefore the only way to address the research questions was to categorize some of the empirical studies on the Hofstede-Gray-Framework into studies which have used IAS / IFRS in their research design and other studies which not.[679] Studies with no IAS / IFRS in research design are the ones from Gray and Vint (1995), Zarzeski (1996), Wingate (1997), Robert and Salter (1999), Jaggi and Low (2000), Schultz and Lopez (2001)

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[670] Cf. Dima/Dima (2009), p. 2.
[671] Cf. Dima/Dima (2009), p. 9.
[672] Cf. Dima/Dima (2009), p. 10.
[673] Cf. Dima/Dima (2009), p. 11.
[674] Cf. Dima/Dima (2009), p. 12.
[675] Cf. Dima/Dima (2009), p. 13.
[676] Cf. Merinda (2011), p. 5.
[677] Merinda (2011), p. 4.
[678] Merinda (2011), p. 21.
[679] Cf. Merinda (2011), p. 21.

and Hope (2003).[680] Doupnik and Richter (2004) used IAS excerpts to assign numerical probabilities to verbal probability expressions,[681] Doupnik and Riccio (2004) asked Brazilian and US accountants to interpret verbal probability expressions used in IFRS[682] and finally, Tsakumis (2007) used a questionnaire on two litigation cases using IAS 37[683]. The author concludes that "after reviewing some empirical evidences, it can be anticipated that culture is still playing a role on accounting practices even when IFRS is applied"[684]. The cultural impact seems to be stronger with regards to disclosure (accounting value of secrecy) and weaker in the area of measurement (accounting value conservatism).[685]

Heidhues and Patel (2011) provided a critique on the Hofstede-Gray-Framework by using Germany as a case study. The authors emphasize the importance of research on the influence of culture on accounting in the move towards globalization and convergence;[686] however, "quantified and narrowly focused approaches"[687] as the Hofstede-Gray-Framework have dominated the research field over the last years. According to the authors, the Hofstede-Gray-Framework only gained "authority and prominence in international accounting research"[687], as subsequent researchers did not question the methodology.[686] Particularly important, is the consideration of contextual factors, e.g., political, legal, social and historical environments of countries.[686] The authors also criticized Gray's "simplistic explanation regarding the validity of Hofstede's cultural dimensions"[688] and subsequent researchers have not adequately challenged it and assessed its constraining effect to the Hofstede-Gray-Framework.[689] Further criticism was given with regards to the accounting values which Gray has derived from a review of accounting literature and practice, which only contrast Anglo-American accounting models with continental European ones.[690] The authors suggest that Gray (1988) might have relied on Hofstede's clustering, as previous researchers challenged the homogeneity of accounting practices in this cluster.[690] The authors also criticize the strong focus on quantification, categorization and measurement leading to overgeneralization and lack of relevant insights.[691] Using Germany as a case study, the authors applied a more holistic approach showing factors which

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[680] Cf. Merinda (2011), p. 24.
[681] Cf. Merinda (2011), p. 26.
[682] Cf. Merinda (2011), p. 27.
[683] Cf. Merinda (2011), p. 28.
[684] Merinda (2011), p. 32.
[685] Cf. Merinda (2011), p. 33.
[686] Cf. Heidhues/Patel (2011), p. 273.
[687] Heidhues/Patel (2011), p. 273.
[688] Heidhues/Patel (2011), p. 276.
[689] Cf. Heidhues/Patel (2011), p. 276.
[690] Cf. Heidhues/Patel (2011), p. 277.
[691] Cf. Heidhues/Patel (2011), p. 283.

distinct the German accounting model from other models beside cultural dimensions and accounting values, e.g., the cultural, economic, social and legal environment.[692]

4.5.4.1 Conclusion

The theoretical reviews of the Hofstede-Gray-Framework which have been published over the years can be summarized in the following broad categories: Framework review and enhancement, review of studies conducted on the framework and holistic criticism of the overall approach.

The work of Perera (1989) and Perera and Mathews (1990) as well as Fechner and Kilgore (1994) and Baydoun and Willett (1995) can be considered as theoretical reviews intended to enhance the overall framework in its very first years. In particular the work of Perera (1989) has been taken up by Radebaugh, Gray and Black (2006), who acknowledge that besides culture, international pressures may trigger accounting change. Such an international force for change has been the European Union who initiated a major program for accounting harmonization.

Chanchani and MacGregor (1999), Doupnik and Tsakumis (2004), Finch (2009) provided reviews of the empirical studies conducted so far and made suggestions for future research. Main takeaways from this section are the advice of Doupnik and Tsakumis (2004) future work on the accounting value of conservatism as it is the most important one for financial reporting and the least researched on. In this context they request the development of adequate measures for dependent variables in particular accounting conservatism. However, these suggestions became outdated as well missing the new concepts of conditional and unconditional conservatism. The same authors suggest replacing the independent variable (cultural dimension scores from Hofstede) with a less outdated and more appropriate measure in an accounting context. Finally, Finch (2009) and Merinda (2011) suggest further research with using data on financial disclosure prepared under IFRS as there is currently no study available that examines the impact of culture on accounting decisions following the implementation of IFRS.

The third area, represented by authors such as Heidhues and Patel (2011), Dima and Dima (2009) criticize the overall approach of the Hofstede-Gray-Framework. They consider the approach as too narrow, excluding too many contextual factors for the sake of a quantifiable, generalizable categorization model. The authors further criticize the non-reflected inclusion of Hofstede's cultural dimension into the framework by most researchers despite all drawbacks

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[692] Cf. Heidhues/Patel (2011), p. 284.

found by various academics. It can be seen from the overview on empirical studies provided above that many studies did only include a limited amount of contextual variables for a wide range of accounting values under examination. Further, only two studies made an attempt to replace the cultural dimension scores from Hofstede: Dima and Dima (2009) and Sarens and Abdolmohammadi (2009). The authors imply with their criticsm the questioning the whole idea and input variables of the Hofstede-Gray-Framework. This criticism can be addressed in different ways, e.g. with either rejecting the application of the framework itself, rebuilding it with a more adequate set of input variables or focusing on single cultural values and accounting values relations with adequate operationalizations of independent and dependent variables and inclusion of relevant contextual variables.

Author (Year)	Title	Findings
Perera (1989) and Perera/ Matthews (1990)	Towards a framework to analyse the impact of culture on accounting / The cultural relativity of accounting and international patterns of social accounting	Perera (1989) and Perera and Matthews (1990) proposed extensions to the Hofstede-Gray-Framework by postulating hypotheses between societal values (cultural dimensions) and accounting values. The main contribution is showing the influence of accounting values (professionalism, uniformity, conservatism, secrecy) on accounting practices (authority, application, measurement, disclosure). With regards to the societal dimensions, Perera and Matthews (1990) consider them as strongly affected by environmental factors
Fechner/ Kilgore (1994)	The influence of cultural factors on accounting practice	The authors present cultural factors as a variable which perhaps has a moderating effect on the link between accounting values and acconting practice; which is a difference to Perera (1989) who consider cultural factors as part of the societal values leading to changes in accounting values.[693] Also economic factors are proposed to have a moderating influence on the relation of accounting values / subculture and accounting practice
Baydoun/ Willett (1995)	Cultural relevance of Western accounting systems to developing countries	The study examines reasons why Western accounting systems are irrelevant for the needs of developing countries. At the case of the importation of the French unified accounting system into the Lebanon an amended version of the Hofstede-Gray-Framework is proposed
Chanchani/ MacGregor (1999)	A synthesis of cultural studies in accounting	One of the first reviews on research on culture and accounting and structured their study into a pre-Hofstede-Gray-Framework, description of the Hofstede-Gray-Framework and post-Hofstede-Gray-Framework section

[693] Cf. Chanchani/MacGregor (1999), p. 14.

Doupnik/ Tsakumis (2004)	A critical review of tests of Gray's theory of cultural relevance and suggestions for future research	The authors assess the validity of the framework by reviewing relevant empirical studies and provide suggestions for future research.[694] The authors could show that most studies find support for the secrecy hypothesis and suggest conducting replication studies to examine if the influence of culture on disclosure has remained stable over time.[695] Only a few studies have tested the link between cultural dimensions and the other accountig values
Chanchani/ Willett (2004)	An empirical assessment of Gray's accounting value constructs	A multivariate analysis revealed some support for Gray's accounting values. The authors consider professionalism as the most clearly defined construct, which is mostly true for uniformity; secrecy also appears to be a well-defined construct.[665] Conservatism seems to be fragmented into two subdimensions being the measurement and disclosure
Finch (2009)	Towards an understanding of cultural influence on the international practice of accounting	Finch (2009) provided an overview on the empirical studies of the Hofstede-Gray-Framework being the work of Eddie (1990), Gray and Vint (1995), Salter and Niswander (1995), Sudarwan and Fogarty (1996), Zarzeski (1996), Wingate (1997), Jaggi and Low (2000) and Hope (2003). Finch recommends the testing of "independent data on financial disclosure prepared under IFRS, as the dependent variable, against Hofstede's (1980) index score as the independent variable among IFRS jurisdictions. This research could potentially make a significant contribution toward better understanding the role and influence of culture in contemporary international accounting practice"[669]

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Dima/Dima (2009)	A discussion on new cultural and accounting variables and IFRS's implementation: Empirical study on a sample of central and eastern European countries	Dima and Dima (2009) criticize the Hofstede-Gray-Framework by highlighting issues around the measurement of cultural and accounting value variables. With regards to accounting values, the authors propose to describe accounting values from a functional perspective. The authors also address the criticism around Hofstede's cultural dimensions, highlight the problems with operationalization and its Western focused nature and suggest to consider alternative culture models
Merinda (2011)	Cultural impact on accounting practices: Does it disappear after the introduction of IFRS?	Through literature review, the author tries to find out if societal and accounting values influence the professional assurance of IFRS, differences in IFRS measurement and IFRS disclosure. The author concludes that "after reviewing some empirical evidences, it can be anticipated that culture is still playing a role on accounting practices even when IFRS is applied"[684]
Heidhues/ Patel (2011)	A critique of Gray's framework on accounting values using Germany as a case study	The authors criticize the focus on quantification, categorization and measurement leading to overgeneralization and lack of relevant insights. Using Germany as a case study, the authors applied a more holistic approach showing factors which distinct the German accounting model from other models beside cultural dimensions and accounting values, e.g., the cultural, economic, social and legal environment

Table 4.5.4.1-1: Theoretical reviews of the Hofstede-Gray-Framework: Overview of studies (own presentation)

[694] Cf. Doupnik/Tsakumis (2004), p. 2.
[695] Cf. Doupnik/Tsakumis (1999), p. 34.

4.5.5   Conclusion

The previous sections provided a comprehensive overview of the studies on the Hofstede-Gray-Framework. Given the amount of research on the framework, theoretical reviews can be valuable contributions to provide critical status updates for the scientific community. Earlier reviews have been published by Doupnik and Tsakumis (2004) and Finch (2008) who only reviewed twelve and eight studies, respectively. A review in the volume of the section in this thesis has not been published so far and does not only cover tests of the overall framework, but also examinations of single hypotheses within and applications (e.g., of case studies) and theoretical reviews of the framework.

According to Radebaugh, Gray and Black (2006), research conducted so far indicates support for "the significance of culture as an influential factor in the development of accounting"[387]. This is also confirmed by Sarens and Abdolmohammdi who state: "While significant variation has been found in the results using Gray's (1988) framework, overall, these studies show that cultural differences have significant effects on the development of accounting and auditing professions"[696]. We could therefore conclude that "Accountants are a product of their environments and to some lesser degree disciples of their profession."[697] This statement does not contradict the conclusions of other authors who consider the results of the research examining the empirical validity of the Hofstede-Gray-Framework as mixed.[698] This is actually in line with the extensive overview, which has been provided as part of this thesis. While the overview shows mixed results for the Hofstede-Gray-Framework, there were only two studies in which all hypotheses related to cultural impact on accounting practices were rejected. These findings go in parallel with the research designs of the studies on the Hofstede-Gray-Framework. In the early years after the publication of the Hofstede-Gray-Framework comprehensive studies of the whole framework have been conducted with mixed results. Afterwards more and more studies have chosen to examine particular hypotheses on relations between cultural dimensions and accounting values. The overall research design became more diverse and flexible. Despite new publications on the Hofstede-Gray-Framework, many researchers stuck to the intital hypotheses proposed by Gray (1988) including four cultural dimensions only and did not use the new cultural dimension of long- versus short-term orientation, some of them built composite independent variables, replaced their independent variable by other measures or even separated their groups by nationality only. The sixth cultural dimension has neither been included in any of the studies on the framework nor included in an updated version of the Hofstede-Gray-

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[696] Sarens/Abdolmohammadi (2009), p. 7.
[697] Fechner/Kilgore (1994), p. 267.
[698] Cf. Noravesh/Dilami/Bazaz (2007), p. 255.

Framework by Radebaugh, Black and Gray or any other author. Given such open items, inconsistencies, the more flexible formulation of the hypotheses in the Hofstede-Gray-Framework by Radebaugh et al. (2006) and criticsm on the validity of the overall framework by Heidhues and Patel (2011), the focus can now be moved to a discussion of linking single relationships of accounting values with cultural dimensions. Research design targeting single cultural values and accounting values relations allow research question based operationalization of independent and dependent variables and inclusion of relevant contextual variables. While the Hofstede-Gray-Framework would be kept as a conceptual basis, the increased degree of flexibility might lead to potential improvement of the research design and the validity of results. One obvious example would be the replacement of for example the cultural dimensions of Hofstede.

These suggestions have been brought up by Doupnik and Tsakumis (2004) as well who argue that "substantial opportunities for research continue to exist as many of the relationships proposed in Gray's framework have yet to be adequately tested. Furthermore, they suggest that alternatives to Hofstede's dimensions might be explored such as those developed more recently by Schwartz (1994), which are based arguably on more generalizable samples, with a view to exploring the links between accounting and culture further. A greater use of the experimental method is also proposed as a way to more closely investigate the cause/effect relationship between culture and the accountant's application of financial reporting rules"[699].

Following Doupnik and Tsakumis (2004) asking for an effort to test specific relationships in the Hofstede-Gray-Framework and for alternatives to Hofstede's dimensions, an alternative to the cultural dimension uncertainty avoidance will be proposed. A country ranking derived from survey on financial risk perception will be developed on the basis of a questionnaire from Weber and Hsee (1998). Not only a solution for the above mentioned constraints of the Hofstede data would be provided, but also the fact that Hofstede data is not derived from a questionnaire related to financial decisions will be addressed.

This thesis will therefore respond to the request from Doupnik and Tsakumis made back in 2004 to test the relationships proposed in the Hofstede-Gray-Framework. While the traditional framework might experience further updates, e.g., for the sixth cultural dimension from Hofstede, a renewed Hofstede-Gray-Framework could be rebuilt at a later stage following the examination of all proposed single relationships. This might address some of the criticism from Heidhues and Patel around the quality of independent, dependent and contextual variables,

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[699] Cf. Radebaugh /Gray/Black (2006), p. 52.

while the criticism with regards to quantification and categorization obviously persists. Alternatively, the results of the test of particular relationships could stand for themselves without reintegration in the Hofstede-Gray-Framework implying a usage of the initial framework as intellectual source for cultural impact on accounting research.

This thesis will further respond to the request of Finch (2009) who is proposing the testing of "independent data on financial disclosure prepared under IFRS, as the dependent variable, against Hofstede's (1980) index score as the independent variable among IFRS jurisdictions. This research could potentially make a significant contribution toward better understanding the role and influence of culture in contemporary international accounting practice".[669] This idea has also been brought up by Merinda (2011), who stated that there are no studies available examining if the cultural impact on accounting practice still persists under IFRS. Salter and Lewis (2011) state that differences between countries in financial reporting practices are not going away with a number of studies showing that significant differences remain.[700] The authors further outline: „While it can be argued that as IFRS based financial statements become more common this will change, Doupnik and Tsakumis (2004) point out that the flexibility of interpretation contained within IFRS and the ability of any country to carve out unacceptable portions of particular IFRS standards will continue to lead to different accounting outcomes among countries"[701].

IFRS application has significantly increased around the world. According to the IFRS website, 105 of 130 jurisdictions worldwide require IFRS for all or most listed companies and financial institutions.[21]

- "Fourteen jurisdictions permit, rather than require, IFRS: Bermuda, Cayman Islands, Guatemala, Honduras, India, Japan, Madagascar, Nicaragua, Panama, Paraguay, Singapore, Suriname, Switzerland, Yemen (Yemen also requires IFRS for financial institutions);
- Three jurisdictions require IFRS for financial institutions: Saudi Arabia, Uzbekistan, Yemen;
- Two jurisdictions are in process of adopting IFRS in full: Indonesia, Thailand; and
- Seven jurisdictions use national or regional standards: Bolivia, China, Egypt, Guinea-Bissau, Macao, Niger, United States."[702]

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[700]Cf. Salter/Lewis (2011), p. 133.
[701] Salter/Lewis (2011), p. 133.
[702]IFRS (2014), internet: http://www.ifrs.org/Use-around-the-world/Pages/Analysis-of-the-IFRS-jurisdictional-profiles.aspx.

4.5.5.1   Concluding remarks on the specific importance of accounting value
conservatism and the uncertainty avoidance scale

Gray (1988) says that conservatism "would seem to be the most significant accounting value dimension"[378]. Doupnik and Tsakumis (2004) confirm this statement and add that the accounting value of conservatism remains relatively untested; the authors suggest "that researchers concentrate their efforts on conservatism. Conservatism is the accounting value that affects the recognition and measurement of items that appear in financial statements and therefore would the greatest implications for the cross-national comparability of financial statements"[661]. Doupnik and Riccio (2006) argue that out of the four accounting values "conservatism and secrecy most directly affect the nature of the information provided in corporate financial reports through their influence on the measurement of assets and profits (conservatism) and the disclosure of information (secrecy)"[703]. Heidhues and Patel (2011) consider the accounting values of secrecy and conservatism as the most important ones due to their influence on recognition, measurement and disclosure.[704]

The importance of the uncertainty avoidance dimension within the Hofstede-Gray-Framework is significant. Gray (1988) says that the accounting value of conservatism can be most closely linked with the cultural dimension of uncertainty avoidance: "A preference for more conservative measures of profits is consistent with strong uncertainty avoidance following from a concern with security and perceived need to adopt a cautious approach to cope with the uncertainty of future events."[378] The significance of the uncertainty avoidance scale is shown in the table below summarizing all studies conducted on the accounting value conservatism. This table clearly reflects that uncertainty avoidance almost consistently relates significantly positively to the accounting value of conservatism; no other cultural dimension has such a strong influence on conservatism.

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[703] Doupnik/Riccio (2004), p. 238.
[704] Cf. Heidhues/Patel (2011), p. 274.

Study	Year	Sample and methods	Uncertainty Avoidance	Individ-ualism	Mascu linity	Power Distance
Gray	1988	Theoretical	+	-	-	NA
Eddie	1990	No real data 13 Asian-Pacific countries	+	-	-	NS
Salter/ Niswander	1995	Secondary data from 29 countries Auditors opinion on a selection of practices	+	NS	-	NS
Sudarwan/ Fogarty	1996	Changes in accounting practice in Indonesia	+	+	NA	+
Schultz/ Lopez	2001	Individual auditors decisions on warranty accruals in France, Germany, US	+	NA	NA	NA
Doupnik /Richter	2004	Quasi experiment on likelihood of expense recognition by individuals in the US and Germany	+	NA	NA	NA
Salter/ Lewis	2011	Shades of Gray: An empirical examination of Gray's model of culture and income measurement in 14 countries	NS	-	NS	-

Salter/ Kang/Gotti /Doupnik	2013	Role of social values, accounting values and institutions in determining accounting conservatism in 22 countries	+	NA	-	NA
Predom- inant result			+	-/NA	-	NA

Table 4.5.5.1-1: Empirical studies on accounting conservatism in the context of the Hofstede-Gray-Framework (own presentation based on Salter & Lewis, 2011)[705]

All mentioned studies have been explained in the detail in the above section. Therefore I would like to focus on the main areas of criticism with regards to these studies representing the research gaps to be filled:

The first area of criticism is the number of countries included in the studies on the accounting value conservatism. The number of countries covered ranges from one (Sudarwan and Fogarty, 1996) to 29 (Salter and Niswander, 1995) with the majority of the studies covering only a small number of countries. While a sample of 20 to 30 countries is satisfying; given the far larger number of countries covered by Hofstede (1980) there seems to be room for improvement. This area of criticism will be addressed in this thesis.

The second area of criticism is the quality of dependent variables. The measurement techniques of many studies on accounting conservatism have been widely criticized, in particular the ones of Eddie (1999) and Salter and Niswander (1995) which capture only a part of the conservatism existing in the country's accounting system.[706] Also the more recent studies can be challenged for the quality of the dependent variables. Salter and Lewis (2011) use Gray's index of conservatism from 1980 as only dependent variable, which does not reflect the currently recommended measures of unconditional conservatism. Salter et al. (2013) use the Basu (1997) model as only measure of unconditional conservatism. This model has been subject to much criticism, which will be explained and outlined the following section of this thesis.

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[705] Source: Salter/Lewis (2011), p. 134.
[706] Cf. Salter/Lewis (2011), p. 134.

This thesis will apply state of the art measures of unconditional conservatism and will not rely on one single measure.

The third area of criticism is the quality of independent variables. Sudarwan and Fogarty (1996) used macroeconomic indicators as proxies for the cultural dimensions of Hofstede (1988), which has been criticized for being a mix-up of cause and effect.[706] Other studies did not use the cultural dimensions as independent variables and only looked at the national differences in response, as for example Schulz and Lopez (2001). [706] Also the more recent studies from Salter and Lewis (2011) and Salter et al. (2013) did not address this issue. This thesis will present an alternative measure for uncertainty avoidance based on a financial risk questionnaire which can be considered a more valid instrument in the context of accounting decisions than a scale derived from an employee survey.

The fourth area of criticism is data collection. The majority of the studies uses data collected in quasi-experiments (Schulz and Lopez, 2001; Doupnik and Richter, 2004), secondary data (Salter and Niswander, 1995) or the data collection process is subject to methodological issues (Eddie, 1990). [706] Salter and Lewis (2011) used data from SEC Form 20-F, which are prepared under US GAAP or under generally accepted accounting principles of another jurisdiction with a reconciliation of some items to US GAAP. The paper from Salter et al. (2013) is actually the only paper using non-adjusted disclosed data. This thesis will use externally disclosed data downloaded from Bloomberg.

The fifth area of criticism is the inclusion of control variables in the research design. Older studies often do not take into account the institutional factors influencing accounting decisions being the size of the domestic stock market and a country's marginal tax rate as shown by Salter and Niswander (1995).[706] This has improved significantly. It seems that the least common denominator for studies in the field of accounting conservatism are the tax rate and market capitalization or importance of the equity market as applied with Salter and Lewis (2011). These control variables will also be included in the research design of this thesis.

The last area for discussion, which represents a research gap, relates to the fact that the majority of the studies was conducted before the adoption of IFRS in the European Union in 2004. Also in studies after 2004, the mentioning of IFRS in the research design is limited to case studies, which include questions on specific standards and survey participants are asked to do specific assessments, e.g., Doupnik and Richter (2006). Salter and Lewis (2011) used SEC Form 20-F, which might lead to adjustments of data as disclosed under national GAAP with US GAAP for reconciliation purposes. Also the most recent study on the accounting value

conservatism, published by Salter, Kang, Gotti and Doupnik (2013) does not separate jurisdictions who did not adopt IFRS (e.g., United States, Japan, Thailand) from countries who adopted them (e.g., Denmark, Netherlands). Ding, Jeanjean and Stolowy (2005) are the only researchers mentioning IFRS as part of their research design as they examine divergence to them. This opens a research gap allowing the examination of the persistence of a cultural impact on accounting practices following the adoption of IFRS with countries who have not adopted the standard so far being excluded from the sample.

5. Conservative Accounting: Definitions, Explanation and Measurement

5.1 Introduction

Accounting conservatism has been observed for many centuries, although accounting regulators attempted to ban it for the sake of neutrality of information.[707] Basu (1997) argues that the influence of conservatism on accounting practice has been observed for at least 500 years and Sterling (1970) even considers it the most influential principle of valuation in accounting.[708]

According to Naves (2009) recent academic research in conservative accounting goes into three directions or streams: "The first stream of research aims at assessing the impact of conservative reporting standards on real economic decisions, e.g., its role in contracting. It addresses the basic question of whether more or less conservatism in accounting is economically desirable. The second stream is concerned with advancing the measurement of conservatism. It addresses limitations of current conservatism measures to sufficiently reflect accounting conservatism. The third stream seeks to incorporate conservatism in accounting based valuation models. It addresses the role of conservatism in valuation."[709]

5.2 Definitions

Watts (2003a) defines accounting conservatism "as the differential verifiability required for recognition of profits versus losses"[710]. Watts (2003a) further outlines that the extreme form of accounting conservatism "is the traditional conservatism adage: 'anticipate no profit, but anticipate all losses'. The adage is also interpreted as the accountant's tendency to require a higher degree of verification to recognize good news as gains than to recognize bad news as losses"[711]. This type of accounting conservatism is defined as conditional conservatism.[712] Other names for this type of accounting conservatism are income statement conservatism, ex post conservatism and news dependent conservatism.[712] In other words it arises because "accounting principles require a higher verification for the recognition of good compared to bad news"[713]. Examples for conditional conservatism are lower of cost or market accounting

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[707] Cf. Watts (2003a), p. 1 (synopsis).
[708] Cf. Watts (2003a), p. 2.
[709] Naves (2009), p. 1.
[710] Watts (2003a), p. 1 (synopsis).
[711] Cf. Basu (1997), p. 7.
[712] Cf. Zhang (2008), p. 7.
[713] Naves (2009), p. 2.

for inventories, impairment accounting for tangible and intangible assets, asset write-downs and timely recognition of economic losses (asymmetric timeliness of earnings).[714],[715]One could conclude that conditional conservatism leads to an increased informative value of the income statement for risk averse share- and stakeholders.[714]

Penman and Zhang (2002) provide the following definition of conservative accounting: "Choosing accounting methods and estimates that keep the book values of net assets relatively low."[716] This definition well reflects the second type of accounting conservatism called unconditional conservatism or balance sheet conservatism, ex ante conservatism, news independent conservatism.[712] This type of accounting conservatism refers to the selection of conservative accounting methods.[714] "Examples are immediate expensing for R&D costs, LIFO inventory valuation and the use of accelerated depreciation method. This type of conservatism lowers asset values, and such a balance sheet effect persists over time. However, its income statement effect is reversible, from understating earnings in the early years of an asset's life to eventually overstating earnings in the later years."[717]

Both types of accounting conservatism result in the understatement of assets relative to economic values. Zhang (2008) outlines: "The cumulative effect of both types of conservatism is reflected as persistent understatement of net asset values on the balance sheet. Such realized conservatism creates accounting slack that constrains further application of conditional conservatism. [...] Suppose a firm has a very low book value of an asset compared to its economic value, either caused by past asset write-downs or by adopting very conservative accounting methods or both. When there is a negative shock, unless the shock is sufficiently big so that the economic value drops below the book value, the firm will not recognize the bad news in the financial statement. Therefore, over a wide range of economic shocks conditional conservatism would not be observed for a firm. Moreover, even if the negative shock was big enough to trigger a write-down, the magnitude of the write-down for such a firm would be smaller than for firms with less accounting slack."[718] This can lead to analyst earnings forecast errors.[712]

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[714] Cf. Zhang (2008), p. 6.
[715] Cf. Naves (2009), p. 2.
[716] Cf. Huang/Tian/Wirjanto (2011), p. 5.
[717] Zhang (2008), p. 6.
[718] Zhang (2008), p. 7.

5.3   Explanation

Explanations for accounting conservatism are contracting, shareholder litigation, taxation, and accounting regulation.[707]

One explanation for conservative accounting arising is due to its contracts with various parties.[719] The contracting explanation is "considered a means of addressing moral hazard caused by parties to the firm having asymmetric information, asymmetric payoffs, limited horizons and limited liability"[720]. Watts (2003a) further argues that "in practice conservatism more than offsets managerial basis, and in average defers earnings and understates cumulative earnings and net assets. In contracts these effects increase firm value because they constrain managements' opportunistic payments to themselves and other parties, such as shareholders. The increased firm value is shared among all parties to the firm increasing everyone's welfare. In that sense, conservatism is an efficient contracting mechanism."[721]. The author further outlines "that conservatism is likely to be an efficient financial reporting mechanism in the absence of contracting. […] In addition to conservatism offsetting managerial bias in financial reporting, non-contracting parties in society also value conservatism's constraint on opportunistic payments to managers and other contracting parties. Given that, conservatism and the net asset bias it generates are probably necessary components of efficient financial reporting that are 'good' and not 'bad' as implied by various statements by accounting regulators and academics"[721]. It needs to be noted that Watts is one of the few authors considering accounting conservatism as a valuable phenomenon whereas most others including accounting regulators do not.

Shareholder litigation also leads to accounting conservatism. Watts (2003a) states that "litigation also produces asymmetric payoffs in that overstating the firm's net assets is more likely to generate litigation costs for the firm than understating net assets. By understating net assets, conservatism reduces the firm's expected litigation costs"[721]. Watts (2003a) further outlines that "the asymmetry in litigation costs is consistent with the legal system evolving to constrain opportunistic payments to managers and other parties to the firm"[722].

Tax and timeliness are also possible explanatory factors for conservative accounting.[723] "Asymmetric recognition of gains and losses enables managers of profitable firms to reduce the

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[719] Cf. Watts (2003a), p. 3.
[720] Watts (2003a), p. 3.
[721] Watts (2003a), p. 4.
[722] Watts (2003a), p. 5.
[723] Cf. Watts (2003a), p. 5.

present value of taxes and increase the value of the firm. Delaying the recognition of revenues and accelerating the recognition of expense defers tax payments."[722]

5.4   Measurement

Watts (2003b) provides three types of measurement for conservative accounting commonly used in research: Net asset measures, earnings and accrual measures and earnings/stock returns relation measures.[724]

- Net asset measures: The market value of the assets and liabilities making up net assets is subject to changes.[724] In case of accounting conservatism, increases in asset values „that are not verifiable are not recorded while decreases of similar verifiability are recorded.“[725] A measure for this understatement is the book to market ratio.[724] A lower coefficient is a sign of accounting conservatism: "The more book value of net assets is biased downward […], the more conservative the firm's accounting"[726].

- Earnings and accrual measures: Given unverifiable increases in asset values may only be reported in future periods but not in the ones they occur, accounting conservatism implies that gains are more persistent than losses.[727] However, losses with the same verifiability as the unverifiable gains tend to be recognized when they occur leading to "a lump sum drop in earnings at the time of the loss rather than a flow of reduced earnings in the future"[728].[727] Consequently, losses tend not to occur again in future periods in average while positive earnings are likely to persist.[727] Therefore, researchers have used earnings changes as a measure of accounting conservatism. The asymmetrical treatment of gains and losses also leads to an asymmetry in accruals.[729] "Losses tend to be fully accrued while gains do not. This causes accruals to tend to be negative and cumulated accruals to be understated. As a result negative periodic net accruals and negative cumulative accruals (cumulated over periods) are used as measures for conservatism."[730] Givoly and Hayn (2000) argue that "a consistent predominance of negative accruals across firms over a long period is, ceteris paribus, an indication of conservatism, while the rate of accumulation of

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[724] Cf. Watts (2003b), p. 2.
[725] Watts (2003b), p. 2.
[726] Watts (2003b), p. 4.
[727] Cf. Watts (2003b), p. 5.
[728] Watts (2003b), p. 2.
[729] Cf. Watts (2003b), p. 6.
[730] Watts (2003b), p. 5.

negative accruals is an indication of the shift in the degree of conservatism over time"[731].

- Earnings/stock return relation measures: Watt (2003b) argues that asset value changes are reflected in the stock price when they occur.[732] Furthermore, accounting losses are reported timely, whereas gains are not.[733] This leads to the fact that stock returns and earnings reflect losses in the same period with stock returns reflecting gains earlier than earnings.[733] Consequently the stock return denominator tends to be higher and the earnings numerator rather lower leading to an overall lower coefficient in the case of accounting conservatism.

Wang et al. (2009) provide a review of the five accounting measures which have been widely used in conservative accounting research. According to Wang et al. (2009), these measures are asymmetric timeliness (Basu, 1997), asymmetric-cash-flow-to-accruals, Book-to-Market ratio, hidden reserves and negative accruals. The authors conclude that the construct validity of these measures is rather weak and that measuring accounting conservatism remains a challenge.[734] Callen, Segal and Hope (2010) provide further measures for (conditional) conservatism by constructing a conservatism ratio (CR) defined as the ratio of current earnings shock to earnings news triggered by the criticism of Basu's timeliness measure.[735] The authors could show "that higher CR firms have more leverage, increased volatility of returns, more incidence of losses, more negative accruals, and increased volatility of earnings and accruals, consistent with the literature on conservative accounting"[736].

Other studies examine the degree of accounting conservatism with the choice among alternative accounting methods (e.g., Basu, 2005 or Bowen, DuCharme, and Shores, 1995). Easton and Pae (2004) found the following proxy indicators for accounting conservatism: The current market to book ratio (which tends to be higher in the case of conservatism, as all forms of conservative accounting lead to an understatement of the book value);[737] and the application of LIFO as inventory valuation method.[738] Further, the authors found an industry effect, with the pharmaceutical industry being the most conservative.[739] In their study on the effects of accounting conservatism on stock market valuation of operating assets, Ahmed, Morton and

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[731] Givoly/Hayn (2000), p. 292.
[732] Cf. Watts (2003b), p. 7.
[733] Cf. Watts (2003b), p. 8.
[734] Cf. Wang/Ó hÓgartaigh/van Zijl (2009), p. 165.
[735] Cf. Callen/Segal/Hope (2010), p. 145.
[736] Callen/Segal/Hope (2010), p. 145.
[737] Cf. Easton/Pae (2004), p. 506.
[738] Cf. Easton/Pae (2004), p. 506.
[739] Cf. Easton/Pae (2004), p. 509.

Schaefer (2000) use the following accounting conservatism proxies: depreciation rate, R&D sales, advertising/sales and a LIFO indicator variable.[740] The LIFO inventory valuation method is a sign of conservatism: "As input prices rise, LIFO results in more conservative income and inventory (operating asset) values relative to other inventory methods"[741].

The accounting conservatism measures can be assigned as follows to the two different types of accounting:

- Conditional conservatism: Lower cost or market accounting for inventories, impairment accounting for tangible and intangible assets, asset write-downs, timely recognition of economic losses ("asymmetric treatment of contingent losses versus contingent gains"[742]), asymmetric-cash-flow-to-accruals
- Unconditional conservatism: Net asset measures, book to market ratio[743], LIFO versus FIFO inventory valuation, immediate expensing for advertising and R&D costs, historical cost accounting for positive net present value project[744], hidden reserves, negative accruals

5.5   Conclusion

It could be shown that there is a considerable amount of accounting conservatism measures available to assess two types of accounting conservatism: Conditional and unconditional conservatism. Wang et al. state in their paper on "Measures of accounting conservatism: A construct validity perspective" the following: "An interesting feature of the conservatism literature is the variety of measures of conservatism in the literature, and the apparent lack of consistency among these measures"[745]. As all of these measures have their weaknesses, Wang et al. (2009) consider it important to use multiple measures of conservatism in the same study.[746]

Wang et al. (2009) criticize in particular the asymmetric timeliness measure of Basu (1997).[747] It is the "most frequently examined measure"[748] from a validation viewpoint, but

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[740] Cf. Ahmed/Morton/Schaefer (2000), p. 271.
[741] Ahmed/Morton/Schaefer (2000), p. 279.
[742] Pae (2007), p. 684.
[743] Cf. Pae (2007), p. 688.
[744] Cf. Pae (2007), p. 684.
[745] Wang/Ó hÓgartaigh/van Zijl (2009), p. 2.
[746] Cf. Wang/Ó hÓgartaigh/van Zijl (2009), p. 44.
[747] Cf. Wang/Ó hÓgartaigh/van Zijl (2009), p. 32.
[748] Wang/Ó hÓgartaigh/van Zijl (2009), p. 32.

with regards to all subtypes of validity (convergent, concurrent, statistical validity and internal consistency) the measure has been evaluated "and the results are mainly negative"[748].

Given asymmetric timeliness is the most important measurement technique for conditional conservatism but has been widely criticized; in this thesis, the focus will be laid on unconditional conservatism. The rationale of unconditional conservatism ("using the accounting standards reducing the profit independent from current news"[749]) in comparison to conditional conservatism ("timely recognition of bad news to good news in profit"[749]) rather fits to the original purpose of the Gray-Hostede-Framework. The framework was proposed "to explain and predict international differences in accounting systems and patterns of accounting development internationally"[750] clearly indicating that the explanatory power of the framework is not related to news dependent decisions but to stable patterns observable in different societal settings. This is in line with the reasoning of Salter and Lewis (2011) who consider the definition of unconditional conservatism being almost identical to the definition of accounting conservatism by Gray (1988).[700]   Following this rationale, the following measures of unconditional accounting conservatism will be applied in this thesis:

- Book to market ratio: The use of the book to market ratio is based on the assumption that a "conservative accounting system tends to depress the net book values of a firm relative to the firm's 'true' economic value"[751]. Therefore a lower book to market ratio (or a higher market to book ratio) implies relatively higher accounting conservatism (vice versa).[752] According to Wang et al. (2009) studies have shown a major advantage of the book to market ratio in comparison to the asymmetric timeliness (Basu, 1997) and asymmetric-cash-flow-to-accruals measures: It is firm specific, whereas the measures mentioned before fail to do so.[753] In addition, the measure has been used in international accounting research before, with Lara and Mora (2004) having shown that continental Europe firms have higher degrees of unconditional conservatism than UK firms.[753] Wang et al. (2009) conclude that a drawback of the measure is that it is used as proxy for other concepts as well, e.g., default risk, which leads to possible confounding and interpretation problems.[753]

- Negative accruals: The use of negative accruals as a proxy for accounting conservatism is due the fact that "accruals to defer the recognition of economic gains and accelerate the recognition of economic losses. Through such a process of

[749] Alipour/Rabiee/Alipour (2013), p. 3649.
[750] Gray (1988), p. 5.
[751] Wang/Ó hÓgartaigh/van Zijl (2009), p. 12.
[752] Cf. Wang/Ó hÓgartaigh/van Zijl (2009), p. 12.
[753] Cf. Wang/Ó hÓgartaigh/van Zijl (2009), p. 14.

delaying gains and accelerating losses, the level of accumulated accruals in a firm gradually becomes more and more negative."[754] This phenomenon has been studied by Givoly and Hayn (2000) who measured both operating and non-operating accruals and found that total accruals decreased over the study period. It has been observed that operating accruals increased during the sample period; however, the effect was offset was by the stronger decrease of the non-operating accruals.[753] The authors argue that the increase in negative accruals during the sample period can be considered a sign of increasing accounting conservatism.[753] The negative accruals measurement for accounting conservatism is a firm-specific measure, easy to implement and does not require too much data.[755] Recent applications of the negative accruals measure use average figures of negative accruals over a certain period of time.[755] Further, the measure has been criticized for not including depreciation since it is a non-cash item.[755] While the exclusion is considered to be justified, a significant item of accrual accounting is not considered which leaves room for criticism.[755] In summary, negative accruals are a well-respected measure of accounting conservatism in the literature with relatively low levels of criticism.[755]

- Inventory valuation: This form of unconditional conservatism is closely linked to tax and regulatory incentives:[756] Generally speaking companies use three forms of inventory valuation methods: FIFO (first in first out), LIFO (last in first out) and the weighted average method.[757] Alexander and Nobes (2007) state that from an income statement perspective, "LIFO matches more recent costs against current revenue levels, whereas FIFO matches older costs against current revenue levels"[758]. Chang outlines that "LIFO is most useful during periods of high inflation, as it results in less reportable earnings with lower taxes paid; LIFO is not useful, however, when prices for raw material decrease."[759] LIFO understates the value of the inventory in the balance sheet and represents a more conservative accounting technique than FIFO.[757] FIFO determines the inventory value more closely to the market value,[757] e.g., oldest costs are matched with current revenues. In times of recession it makes the income statement look better as it actually is.[757] "Weighted average is essentially a compromise between LIFO and FIFO."[758] LIFO is forbidden by law in countries as for example the UK, France or Australia;[757] IFRS does not permit the use of LIFO at all.[760]

[754] Wang/Ó hÓgartaigh/van Zijl (2009), p. 14.
[755] Cf. Wang/Ó hÓgartaigh/van Zijl (2009), p. 15.
[756] Cf. Basu (2005), p. 314.
[757] Cf. Chang (2010), p. 244.
[758] Alexander/Nobes (2007), p. 205.
[759] Chang (2010), p. 244.
[760] Gray/Ehoff (2014), p. 20.

Watts and Zou (2011) state the after years of accounting conservatism research the impact of accounting conservatism on the firm value remains controversial.[761] It has been argued that it constrains managers' opportunistic behaviour, improves borrowing capacity and therefore enhances firm value, but on the other hand other researchers and standard setters think that it distorts information and resource allocation and can even destroy firm value.[761] Hendriksen (1982) concludes that "conservatism is, at best, a very poor method of treating the existence of uncertainty in valuation and income. At its worst, it results in a complete distortion of accounting data"[762]. Hellman (2008) argues that from an IASB and FASB perspective „prudence and conservatism are not desirable qualities of financial reporting information"[763]. Hellman (2008) interprets this statement by outlining that "the argument for excluding conservatism seems to be that preparers should not at all be encouraged to be conservative when dealing with uncertainty since this could lead to a conservatism bias. Instead, preparers shall take a neutral standpoint when dealing with uncertainty"[764].

Salter and Lewis (2011) state that since the article of Doupnik and Tsakumis (2011) no studies on the root causes of unconditional conservatism have been published.[765] Ball et al. (2008) did not find any capital market explanation in their study for the concept and therefore argue "the origin of unconditional accounting conservatism lies outside the capital market and falls back on societal or legal requirements"[766]. Salter et al. (2013) recently published an article on the Hofstede-Gray-Framework using the Basu (1997) model as operationalization of unconditional conservatism. Given the criticism of the Basu model, I will focus on the measures of unconditional conservatism outlined before.

In summary, the thesis aims to replace the dependent variables currently used in empirical studies on the Hofstede-Gray-Framework, e.g., in particular the link between the cultural dimension of uncertainty avoidance and the accounting value of conservatism, with measures commonly applied and accepted in conservative accounting research. An examination of the degree of accounting conservatism following the implementation of IFRS seems to be a valuable study to evaluate if the standardization of accounting standards has led to less conservatism.

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[761] Cf. Watts/Zou (2011), p. 1.
[762] Cf. Hendrikson (1982), p. 83.
[763] Hellman (2008), p. 71.
[764] Hellman (2008), p. 77.
[765] Salter/Lewis (2011), p. 133.
[766] Ball/Robin/Sadka (2008), p. 195.

6. Empirical analysis of the impact of cultural differences in uncertainty avoidance on accounting conservatism

6.1 Introduction

Based on the research gaps outlined in the sections before, companies worldwide will be examined regarding the choice of their inventory valuation method, their market-to-book ratio and negative accruals in order to measure a potential link between uncertainty avoidance and unconditional accounting conservatism. In addition to the analyses conducted for the Hofstede data, the same analyses will be calculated for current risk data gathered with a questionnaire on financial risk perception with the purpose to overcome above mentioned constraints of the Hofstede data.

6.2 Hypotheses

Six hypotheses will be formulated. For the first hypothesis, I am coming back to the initial idea of Sorter and Becker (1966), who found a "corporate personality" of risk aversion and conservatism reflected in the choice of more conservative accounting choices, e.g., a preference for LIFO (not allowed under IFRS) versus FIFO and the idea of finding empirical evidence for the link between uncertainty avoidance and the accounting value conservatism. We know that LIFO is providing a conservative measure of net income.[767] With regards to accounting conservatism the weighted average method is somehow in between LIFO and FIFO. The application of the FIFO method is therefore a sign of low accounting conservatism.

Hypothesis one: Firms in countries with low uncertainty avoidance scores have a preference for choosing less conservative inventory valuation methods, e.g., the FIFO method, compared to firms in countries with high uncertainty avoidance scores.

The second measure of unconditional accounting conservatism is the market to book ratio. We have outlined before that a "conservative accounting system tends to depress the net book values of a firm relative to the firm's 'true' economic value"[751]. Therefore, a higher market to book ratio implies relatively lower accounting conservatism.

Hypothesis two: Firms in countries with low uncertainty avoidance scores show higher market to book ratios compared to firms in countries with high uncertainty avoidance scores.

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[767] Cf. Kimmel/Weygandt/Kieso (2009), p. 288.

The third measure of unconditional accounting conservatism is negative accruals. As explained before we use negative accruals as a proxy for accounting conservatism as "accruals defer the recognition of gains and accelerate the recognition of economic losses. Through such a process of delaying gains and accelerating losses, the level of accumulated accruals in a firm gradually becomes more and more negative."[720] Therefore, higher negative accruals figures imply relatively higher accounting conservatism.

Hypothesis three: Firms in countries with low uncertainty avoidance scores in average show less negative accruals figures compared to firms in countries with high uncertainty avoidance scores.

Gray (1988), Salter and Niswander (1995), and Salter and Lewis (2011) have studied the influence of institutional variables, e.g., taxation and the relative development or importance of capital markets on accounting conservatism. Salter and Niswander (1995) could find a significant impact of both variables on his measure of accounting conservatism, e.g., pessimism. Salter and Lewis (2011) could show a link between tax rates and conservative accounting, but not the expected relationship between accounting conservatism and importance of national equity markets. Salter et al. (2013) controlled for the development of the national stock market and other institutional variables. We therefore hypothesize as follows.

Hypothesis four: Firms in countries with relatively higher corporate income tax rates and relatively smaller equity markets relative to their GDP show in average a preference for more conservative inventory valuation methods, e.g., less application of the FIFO method.

Hypothesis five: Firms in countries with relatively higher corporate income tax rates and relatively smaller equity markets relative to their GDP show in average lower market to book ratios.

Hypothesis six: Firms in countries with higher corporate income tax rates and relatively smaller equity markets relative to their GDP show in average more negative accruals figures.

6.2.1   Empirical model, data and sample

6.2.1.1   Empirical model

I use the following general models to test the hypotheses through univariate (model one) and multivariate regression analyses (model 2):

(1) Accounting conservatism = f (Uncertainty avoidance) or Accounting conservatism = $\alpha + \beta_1$ Uncertainty avoidance + ϵ

(2) Accounting conservatism = f (Uncertainty avoidance; institutional variables) or Accounting conservatism = $\alpha + \beta_1$ Uncertainty avoidance + β_2 Market capitalization + β_3 Tax + ϵ

6.2.1.2   Data

Independent and dependent variables were defined to run the regression models. Independent variables are the uncertainty avoidance scores from Hofstede (1980) and the institutional variables. Dependent variables are three measures of unconditional conservatism being the inventory valuation method used, the market to book ratio and negative accruals.

The scores of the independent variable uncertainty avoidance have been taken directly from the publications, e.g., books and websites of Hofstede (1980, 2014). The institutional variable importance of equity market is defined as the market value of the country's equity shares divided through the country's Gross Domestic Product. This definition is in line with Salter and Lewis (2011) and Salter and Niswander (1995). The data for the size of the equity market of a specific country was downloaded from Bloomberg; GDP data as of end of 2013 have been taken from the website of the World Bank. The second institutional variable corporate income tax rate has been applied by the same authors. The rates in this study have been taken from the worldwide corporate tax guide published by Ernst and Young in 2014.

The dependent variable inventory valuation method represents the number of listed firms in a particular country favouring the FIFO method over other inventory valuation methods. Therefore the dependent variable represents a percentage number. Countries with firms rarely applying the FIFO method would have a rather low FIFO percentage number and vice versa. The data on the inventory valuation method of the firms was downloaded from Bloomberg. The percentage rates were calculated by the author.

The dependent variable market to book ratio represents the average market to book ratios of listed firms in a particular country. The market to book ratios of the firms was downloaded from Bloomberg. The average ratios per country were calculated by the author.

The dependent variable negative accruals is measured by accruals as percentage of net operating assets (trailing 12-month (net income – cash from operations) / average year over year of net operating assets) of listed firms in a particular country. The accruals of the firms were downloaded from Bloomberg. The average accrual figures per country were calculated by the author.

6.2.1.3   Sample

Bloomberg provides a huge amount of accounting related data on firms worldwide. I have reviewed stock market indices of countries worldwide available on Bloomberg to download the dependent variables as outlined above. The number of countries covered amounted to 82. 22 countries needed to be excluded after this first search mostly due to the unavailability of inventory valuation method data. Additional nine countries were excluded for not having adopted IFRS. Further countries needed to be excluded from the analysis as no Hofstede uncertainty avoidance scores had been available. Afterwards, average scores for the dependent variables have been calculated. The number of countries to be included in the sample was limited from two sides: The amount of data available for specific stock markets on Bloomberg and the availability of Hofstede uncertainty avoidance scores for a specific country. Eventually, listed companies from 44 countries could be included into the sample. Nevertheless, the number of countries covered still exceeds the sample size of Salter and Niswander (1995) of 29, Salter and Lewis (2011) of 14 and of Salter et al. (2013) of 22.

Country	Uncertainty Avoidance	Percentage of FIFO	Market to book ratio	Negative accruals	Market Capitalization / GDP	Corporate income tax
Argentina	86	21.88%	2.73	-0.09	6.23	35.00%
Australia	51	34.22%	2.20	-0.12	1.10	30.00%
Austria	70	18.33%	1.58	-0.17	0.87	25.00%
Belgium	94	22.22%	1.65	-0.10	0.86	33.00%
Brazil	76	0.00%	2.31	-0.26	2.84	15.00%
Canada	48	30.00%	2.31	-0.26	3.18	15.00%
Chile	86	5.17%	1.94	-0.04	3.00	20.00%
Colombia	80	9.52%	1.90	-0.04	1.30	25.00%
Denmark	23	74.07%	2.71	-0.16	3.29	24.50%
Finland	59	60.38%	2.55	-0.15	4.18	20.00%
France	86	34.52%	2.23	-0.06	1.76	33.33%
Germany	65	16.25%	2.74	-0.11	2.62	15.00%
Great Britain	35	56.44%	4.15	0.04	3.77	23.00%
Greece	112	10.00%	1.29	-0.18	0.39	26.00%
Hong Kong	29	11.54%	1.71	-0.02	45.69	16.50%
Ireland	35	84.62%	6.92	-0.13	0.02	12.50%
Israel	81	23.21%	2.85	-0.06	0.01	26.50%
Italy	75	23.23%	2.17	-0.16	0.68	27.50%
Jordan	68	15.38%	1.05	-0.18	1.40	30.00%
Korea South	85	6.13%	1.30	-0.06	1.45	22.00%
Kuwait	68	6.59%	0.99	-0.12	0.01	15.00%
Luxembourg	70	0.00%	1.70	-0.06	1.90	21.00%
Malaysia	36	9.09%	6.15	-0.06	1.26	25.00%
Malta	96	20.00%	2.20	-0.09	0.54	35.00%
Mexico	82	0.00%	3.32	-0.08	1.10	30.00%
Morocco	68	15.38%	2.07	-0.10	1.19	30.00%
Netherlands	53	60.00%	2.22	-0.12	1.06	25.00%
New Zealand	49	50.00%	2.30	-0.10	0.37	28.00%
Norway	50	73.83%	5.86	-0.10	3.51	27.00%
Oman	68	7.14%	1.97	0.08	0.62	12.00%

Pakistan	70	12.50%	3.34	-0.10	0.61	34.00%
Peru	87	0.00%	1.85	-0.59	0.63	30.00%
Philippines	44	4.55%	2.95	-0.09	1.07	30.00%
Portugal	104	0.00%	1.74	-0.07	1.47	23.00%
Qatar	68	0.00%	2.32	0.04	1.79	10.00%
Russia	95	10.91%	1.18	-0.15	2.83	20.00%
Slovenia	88	33.33%	0.77	0.02	0.34	17.00%
South Africa	49	44.34%	3.07	1.03	11.05	28.00%
Spain	86	4.44%	2.53	-0.08	1.78	30.00%
Sweden	29	80.45%	3.13	-0.07	7.62	22.00%
Taiwan	69	4.02%	1.97	-0.05	3.32	17.00%
Turkey	85	23.53%	1.86	-0.12	8.90	20.00%
Venezuela	76	14.29%	2.59	-4.60	4.14	34.00%
Vietnam	30	6.30%	1.07	-0.02	0.29	22.00%

Table 6.2.1.3-1: Sample size, independent and dependent variables values

6.2.2 Results

6.2.2.1 Descriptive statistics

In a first step descriptive statistics for the whole sample have been calculated. For uncertainty avoidance it can be stated that the average uncertainty score stands at 68.23 with a standard deviation of +/- 21.63. The minimum score is 23 and the maximum score 112. We can therefore state the overall sample is rather scoring high in uncertainty avoidance. The percentage of FIFO inventory valuation method used per country amounts to 23.99% with a standard deviation of +/- 24.04%. The minimum application rate is 0% the maximum 84.62%. We can therefore state that the overall application rate of the FIFO method is rather low. The average market to book ratio stands at 2.47 with a standard deviation of +/- 1.27. The maximum market to book ratio in the sample stands at 6.92, whereas the minimum is 0.77. The average accruals stand at -0.18 with a standard deviation of +/- 0.72. The minimum stands at -4.6, whereas the maximum amounts to 1.03. The importance of the equity market measured as market capitalization divided through GDP has an average of 3.3 with a standard deviation of +/- 7.03. The minimum is 0.01, the maximum stands at 45.69. The average corporate income tax rate in the sample stands at 24.14% with a standard deviation of 6.84%. The maximum stands at 35%, the minmum corporate income tax rate is 10%.

	Uncertainty Avoidance	Percentage of FIFO	Market to book ratio	Negative accruals	Market Capitalization / GDP	Corporate income tax
Average	68.23	23.99%	2.47	-0.18	3.30	24.14%
Median	70.00	15.38%	2.22	-0.10	1.45	25.00%
Standard deviation	21.63	24.04%	1.27	0.72	7.03	6.84%
Variance	467.80	5.78%	1.61	0.52	49.43	0.47%
Minimum	23.00	0.00%	0.77	-4.60	0.01	10.00%
Maximum	112.00	84.62%	6.92	1.03	45.69	35.00%

Table 6.2.2.1-1: Descriptive statistics for independent and dependent variables

6.2.2.2 Univariate analysis

Following the approach of Salter and Niswander (1995) and Hope (2003), I first calculate univariate regression analyses to examine the relation between the independent variable of uncertainty avoidance and different measures of accounting conservatism (regression model 1).

First, hypothesis one is tested. The regression statistics support hypothesis one indicating a significant negative relation (Pearson correlation coefficient: -0.54) between uncertainty avoidance and percentage of FIFO. We can therefore conclude that firms in countries with low uncertainty avoidance scores have a preference for choosing less conservative inventory valuation methods, e.g., the FIFO method, compared to firms in countries with high uncertainty avoidance scores.

Regression statistics	
Multiple R	0.543
R square	0.295
Adjusted R square	0.278
Standard error	0.203
Observations	44

ANOVA

	Degrees of freedom (df)	Regression sum of squares (SS)	Regression mean square error	F-value	Significance F
Regression	1	0.725	0.725	17.564	0.00013974
Residual	42	1.733	0.041		
Total	43	2.458			

Table 6.2.2.2-1: Univariate regression analysis: Percentage of FIFO (dependent variable) and uncertainty avoidance (independent variable)

Afterwards, a univariate regression analysis for hypothesis two has been conducted. The regression statistics support hypothesis two indicating a significant negative relation (Pearson correlation coefficient: -0.47) between uncertainty avoidance and the average market to book ratio of the listed firms of individual countries. We can therefore conclude that firms in countries with low uncertainty avoidance scores show higher market to book ratios compared to firms in countries with high uncertainty avoidance scores.

Regression statistics	
Multiple R	0.467
R square	0.218
Adjusted R square	0.199
Standard error	1.139
Observations	44

ANOVA

	Degrees of freedom (df)	Regression sum of squares (SS)	Regression mean square error	F-value	Significance F
Regression	1	15.194	15.194	11.702	0.00140195
Residual	42	54.531	1.298		
Total	43	69.725			

Table 6.2.2.2-2: Univariate regression analysis: Market to book ratio (dependent variable) and uncertainty avoidance (independent variable)

Finally, a univariate regression analysis for hypothesis three has been conducted. The regression statistics does not support hypothesis three. While the correlation between the independent and the dependent variable is negative as hypothesized, the correlation was not significant. We therefore need to acknowledge that while firms in countries with low uncertainty avoidance scores tend to show in average show less negative accruals figures compared to firms in countries with high uncertainty avoidance scores, this relation is not significant.

Regression statistics	
Multiple R	0.108
R square	0.012
Adjusted R square	-0.012
Standard error	0.715
Observations	44

ANOVA

	Degrees of freedom (df)	Regression sum of squares (SS)	Regression mean square error	F-value	Significance F
Regression	1	0.254	0.254	0.498	0.48427725
Residual	42	21.452	0.511		
Total	43	21.707			

Table 6.2.2.2-3: Univariate regression analysis: Negative accruals (dependent variable) and uncertainty avoidance (independent variable)

The following table shows the Pearson correlations between the dependent and independent variables. The overview indicates that besides the significant negative correlations supporting hypotheses one and two, a significant negative correlation between uncertainty avoidance and importance of the equity market as well as a positive correlation between the two dependent variables percentage of FIFO and market to book ratio was found. The significant correlation between the importance of the equity market and uncertainty avoidance has been found by Salter and Niswander (1995) as well. Therefore multicollinearity (robustness) tests have been calculated with results indicating no multicollinearity.[768] Salter and Niswander (1995) nevertheless adjusted dependent variables for the effect of uncertainty avoidance and

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[768] Cf. Salter/Niswander (1995), p. 388.

removed it as an independent variable.[768] The adjusted dependent variables continued to be included in the research design.[768] In this thesis, this particular multicollinearity will be addressed by proposing an independent variable replacing the uncertainty avoidance scale from Hofstede. Finally, it needs to be stated that neither the importance of the equity market nor the corporate income tax rate do have a significant influence on any of the conservative accounting measures.

	Uncertainty Avoidance	Percentage of FIFO	Market to book ratio	Negative accruals	Market Capitalization / GDP	Corporate income tax
Uncertainty Avoidance	1					
Percentage of FIFO	*-0.54*	1				
Market to book ratio	*-0.47*	*0.50*	1			
Negative accruals	-0.11	0.09	0.01	1		
Market Capitalization / GDP	*-0.31*	0.03	-0.04	0.04	1	
Corporate income tax	0.23	0.00	0.03	-0.22	-0.17	1

Note: All (Pearson) correlation coefficients in italic are significant at the 5% level or better

Table 6.2.2.2-4: Pearson correlation coefficients among independent and dependent variables

6.2.2.3 Multivariate analysis

Univariate regression results can be impacted by correlations among variables. Therefore the most recent publications on the Hofstede-Gray-Framework related to the accounting value of conservatism all applied multivariate regression analyses. As outlined above the corporate income tax rate and the importance of the equity market have been included as additional independent variables based on previous research (regression model 2).

First, hypothesis four is tested. The regression statistics support hypothesis four indicating a moderately strong overall association between the dependent, e.g. FIFO percentage, and independent variables, e.g. uncertainty avoidance, importance of the equity market and the corporate income tax rate. However, it needs to be stated that the only significant variable

explaining FIFO percentage is uncertainty avoidance. While the other two independent variables show estimated coefficients in line with the hypothesized signs (negative in the case of tax rates, positive in the case of equity market importance), these results are not significant and do not add significantly in explaining the variance in percentage of FIFO.

Regression statistics	
Multiple R	0.574
R square	0.329
Adjusted R square	0.279
Standard error	0.203
Observations	44

ANOVA

	Degrees of freedom (df)	Regression sum of squares (SS)	Regression mean square error	F-value	Significance F
Regression	3	0.809	0.270	6.537	0.0010564
Residual	40	1.649	0.041		
Total	43	2.458			

	Coefficients	Standard error	T-statistics	P-value	Lower 95%	Upper 95%
Intercept	0.599	0.145	4.126	0.00018185	0.306	0.892
Market Capitalization / GDP	-0.005	0.005	-1.035	0.30696683	-0.014	0.005
Corporate income tax	0.413	0.473	0.872	0.38822396	-0.544	1.370
Uncertainty Avoidance	-0.007	0.002	-4.423	7.2901E-05	-0.010	-0.004

Table 6.2.2.3-1: Multivariate regression analysis: FIFO percentage (dependent variable) and uncertainty avoidance, importance of equity market, corporate income tax rate (independent variables)

Afterwards, hypothesis five is tested. The regression statistics support hypothesis five indicating a moderate overall association between the dependent, e.g., market to book ratio, and independent variables, e.g., uncertainty avoidance, importance of the equity market and the corporate income tax rate. However, it needs to be stated that the only significant variable explaining the average market to book ratio per country is uncertainty avoidance. While the other two independent variables show estimated coefficients in line with the hypothesized signs (negative in the case of tax rates, positive in the case of equity market importance), these results are not significant and do not add significantly in explaining the variance in market to book ratios.

Regression statistics	
Multiple R	0.521
R square	0.272
Adjusted R square	0.217
Standard error	1.127
Observations	44

ANOVA

	Degrees of freedom (df)	Regression sum of squares (SS)	Regression mean square error	F-value	Significance F
Regression	3	18.950	6.317	4.976	0.00499769
Residual	40	50.775	1.269		
Total	43	69.725			

	Coefficents	Standard error	T-statistics	P-value	Lower 95%	Upper 95%
Intercept	4.138	0.806	5.136	7.6657E-06	2.509	5.766
Market Capitalization / GDP	-0.035	0.026	-1.361	0.18119693	-0.088	0.017
Corporate income tax	2.391	2.627	0.910	0.36808395	-2.918	7.700
Uncertainty Avoidance	-0.032	0.008	-3.847	0.00041974	-0.049	-0.015

Table 6.2.2.3-2: Multivariate regression analysis: Market to book ratio (dependent variable) and uncertainty avoidance, importance of equity market, corporate income tax rate (independent variables)

Finally, hypothesis six is tested. The regression statistics do not support hypothesis six.

Regression statistics	
Multiple R	0.229
R square	0.053
Adjusted R square	-0.018
Standard error	0.717
Observations	44

ANOVA

	Degrees of freedom (df)	Regression sum of squares (SS)	Regression mean square error	F-value	Significance F
Regression	3	1.141	0.380	0.740	0.53444438
Residual	40	20.565	0.514		
Total	43	21.707			

	Coefficients	Standard error	T-statistics	P-value	Lower 95%	Upper 95%
Intercept	0.490	0.513	0.956	0.34489813	-0.546	1.526
Market Capitalization / GDP	-0.001	0.017	-0.083	0.93418534	-0.035	0.032
Corporate income tax	-2.194	1.672	-1.313	0.1967874	-5.573	1.184
Uncertainty Avoidance	-0.002	0.005	-0.384	0.70312977	-0.013	0.009

Table 6.2.2.3-3: Multivariate regression analysis: Negative accruals (dependent variable) and uncertainty avoidance, importance of equity market, corporate income tax rate (independent variables)

6.2.2.4 Robustness test

In alignment with previous research, a test for multicollinearity of the independent variables was conducted. Multicollinearity can be tested through correlation matrices (provided before) and / or specific tests, e.g., the variance inflation factor (VIF). The VIF has also been calculated by Salter and Niswander (1995) and Salter and Lewis (2011) in their studies on the Hofstedey-Gray-Framework. A high VIF value is considered as an indication for high multicollinearity. The threshold for high multicollinearity is deemed to be 10.[769] However, Urban and Mayer (2006) propose a stricter threshold, e.g., a VIF of 5, which should not be exceeded.[770] The VIF values for the independent variables in this sample are below 1.20.

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[769] Kaufmann (2011), p. 209.
[770] Urban/Mayerl (2006), p. 232.

7. Introduction and empiricial analysis of measurement alternatives for the independent variable uncertainty avoidance: The financial risk perception questionnaire

7.1   Introduction

As outlined before "the uncertainty avoidance dimension expresses the degree to which the members of a society feel uncomfortable with uncertainty and ambiguity. The fundamental issue here is how a society deals with the fact that the future can never be known: should we try to control the future or just let it happen? Countries exhibiting strong uncertainty avoidance maintain rigid codes of belief and behaviour and are intolerant of unorthodox behaviour and ideas. Weak uncertainty avoidance societies maintain a more relaxed attitude in which practice counts more than principles." [771] Hofstede's uncertainty avoidance dimension has been calculated through a composite of three factors: Rules orientation, employment stability and nervousness or stress at work.[772]

An overview of the culture theory of Hofstede, detailed explanations on the uncertainty avoidance dimension and criticism of the theory have been provided in the culture theory section of this thesis. It has been further shown that researchers who published work on the Hofstede-Gray-Framework have also taken up this criticism, e.g., Doupnik and Tsakumis (2004). This section builds on this criticism and proposes an alternative to uncertainty avoidance dimension, which is based on questions related to job stress, compliance with company rules and intention to quit and not to financial decisions.[773]

Hens and Wang (2007) state that "cultural differences do matter for financial decisions"[774] which is contrary to the traditional view of "complete rationality of decision makers"[774]. The authors describe culture theories, in particular the ones of Project GLOBE and Hofstede, and emphasize the importance of the uncertainty avoidance dimension for Finance as it includes aspects of risk aversion.[775] Following this introduction, the authors give an update on studies examining cross cultural differences in risk perception / risk aversion. The authors show that researchers have not used the uncertainty avoidance index of Hofstede (1980), but used lotteries or financial options games to measure the degree of financial risk perception in different cultures.[776] Hens and Wang (2007) put a particular focus on the work of Weber and Hsee (1998),

[771] Hofstede (2013), http://geert-hofstede.com/dimensions.html.
[772] Cf. Rapp/Benardi/Bosco (2011), p. 3.
[773] Cf. Hofstede/Hofstede (2005), p. 166.
[774] Hens/Wang (2007), p. 2.
[775] Cf. Hens/Wang (2007), p. 4.
[776] Cf. Hens/Wang (2007), p. 5.

who provided a set of risky investment options which can be easily included in a questionnaire-based research design.

7.2 Alternatives to Hofstede's measurement technique: The financial risk perception questionnaire

A questionnaire based on the study of Weber and Hsee (1998) has been developed. The set of financial options included is based on a model widely used in individual judgement and decision making research,[777] e.g., builds on the "pioneering of Markowitz (1959)"[778], who "conceptualized people's willingness to pay (WTP) for risky option X as a compromise between the option's return or value (V) and its risk (R) and assumed that decision makers seek to minimize the risk of a portfolio for a given level of expected return"[779].

The authors asked respondents (students from US, Chinese, Polish and German universities) about "their perceptions and reactions to risky financial investment options. Each option had three potential outcomes, with at least one possible gain and one possible loss of money"[780]. Twelve options were presented and respondents "were told that they were investing their own money and that they currently had $20,000 available to make investments"[780]. Participants were asked to examine each investment option separately and were asked to answer the following questions: "What is the maximum amount you would be willing to pay to get a chance at this investment option? (If you wouldn't buy it any price, say $0"[781], the question which reflects the willingness to pay, and "How risky do you think this investment option is? Perceived riskiness (R) of the option was expressed on a numerical rating scale that ranged from 0 (not at all risky) to 100 (extremely risky)"[781].

Weber and Hsee (1998) found that Chinese, US, German and Polish participants significantly differed in their willingness to pay for risky financial options, while Chinese being significantly less-risk averse in their pricing than Americans. This was associated with the perception of the risk of the financial options: In all cultures respondents were willing to pay more for options perceived as less risky. Therefore, the question for perceived riskiness is the driving factor of the financial decisions.

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[777] Cf. Weber/Hsee (2000), p. 42.
[778] Weber/Hsee (1998), p. 1205.
[779] Weber/Hsee (1998), p. 1206.
[780] Weber/Hsee (1998), p. 1209.
[781] Weber/Hsee (1998), p. 1210.

I included the questions along with the twelve financial options from Weber and Hsee (1998) into a questionnaire and added some questions on personal information, e.g., nationality, age, gender and whether the respondent considers him- or herself an investment professional.

Nationality: _____ Age: _____

Sex: male ☐ female ☐

Investment professional: yes ☐ no ☐

You have **overall** (not for every single option) $20'000 available to make investments in the investment options described below. Assume that you are investing your own money. For each investment option 3 possible outcomes in US Dollar ($) (outcome 1-3) and their respective probabilities (P1-3) are presented. Please examine each investment option individually by answering the following questions :

→ What is the **maximum amount** you are willing to pay to get a chance at this investment option (if you would not buy it at any price, say USD 0).

→ How **risky** do you think this investment option is? (Rating scale: 0 (not at all risky) to 100 (extremely risky).

Investment Option	Outcome 1	P1	Outcome 2	P2	Outcome 3	P3	Willingness to pay ($0-20'000)	Riskiness (0-100)
1	$3'500	79%	-$5'300	20%	-$16'000	1%		
2	$400	56%	-$150	38%	-$750	6%		
3	$1'700	1%	$800	20%	-$50	79%		
4	$1'250	56%	-$450	38%	-$2'200	6%		
5	$2'600	11%	$950	44%	-$650	45%		
6	$9'300	11%	$3'400	44%	-$2'400	45%		
7	$4'700	1%	$2'300	20%	-$120	79%		
8	$1'000	79%	-$1'400	20%	-$4'800	1%		
9	$900	11%	$350	44%	-$200	45%		
10	$350	79%	-$400	20%	-$1'600	1%		
11	$4'600	56%	-$1'700	38%	-$8'100	6%		
12	$17'200	1%	$8'300	20%	-$450	79%		

Thank you for your participation!

Table 7-1: Questionnaire with investment options (own presentation based on Weber and Hsee (1998))[782]

[782] Soure: Weber/Hsee (1998), p. 210.

7.3   Hypotheses

As I intend to provide alternatives to Hofstede's uncertainty avoidance dimension, I adjust the six hypotheses presented before for the new independent variable. The alternative independent variable will be represented by the average risk assessment scores by country collected from the responses to the questionnaire. In addition to the country-level analysis, clusters based on the Project GLOBE method will be introduced to account for the limited response rate in some countries. The adjusted hypotheses are as follows:

Hypothesis seven: Firms in countries/country clusters with low financial risk perception scores have a preference for choosing less conservative inventory valuation methods, e.g., the FIFO method, compared to firms in countries with high financial risk perception scores.

Hypothesis eight: Firms in countries/country clusters with low financial risk perception scores show higher market to book ratios compared to firms in countries with high financial risk perception scores.

Hypothesis nine: Firms in countries/country clusters with low financial risk perception scores in average show less negative accruals figures compared to firms in countries with high financial risk perception scores.

Hypothesis ten: Firms in countries/country clusters with relatively higher corporate income tax rates and relatively smaller equity markets relative to their GDP show in average a preference for more conservative inventory valuation methods, e.g., less application of the FIFO method.

Hypothesis eleven: Firms in countries/country clusters with relatively higher corporate income tax rates and relatively smaller equity markets relative to their GDP show in average lower market to book ratios.

Hypothesis twelve: Firms in countries/country clusters with higher corporate income tax rates and relatively smaller equity markets relative to their GDP show in average more negative accruals figures.

7.3.1   Empirical model, data and sample

7.3.1.1   Empirical model

In alignment with the Hofstede data set, I test the hypotheses through univariate (model one) and multivariate regression analyses (model 2):

(1) Accounting conservatism = f (Financial risk perception) or Accounting conservatism = α + β_1 Financial risk perception + ϵ

(2) Accounting conservatism = f (Financial risk perception; institutional variables) or Accounting conservatism = α + β_1 Financial risk perception + β_2 Market Capitalization + β_3 Tax + ϵ

7.3.1.2   Data

Independent and dependent data were again defined to run the regression models. Independent variables are the financial risk perception scores and the institutional variables as described before. Dependent variables are three measures of unconditional conservatism being the inventory valuation method used, the market to book ratio and negative accruals. The dependent variables have been described in detail and will not be repeated here.

The country scores of the independent variable financial risk perception have been calculated from the individual responses to the riskiness assessment task (scale: 0-100) in the financial risk perception questionnaire (right column). Individual scores to the twelve questions have been summed up and a country average score across the questions and respondents has been calculated. This procedure is in line with Weber and Hsee (1998) who found mean risk judgements for American (52.2), German (47.4), Polish (46.8) and Chinese (41.9) students.[783]

7.3.1.3   Sample

The questionnaire has been sent via email to potential participants worldwide. Participants had the opportunity to either complete the questionnaire in the attached word file or via an online tool. The questionnaire was provided in German and English language.

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[783] Cf. Weber/Hsee (1998), p. 1211.

Overall 494 participants completed the questionnaire. The respondent number per country ranges from one to 84 triggering the need for defining a minimum of participants necessary for a country to be included in the sample. Hope (2003) and Jaggi and Low (2000) postulate a minimum of 20 observations per country in the context of the Hofstede-Gray-Framework.[784] Therefore the threshold should be set at 20 limiting the countries in the sample to Switzerland, Germany, Austria, the United States, Italy and India. As Switzerland, the United States and India have not adopted IFRS, the sample would needed be reduced to Germany, Austria and Italy. I consider this as unsatisfactory in the context of the global reach and claim of the Hofstede-Gray-Framework.

Country	Participants	Mean Financial Risk Perception
Switzerland	84	51
Germany	59	50
Austria	27	49
United States	26	48
Italy	21	49
India	20	42
France	19	43
Spain	19	52
Netherlands	16	43
UK	16	42
Russia	15	49
Sweden	15	53
Poland	12	47
Turkey	11	37
Australia	9	44
China	9	50
Singapore	9	47
Greece	8	47
Japan	8	51
Portugal	7	39
Canada	6	45
Romania	6	40
Ukraine	6	44

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[784] Cf. Hope (2003), p. 241.

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Hungary	5	50
Belgium	4	57
Slovakia	4	51
Brazil	3	53
Czech Republic	3	49
Finland	3	35
Iran	3	43
Ireland	3	56
Philipines	3	55
South Africa	3	45
Argentina	2	53
Bosnia	2	39
Bulgaria	2	57
Colombia	2	55
Danemark	2	38
Macedonia	2	48
Malaysia	2	48
Norway	2	42
Pakistan	2	36
Chile	1	33
Croatia	1	38
Indonesia	1	54
Kenya	1	70
Latvia	1	45
Mexico	1	61
Peru	1	54
Serbia	1	82
Sri Lanka	1	50
Taiwan	1	53
Thailand	1	36
UAE	1	49
Uzbekistan	1	56
Vietnam	1	56

Table 7.3.1.3-1: Number of participants and mean financial risk perception scores by country

The threshold will therefore be set at 19 participants per country. While I acknowledge that this threshold is below standard and that the number of participants per country should be further increased, the analysis might provide indicative results valuable for future research. The sample to examine the country-level postulated hypotheses is presented in the table below.

Country	Mean Financial Risk Perception	Percentage of FIFO	Market to book ratio	Negative accruals	Market Capitalization / GDP	Corporate income tax
Austria	49	18.33%	1.58	-0.17	0.87	25%
France	44	34.52%	2.23	-0.06	1.76	33%
Germany	51	16.25%	2.74	-0.11	2.62	15%
Italy	50	23.23%	2.17	-0.16	0.68	28%
Spain	53	4.44%	2.53	-0.08	1.78	30%

Table 7.3.1.3-2: Sample for country-level hypotheses testing

A further measure to address the shortcomings related to the limited number of participants per country is the creation of country clusters. The countries were clustered according to the work of Ronen and Shenkar (1985), which has been applied in Project GLOBE and described in the respective section of this thesis. Only clusters with more than 20 respondents have been included in the sample. This rule led to the exclusion of the Latin America, Sub Saharan Africa and Middle East clusters.

Cluster	Part-icipants	Mean Financial Risk Perception	Percent -age of FIFO	Market to book ratio	Negative accruals	Market Capitaliz-ation / GDP	Corporate income tax
Confucian Asia	28	52	6.95%	1.57	-0.05	16.20	19%
Southern Asia	34	47	10.32%	3.61	-0.06	0.93	29%
Nordic Europe	22	42	72.18%	3.56	-0.12	4.65	23%
Anglo	63	47	51.05%	3.58	-0.11	1.69	22%
Germanic Europe	186	49	23.64%	2.06	-0.12	1.61	22%
Latin Europe	70	49	18.23%	2.20	-0.09	1.01	30%
Eastern Europe	68	49	18.08%	1.08	-0.11	1.19	21%

Table 7.3.1.3-3: Sample for cluster-level hypotheses testing

7.3.2   Results

7.3.2.1   *Descriptive statistics*

Descriptive statistics for the country-level and cluster-level sample have been calculated. I first start with the descriptive analysis for the country-level data. The mean financial risk perception score stands at 49.34 with a standard deviation of +/- 3.39. The minimum score is 43.85 and the maximum score 53. We can therefore state the overall sample is rather risk neutral. The percentage of FIFO inventory valuation method used per country amounts to 19.36% with a standard deviation of +/- 10.93%. The minimum application rate of the FIFO method is 4.44% the maximum 34.52%. We can therefore state that the overall application rate of the FIFO method is rather low. The average market to book ratio stands at 2.25 with a standard deviation of +/- 0.44. The maximum market to book ratio in the sample stands at 2.74, whereas the minimum is 1.58. The average accruals stand at -0.12 with a standard deviation of +/- 0.05. The minimum stands at -0.17, whereas the maximum amounts to -0.06. The importance of the equity market measured as market capitalization divided through GDP has an average of 1.54 with a

standard deviation of +/- 0.78. The minimum is 0.68, the maximum stands at 2.62. The average corporate income tax rate in the sample stands at 26.17% with a standard deviation of 6.96%. The maximum stands at 33.33%, the minimum corporate income tax rate is 15%.

	Mean Financial Risk Perception	Percentage of FIFO	Market to book ratio	Negative accruals	Market Capitalization / GDP	Corporate income tax
Average	49.34	19.36%	2.25	-0.12	1.54	26.17%
Median	49.86	18.33%	2.23	-0.11	1.76	27.50%
Standard deviation	3.39	10.93%	0.44	0.05	0.78	6.96%
Variance	11.46	1.20%	0.20	0.00	0.62	0.48%
Minimum	43.85	4.44%	1.58	-0.17	0.68	15.00%
Maximum	53.00	34.52%	2.74	-0.06	2.62	33.33%

Table 7.3.2.1-1: Descriptive statistics for country-level independent and dependent variables

In a second step, I calculate the descriptive statistics for the cluster-level independent and dependent variables and the number of participants in each cluster. The mean number of participants allocated to each cluster stands at 67.29 with a standard deviation of +/- 56.01. The minimum number is 22 and the maximum 186. The mean financial risk perception score stands at 47.92 with a standard deviation of +/- 2.98. The minimum score is 42 and the maximum score 53. We can therefore state the overall sample is rather risk neutral. The percentage of FIFO inventory valuation method used per country amounts to 28.64% with a standard deviation of +/- 23.98%. The minimum application rate of the FIFO method is 6.95% the maximum 72.18%. We can therefore state that the average application rate of the FIFO method is rather low. The average market to book ratio stands at 2.52 with a standard deviation of +/- 1.06. The maximum market to book ratio in the sample stands at 3.61, whereas the minimum is 1.08. The average accruals stand at -0.09 with a standard deviation of +/- 0.03. The minimum stands at -0.12, whereas the maximum amounts to -0.05. The importance of the equity market measured as market capitalization divided through GDP has an average of 3.9 with a standard deviation of +/- 5.57. The minimum is 0.93, the maximum stands at 16.2. The average corporate income tax rate in the sample stands at 23.71% with a standard deviation of 4.13%. The maximum stands at 29.76%, the minimum corporate income tax rate is 19.38%.

	Part-icipants	Mean Financial Risk Perception	Percentage of FIFO	Market to book ratio	Negative accruals	Market Capitalization / GDP	Corporate income tax
Average	67.29	47.92	28.64%	2.52	-0.09	3.90	23.71%
Median	63.00	48.77	18.23%	2.20	-0.11	1.61	21.70%
Standard deviation	56.01	2.98	23.98%	1.06	0.03	5.57	4.13%
Variance	3136.90	8.88	5.75%	1.12	0.00	31.08	0.17%
Minimum	22.00	42.31	6.95%	1.08	-0.12	0.93	19.38%
Maximum	186.00	51.98	72.18%	3.61	-0.05	16.20	29.76%

Table 7.3.2.1-2: Descriptive statistics for cluster-level independent, dependent variables and number of participants

7.3.2.2 Univariate analysis

In alignment with the analysis with the Hofstede data, I first calculate univariate regression analyses to examine the relation between the independent variable of financial risk perception and different measures of accounting conservatism (regression model 1).

First, hypothesis seven is tested. The regression statistics support hypothesis seven indicating a significant negative relation on a both country (Pearson correlation coefficient: -0.94) and cluster level (Pearson correlation coefficient: -0.85) between financial risk perception and percentage of FIFO. We can therefore conclude that firms in countries/clusters with low financial risk perception scores have a preference for choosing less conservative inventory valuation methods, e.g., the FIFO method, compared to firms in countries/clusters with high financial risk perception scores.

Regression statistics	
Multiple R	0.946
R square	0.895
Adjusted R square	0.860
Standard error	0.041
Observations	5

ANOVA

	Degrees of freedom (df)	Regression sum of squares (SS)	Regression mean square error	F-value	Significance F
Regression	1	0.043	0.043	25.642	0.01486625
Residual	3	0.005	0.002		
Total	4	0.048			

Table 7.3.2.2-1: Univariate regression analysis – country-level: Percentage of FIFO (dependent variable) and financial risk perception (independent variable)

Regression statistics	
Multiple R	0.854
R square	0.729
Adjusted R square	0.675
Standard error	0.137
Observations	7

ANOVA

	Degrees of freedom (df)	Regression sum of squares (SS)	Regression mean square error	F-value	Significance F
Regression	1	0.252	0.252	13.469	0.01444236
Residual	3	0.093	0.019		
Total	4	0.345			

Table 7.3.2.2-2: Univariate regression analysis – cluster-level: Percentage of FIFO (dependent variable) and financial risk perception (independent variable)

Afterwards, a univariate regression analysis for hypothesis eight has been conducted. The regression statistics do not support hypothesis eight (Pearson correlation coefficient: 0.13) on a country level, but on a cluster level (Pearson correlation coefficient: -0.76). We can therefore conclude that firms in clusters with low financial risk perception scores do not show higher market to book ratios compared to firms in clusters with high risk perception scores. However, this is not true for the country-level evaluation.

Regression statistics	
Multiple R	0.311
R square	0.097
Adjusted R square	-0.204
Standard error	0.485
Observations	5

ANOVA

	Degrees of freedom (df)	Regression sum of squares (SS)	Regression mean square error	F-value	Significance F
Regression	1	33.270	33.270	5.964	0.05032317
Residual	3	33.470	5.578		
Total	4	66.739			

Table 7.3.2.2-3: Univariate regression analysis – country-level: Market to book ratio (dependent variable) and financial risk perception (independent variable)

Regression statistics	
Multiple R	0.765
R square	0.585
Adjusted R square	0.502
Standard error	0.746
Observations	7

ANOVA

	Degrees of freedom (df)	Regression sum of squares (SS)	Regression mean square error	F-value	Significance F
Regression	1	0.076	0.076	0.322	0.609938829
Residual	3	0.706	0.235		
Total	4	0.782			

Table 7.3.2.2-4: Univariate regression analysis – cluster-level: Market to book ratio (dependent variable) and financial risk perception (independent variable)

Finally, a univariate regression analysis for hypothesis nine has been conducted. The regression statistics do not support hypothesis nine for both on a country- and cluster-level. We

therefore need to acknowledge that while firms in countries / clusters with low financial risk perception scores do not show in average less negative accruals figures compared to firms in countries with high financial risk perception scores.

Regression statistics	
Multiple R	0.299
R square	0.090
Adjusted R square	-0.214
Standard error	0.055
Observations	5

ANOVA

	Degrees of freedom (df)	Regression sum of squares (SS)	Regression mean square error	F-value	Significance F
Regression	1	0.001	0.001	0.295	0.624727578
Residual	42	0.009	0.003		
Total	43	0.010			

Table 7.3.2.2-5: Univariate regression analysis – country-level: Negative accruals (dependent variable) and uncertainty avoidance (independent variable)

Regression statistics	
Multiple R	0.591
R square	0.349
Adjusted R square	0.219
Standard error	0.024
Observations	7

ANOVA

	Degrees of freedom (df)	Regression sum of squares (SS)	Regression mean square error	F-value	Significance F
Regression	1	0.002	0.002	2.680	0.16255692
Residual	42	0.003	0.001		
Total	43	0.005			

Table 7.3.2.2-6: Univariate regression analysis – cluster-level: Negative accruals (dependent variable) and uncertainty avoidance (independent variable)

The following tables provide an overview of the Pearson correlations between the dependent and independent variables. On a country-level, the only significant association is between mean financial risk perception and percentage of FIFO. All other correlations are not significant. On a cluster-level the correlation matrix analysis did not reveal further significant relations. Consequently, there is no indication for a multicollinearity issue comparable to Salter and Niswander (1995) between the independent variables.

	Mean Financial Risk Perception	Percentage of FIFO	Market to book ratio	Negative accruals	Market Capitalization / GDP	Corporate income tax
Questionnaire	1					
Percentage of FIFO	-0.946	1				
Market to book ratio	0.311	-0.290	1			
Negative accruals	-0.299	0.087	0.569	1		
Market Capitalization / GDP	0.083	-0.186	0.807	0.667	1	
Corporate income tax	-0.428	0.304	-0.319	0.359	-0.456	1

Note: All (Pearson) correlation coefficients in italic are significant at the 5% level or better

Table 7.3.2.2-7: Pearson correlation coefficients among independent and dependent variables on a country-level

	Mean Financial Risk Perception	Percentage of FIFO	Market to book ratio	Negative accruals	Market Capitalization / GDP	Corporate income tax
Questionnaire	1					
Percentage of FIFO	*-0.85*	1				
Market to book ratio	*-0.76*	0.60	1			
Negative accruals	0.59	-0.74	-0.19	1		
Market Capitalization / GDP	0.42	-0.20	-0.30	0.59	1	
Corporate income tax	-0.26	-0.15	0.41	0.20	-0.51	1

Note: All (Pearson) correlation coefficients in italic are significant at the 5% level or better

Table 7.3.2.2-8: Pearson correlation coefficients among independent and dependent variables on a cluster-level

7.3.2.3   *Multivariate analysis*

In alignment with the approach of the testing of the Hofstede-Gray-Framework related hypotheses multivariate regression analyses will be conducted. As outlined above the corporate income tax rate and the importance of the equity market have been included as additional independent variables based on previous research (regression model 2).

First, hypothesis ten has been tested. The regression statistics do not support hypothesis ten and we therefore need to conclude that firms in countries/country clusters with relatively higher corporate income tax rates and relatively smaller equity markets relative to their GDP so not show in average a preference for more conservative inventory valuation methods, e.g., less application of the FIFO method.

Afterwards, hypothesis eleven has been tested. The regression statistics do not support hypothesis and we therefore need to conclude that firms in countries/country clusters with relatively higher corporate income tax rates and relatively smaller equity markets relative to their GDP do not show in average lower market to book ratios.

Finally, hypothesis twelve has been tested. The regression statistics do significantly support hypothesis twelve and therefore we can conclude that firms in countries with higher corporate income tax rates and relatively smaller equity markets relative to their GDP show in average more negative accruals figures. The same hypothesis on a cluster level could not be supported. All independent variables contribute explaining the average negative accruals per country. The hypothesis could not be supported on a cluster level.

Regression statistics	
Multiple R	1.000
R square	1.000
Adjusted R square	1.000
Standard error	0.000
Observations	5

ANOVA

	Degrees of freedom (df)	Regression sum of squares (SS)	Regression mean square error	F-value	Signific-ance F
Regression	3	0.010	0.003	76205.224	0.002663
Residual	40	0.000	0.000		
Total	43	0.009899			

	Coeffic-ients	Standard error	T-statistics	P-value	Lower 95%	Upper 95%
Intercept	-0.345	0.002	-170.143	0.004	-0.371	-0.320
Market Capitalization / GDP	0.066	0.000	439.590	0.001	0.064	0.068
Corporate income tax	0.586	0.002	313.251	0.002	0.562	0.610
Financial risk perception	-0.001	0.000	-14.749	0.043	-0.001	0.000

Table 7.3.2.3-1: Multivariate regression analysis – country-level: Negative accruals (dependent variable) and financial risk perception, importance of equity market, corporate income tax rate (independent variables)

7.3.2.4   Robustness test

The VIF values for the independent variables in both the country- and cluster level samples are all smaller than 1.6 which is below the threshold of 5.

8. Conclusion, implications for further research, and practical implications

In this study I have examined the link between measures of accounting conservatism and Hofstede's uncertainty avoidance scale as well as the financial risk perception questionnaire. For the Hofstede data, univariate and multivariate regression analyses showed the hypothesized association between uncertainty avoidance and the accounting value conservatism, operationalized through inventory valuation and market to book ratio. The association between uncertainty avoidance and negative accruals was non-significant; however, the correlation is negative as hypothesized. Overall, we can conclude that the empirical results from the Hofstede data indicate that we cannot dismiss culture as a possible variable explaining accounting conservatism.

For the financial risk perception questionnaire data, results were mixed. Univariate regression analyses found a significant negative link between both country-level and cluster-level financial risk perception scores and percentage of FIFO. The link to the market to book ratio was significant on a cluster-level, but not on a country-level. Univariate analyses for the hypothesis were not significant. Multivariate regression analyses found a significant link between the questionnaire, importance of equity market, tax rate and accruals on a country- but not on a cluster level. The other hypotheses could not be supported. It needs to be stated that the results for the alternative independent variable are less evident than for the Hofstede scale, whereas more significant results could be found for the cluster-level analysis. While the respondent structure is very diverse, the majority of the respondents is concentrated on a few countries only. As the statistical results are encouraging and valuable from a research gap perspective, it is suggested to continue the search for further participants in the survey to increase the number of participants per country to a reasonable amount. Afterwards the hypotheses should be reassessed again.

With regards to the improvement of the dependent variables, suggested measures for unconditional conservatism have been applied and significant associations have been found for the Hofstede data, at least for inventory valuation and market to book ratio. Following the suggestions of Wang et al. (2009) I did not rely on a single measure of accounting conservatism. Further research could include the elaboration of an accounting conservatism index including the three variables facilitating the statistical analysis process. This proposal is based as well on a suggestion of Wang et al. (2009).

Another important area for discussion relates to the fact that the majority of the studies were conducted before the adoption of IFRS in the European Union in 2004. Also in studies after 2004, the mentioning of IFRS in the research design is limited to case studies which include questions on specific standards, and survey participants are asked to do specific assessments. This thesis contributed to the understanding if cross-cultural differences in accounting decisions vanish following the introduction of IFRS or if they perpetuate. The results from the Hofstede data indicate that cultural impact on accounting practices persists even under IFRS. These results underscore the continuing importance of the field of International Accounting Harmonization Research and the need for further research. First, the standardization project between the IASB and the FASB is still ongoing being a classic field of international accounting harmonization research. Second, the transferability of models postulated before the introduction of IFRS into the IFRS era needs to be further assessed given this study only examined one accounting value of the Hofstede-Gray-Framework. Ultimately the question needs to be raised if the idea of full accounting standardization across nations and their different cultures represents an achievable mission. This study indicates that full standardization is not achievable as culture continues to be a variable influencing accounting practice under IFRS. The addition of a further period of International Accounting Harmonization Research to the work of Baker and Barbu (2007), which could be called the post-IFRS introduction period, seems reasonable.

Offering alternative options to Hofstede's uncertainty avoidance continues to be a valuable contribution for future research. In 2011, a study was conducted by Rapp, Benardi and Bosco to examine the use of Hofstede's uncertainty avoidance construct in international research. The authors found 118 articles alone in the Journal of International Business Studies mentioning uncertainty avoidance. Most of these studies used the uncertainty avoidance scale in the explanation of their research hypotheses, as an independent or control variable or as a tool to compare countries by using the composite indices. [772] In addition to the Hofstede-Gray-Framework, the cultural dimensions from Hofstede themselves have been widely used in different fields of accounting research, as for example management accounting (Chow et al., 2001; Tsui, 2001), audit (Winsgate, 1997), financial accounting, and accounting standards (amongst others Wagdy, 1999; Naciri and Hoarau, 2001). It has been applied in studies on management control systems (Chanchani and MacGregor, 1999), financial risk perception, investment strategy, and return (Hens, 2012).

Therefore, I suggest further increasing the number of participants in the financial risk perception questionnaire in order to use the new independent variable for further research in the Hofstede-Gray-Framework when linking measures of accounting conservatism with the

degree of uncertainty avoidance or risk aversion in a society. Also studies which would have used Hofstede's uncertainty avoidance scores in a financial context could consider this new variable as a future tool for research. Further variables from the questionnaire which have not been used so far could be included in these studies. These variables include gender, age, willingness to pay, and whether the fact the respondent is an investment professional has an influence or not. More recent studies on measuring culture, e.g. project GLOBE, do not provide an alternative as their uncertainty avoidance or risk measures are based on the work of Hofstede (1980). In certain time intervals, it might be valuable to repeat the study to review potential effects from cultural convergence, standard changes or increased accounting practice and standard harmonization on the way to a "neutral standpoint when dealing with uncertainty"[764].

This new independent variable would also support the idea of single hypothesis testing of accounting and societal values while having the Hofstede-Gray-Framework being kept as a conceptual basis only. The increased degree of flexibility might lead to potential improvement of the research design and the validity of results.

Practical implications of the finding that following the adoption of IFRS culture related differences in accounting conservatism persist are important for a range of areas. First of all continuous education and training of accounting practitioners and regulatory bodies in terms of cultural awareness is eminent. A true and fair view of financials is key: "Preparers shall take a neutral standpoint when dealing with uncertainty"[764]. Salter and Niswander (1995) consider the avoidance of global capital market segmentation to be one of the most important practical implications of international accounting harmonization.[785] If investors are informed differently throughout the world from a quality and volume perspective, this might not only influence the global flow of capital, but also paid risk premia.[785] Harmonization of accounting practices have also been seen as a mean to improve the quality of information.[785]

Such information could also be incorporated as a culture variable in company valuation models of equity market research analysts, leading to a possible notch up or down depending on the relative degree of conservatism. In this case the findings of this thesis would serve as a mitigation tool helping to ensure the quality of information provided to potential investors.

The practical implications of a new independent variable differentiating countries in their financial risk perception go beyond accounting. Hens and Wang (2007) suggest that the knowledge of how "culture can influence risk-attitudes, probabilistic thinking, overconfidence

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[785] Cf. Salter/Niswander (1995), p. 393.

tendency"[786], which might "manifest itself as different patterns in investment behavior as well as market trends across countries and regions"[786] might help to "construct financial products that are appealing to different cultures"[787]. Also risk control policies could benefit and be enhanced by including information on cross-cultural differences in risk attitude and perception.

Also the suggestions made by Salter and Niswander (1995) go beyond accounting. The authors argued that high uncertainty avoidance countries would rather be reluctant to the harmonization efforts of the IASC, whereas low uncertainty avoiding countries are expected to be rather open. [785] The authors argue that "even if the IASC were successful de jure, culture may well frustrate the results by making the quality of financial reporting unclear. Persons seeking information on companies globally may believe they are receiving the same information but may well be missing certain subtleties and, as a result, make poor decisions. As Meek and Gray (1989) indicate, even companies that voluntarily disclose information above required national levels still retain a national flavour to those disclosures and are limited by those national predilections. These thinking can be valuable for other standard setting bodies, e.g., the Basel Committee for Banking Supervision, when releasing standards to be adopted on a global basis in a certain period of time. The national flavour can be well observed in the adoption of global standards, e.g. Basel III where Switzerland relatively quickly introduced a Swiss Finish and the United States postponed the adoption.

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[786] Hens/Wang (2007), p. 11.
[787] Cf. Hens/Wang (2007), p. 12.

Literature

Adnan, S.M./van Staden, C.J./Hay, D. (2010):
Does the Interaction of National Culture with Governance Structure Influence Quality and Quantity of CSR Disclosure?, in: APIRA 2010 Conference, Internet: http://docs.business.auckland.ac.nz/Doc/Shayuti-Mohamed.pdf, Download: 9 June 2014, p. 1-30.

Ahmed, A. /Morton, R./ Schaefer, T. (2000):
Accounting Conservatism and the Valuation of Accounting Numbers: Evidence of the Feltham-Ohlson (1996) Model, in: Journal of Accounting, Auditing & Finance, Vol. 15, p. 271–294.

Alexander, D./ Nobes, C. (2007):
Financial Accounting: An International Introduction, third edition, Pearson Education Limited, Essex, England.

Alipour, S./ Rabiee, K./Alipour, M. (2013):
Relations between Unconditional and Conditional Accounting Conservatism with Bankruptcy Risk in Companies Listed in Tehran Stock Exchange, in: International Research Journal of Applied and Basic Sciences, Vol. 4, Issue 10, p. 3649-3657.

American Accounting Association - AAA (1977):
Report of the American Accounting Association Committee on International Accounting Operations and Education, in: Accounting Review, Supplement to Vol. 52, p. 67-119.

Archambault, J.J./Archambault, M.E. (2003):
A multinational test of determinants of corporate disclosure, in: The International Journal of Accounting, Vol. 38, No. 2, p. 173-194.

Arnold, D.F.Sr./Bernardi, R.A./Neidermeyer, P.E. (2001):
The association between European materiality estimates and client integrity, national culture and litigation, in: The International Journal of Accounting, Vol. 36, p. 459-483.

Aschenbrenner-Wellmann, B. (2003):
Interkulturelle Kompetenz in Verwaltung und Wirtschaft: Theorie und Praxis eines Change-Prozesses von der monokulturellen zur globalen Kompetenz. Berlin. Logos Verlag.

Askary, S./Pounder, S.J./Yazdifar, H. (2008):
Influence of culture on accounting uniformity among Arabic nations, in: Education, Business and Society: Contemporary Middle Eastern Issues, Vol. 1, No. 2, p. 145-154.

AZEK/CFPI (2005):
Financial Accounting and Financial Statement Analysis, Bülach 2005.

Back, Peter (2005):
Explaining Financial Difficulties based on previous Payment Behaviour, Management Background Variables and Financial Ratios, in: European Accounting Review, Volume 14 No 4, p. 839-868.

Baker, Richard C./Barbu, Elena M. (2007):
Trends in research on international accounting harmonization, in: The International Journal of Accounting, Volume 42, Issue 2, p. 272-304.

Ball, R./Robin, A./Sadka, G. (2008):
Is financial reporting shaped by equity markets or by debt markets? An international study of timeliness and conservatism, in: Review of Accounting Studies, Vol. 13, p. 168-205.

Banks, J.A./ Banks McGee, C. A. (1989):
Multicultural education. Needham Heights, MA; Allyn & Bacon.

Baskerville, R.F. (2003):
Hofstede never studied culture, in: Accounting, Organizations and Society, Vol. 28, No. 1, p. 1-14.

Basu, S. (1997):
The conservatism principle and the asymmetric timeliness of earnings, in: Journal of Accounting & Economics, Volume 24, December, p. 3-37.

Basu, S. (2005):
Discussion of ''Conditional and Unconditional Conservatism: Concepts and Modeling'', in: Review of Accounting Studies, Vol. 10, p. 311–321.

Baydoun, N./Willett, R. (1995):
Cultural relevance of Western Accounting systems to developing countries, in: Abacus, Vol. 31, No. 1, p. 67-92.

Belkaoui, A. (1978):
Linguistic Relativity in Accounting, in: Accounting, Organizations and Society, Volume 3, No. 2, p. 97-104.

Belkaoui, A. (1983):
Economic, Political and Civil Indicators and Reporting and Disclosure Adequacy: Empirical Investigation, in: Journal of Accounting and Public Policy, Fall 1983, Volume 2, Issue 3, p. 207-220.

Berry, J. (1999):
On the Unity of the field of Culture and Psychology, in: Adamopoulous, John/Kashima, Yoshihisa. Psychology and Cultural Context, p. 7-16. Sage. Thousand Oaks.

Berry, J.W./Poortinga, Y.H./Segall, M. H./Dasen, P. R. (2002):
Cross-Cultural Psychology. Research and Applications. (2nded.) Cambridge: University Press.

Birnberg, J.G./Shields, J.F. (1989):
Three Decades of Behavioral Accounting Research: A Search for Order, in: Behavioral Research in Accounting, Volume 1 (1989), p. 23-74.

Bloom, R./Fuglister, J./Myring, M. (1998):
The state of Accounting in Armenia: A case, in: The International Journal of Accounting, Vol. 33, No. 5, p. 633-654.

Brandt, R. F. (1962):
One world in accounting, in: The Journal of Accountancy, July, Vol. 114, p. 68-71.

Breakwell, G.M./Smith, J.A./Wright, D.B. (2012):
Research Methods in Psychology, 4th edition, Sage, London.

Buckley, J.W. and Buckley, M.H. (1974):
The Accounting Profession, Melville, Los Angeles, p. 139-140.

Bühl, A./Zöfel, P. (2000):
SPSS Version 10: Einführung in die moderne Datenanalyse unter Windows, München 2000.

Buhr, N./Freedman, M. (2001):
Culture, institutional factors and differences in environmental disclosure between Canada and the US, in: Critical Perspectives on Accounting, Vol. 12, p. 293-322.

Cairns, D. (1997):
The future shape of harmonization: a reply, in: European Accounting Review, July 1997, Vol. 6, Issue 2, p. 305-348.

Callen, J.L./Segal, D./Hope, O. (2010):
The pricing of conservative accounting and the measurement of conservatism at the firm-year level, in: Review of accounting studies, Vol. 15, Issue 1, p. 145-178.

Cardon, P.W. /Marshall, B.A. (2008):
National Culture and Technology Acceptance: The Impact of Uncertainty Avoidance, in: Issues in Information Systems, Volume 9 Number 2 (2008), p. 103-110.

Cartwright, S. (2006):
30 Years of Mergers and Acquisitions Research: Recent Advances and Future Opportunities, in: British Journal of Management, Volume 17 Issue S1, p. 1-5.

Chand, P./Cummings, L./Patel, C. (2012):
The effect of Accounting education and national culture on accounting judgments: A comparative study of Anglo-Celtic and Chinese culture, in: European Accounting Review, Vol. 21, No. 1, p. 153-182.

Chanchani, S./MacGregor, A. (1999):
A synthesis of cultural studies in accounting, in: Journal of Accounting Literature, Vol. 18, p. 1-30.

Chanchani, S./Willett, R. (2004):
An empirical assessment of Gray's accounting value constructs, in: The International Journal of Accounting, Vol. 39, No. 2, p. 125-154.

Chang, C.M. (2010):
Service Systems Management and Engineering: Creating Strategic Differentiation and Operational Excellence, John Wiley & Sons Inc., Hoboken, New Jersey.

Chatterjee, B./Hawkes, L. (2008):
Does internet reporting improve the accessability of financial information in a global world? A comparative study of New Zeland and Indian Companies, in: The Australasian Accounting Business & Finance Journal, Vol. 2, No. 4, p. 33 -56.

Chow, C.W./Wong-Boren, A. (1987):
Voluntary financial disclosure by Mexican corporations, in: The Accounting Review, Vol. 62, Issue 3, p. 533-562.

Chow, M.-Y.L./Chau, G.K.-K./Gray, S.J. (1995):
Accounting reforms in China: Cultural constraints on implementation and development, in: Accounting and Business Research, Vol. 26, No. 1, p. 29-49.

Christopher, T./Hassan, S. (2005):
Culture and Corporate Governance Statement Disclosure, in: School of Accounting, Finance and Economics & FIMARC Working Paper Series Edith Cowan University, November 2005, Working Paper 0513, p. 1-16.

Connerley, M.L./Pedersen, P.B. (2005):
Leadership in a Diverse and Multicultural Environment: Developing Awareness, Knowledge, and Skills. Sage. Thousand Oaks.

Coyne, J.G./Summers, S.L./Williams, B./ Wood, D.A. (2010):
Accounting Program Research Rankings by Topical Area and Methodology, in: Issues in Accounting Education: November 2010, Vol. 25, No. 4, pp. 631-654.

Cravens, K.S./Goad Oliver, E. (2000):
The influence of culture on pension plans, in: The International Journal of Accounting, Vol. 35, No. 4, p. 521-537.

Cyert, R./March, J. (1963):
A behavioral theory of the firm. Englewood Cliffs. NJ: Prentice Hall.

Dahawy, K./Merino, B.D./Conover, T.L. (2002):
The conflict between IAS disclosure requirements and the secretive culture in Egypt, in: Advances in International Accounting, Vol. 15, p. 203-228.

D'Arcy, A. (2001):
Accounting classification and the international harmonisation debate – an
empirical investigation, in: Accounting, Organizations and Society, Vol. 26, Nos 4–5, p. 327-349.

Da Costa, R.C./Bourgeois, J.C./Lawson, W.M. (1978):
A classification of international financial accounting practices, in: International Journal of Accounting, Vol. 13, No. 2, p. 73-85.

Dahawy, K./Conover, T. (2007):
Accounting Disclosure in companies listed on the Egyptian stock exchange, in: Middle Eastern Finance and Economics, Issue 1, p. 5-17.

Damen, L. (1987):
Culture Learning: The Fifth Dimension on the Language Classroom. Reading, MA: Addison-Wesley.

Dima, B./Dima, S.M. (2009):
A discussion on new cultural and accounting variables and IFRSs' implementation: Empirical study on a sample of Central and Eastern European countries," MPRA Paper 27165, University Library of Munich, Germany, p. 1-40.

Ding, Y.Y. (2002):
International differences in disclosure adequacy: Empirical evidence from annual reports of French and Chinese listed firms, Vol. 15, p. 155-179.

Ding, Y.Y./Entwistle, G./Stolowy, H. (2004):
International differences in research and development reporting practices: A French and Canadian comparison, in: Advances in International Accounting, Vol. 17, p. 55-72.

Ding, Y.Y./Jeanjean, T./Stolowy, H. (2005):
Why do national GAAP differ from IAS? The role of culture, in: The International Journal of Accounting, Volume 40, Issue 4, 2005, p. 325–350.

Dorman, P.W./House, R.J. (2004):
Cultural influences on organizational leadership – literature review, theoretical rationale, and GLOBE project goals, in: House, Robert J./Hanges, Paul J./Javidan, Mansour/Dorfman, Peter W./Gupta, Vipin (editors). Culture, leadership and organizations: The GLOBE study of 62 societies, SAGE, Thousand Oaks, p. 51-73.

Doupnik, S./Richter, M. (2004):
The impact of culture on the interpretation of "in context" verbal probability expressions, in: Journal of International Accounting Research, Vol. 3, No. 1, p. 1-20.

Doupnik, T.S./Riccio, E.L. (2006):
The influence of conservatism and secrecy on the interpretation of verbal probability expressions in the Anglo and Latin cultural areas, in: The International Journal of Accounting, Vol. 41, Issue 3, p. 237-261.

Doupnik, T. S./Salter, S.B. (1993):
An Empirical Test of a Judgmental International Classification of Financial Reporting Practices, in: Journal of International Business Studies, first quarter, p.41–60.

Doupnik, T. S./Salter, S.B. (1995):
External environment, culture, and accounting practice: A preliminary test of a general model of international accounting development, in: International Journal of Accounting, Vol, 30, No. 3, p. 189-207.

Doupnik, T.S./Richter, M. (2004):
The impact of culture on the interpretation of „in context" verbal probability expressions, in: Journal of International Accounting Research, Vol. 3, No. 1, p. 1-20.

Doupnik, T.S./Tsakumis, G.T. (2004):
A Critical Review of Tests of Gray's Theory of Cultural Relevance and Suggestions for Future Research, in: Journal of Accounting Literature, Vol. 23, p. 1-30.

Easton, P./Pae, J. (2004):
Accounting conservatism and the relation between returns and accounting data, in: Review of Accounting Studies, Vol. 9, p. 495–521.

Eddie, I.A. (1990):
Asia Pacific cultural values and accounting systems, in: Asia Pacific International Management Forum, Vol. 16, p. 22-30.

E&Y (2014):
Worldwide corporate tax guide 2014, internet: http://www.ey.com/GL /en/Services/Tax/Worldwide-Corporate-Tax-Guide---Country-list, download: 12 July 2014.

Fang, Y. (2007):
On Accounting and Culture, in: Canadian Social Science, Vol. 3, No. 5, p. 121-124.

Fechner, H. E./Kilgore, A. (1994):
The Influence of Cultural Factors on Accounting Practice, in: International Journal of Accounting, Vol. 29 (3), p. 265-277.

Finch, N. (2009):
Towards on Understanding of Cultural Influence on the International Practice of Accounting, in: Journal of international business and cultural studies, Vol. 2, No. 1, p.1-6.

Frank, W.G. (1979):
An Empirical Analysis of International Accounting Principles, in: Journal of Accounting Research, Vol. 17, No. 2, p. 593-605.

Gallizo, J./Jiménez, F./Salvador, M. (2003):
Evaluating the Effects of Financial Ratio Adjustmentin European Financial Statements, in: European Accounting Review, July 2003, Volume 12 Issue 2, p. 357-377.

Genkova, P. (2013):
Kulturvergleichende Psychologie: Gegenstand, theoretische Konzepte und Perspektiven. In: Genkova, Petia; Ringeisen, Tobias; Leong, Frederick T. L. (Hrsg.). Handbuch Stress und Kultur – Interkulturelle und Kulturvergleichende Perspektiven, p. 19-40. Springer. Wiesbaden. 2013.

Givoly, D./Hayn, C. (2000):
The changing time-series properties of earnings, cash flows and accruals: Has financial accounting become more conservative?, in: Journal of Accounting & Economics, Vol. 29, p. 287-320.

Gordon, T.P./Porter, J.C. (2009):
Reading and Understanding Academic Research in Accounting: A Guide For Students, in: *Global Perspectives on Accounting Education*, Vol. 6, Iss. 1, Article 1.

Gray, D./Ehoff, C. Jr. (2014):
Lower Of Cost Or Market Inventory Valuation: IFRS Versus US GAAP, in: Journal of Business & Economics Research, Volume 12, Number 1, p. 19-22.

Gray, S.J. (1988):
Towards Towards a Theory of Cultural Influence on the Development of Accounting Systems Internationally, in: Abacus, March 1988, Volume 24, Issue 1, p. 1-15.

Gray, S.J./Vint, H.M. (1995):
The impact of culture on accounting disclosures: Some international evidence, in: Asia-Pacific Journal of Accounting, Vol. 2, p. 33-43.

Guillamon-Saorin, E./Sousa, C.M.P. (2010):
Press release disclosures in Spain and the UK, in: International Business Review, Vol. 19, p. 1-15.

Gupta, Vipin/Hanges, Paul J. (2004):
Regional and Climate Clustering of Societal Cultures, in: House, Robert J./Hanges, Paul J./Javidan, Mansour/Dorfman, Peter W./Gupta, Vipin (editors). Culture, leadership and organizations: The GLOBE study of 62 societies, SAGE, Thousand Oaks, p. 178-218.

Hall, E.T. (1959):
The Silent Language. New York. Doubleday.

Hall, E.T. (1966):
The Hidden Dimension. New York. Doubleday.

Hall, E.T. (1976):
Beyond Culture. New York. Anchor Books/Doubleday.

Hall, E.T. (1992):
An Anthropology of Everyday Life. New York. Doubleday.

Haniffa, R.M./Cooke, T.E. (2002):
Culture, corporate governance and disclosure in Malaysian corporations, in: Abacus, Vol. 38, No. 3, p. 317-349.

Harrison, G. L./McKinnon, J. L. (1986):
Culture and Accounting Change: A New Perspective on Corporate Reporting Regulation and Accounting Policy Formulation, in: Accounting, Organisations and Society, Volume 11(3), p. 233–252.

Heidhues, E./Patel, C. (2011):
A critique of Gray's framework on accounting values using Germany as a case study, in: Critical perspectives on Accounting, Volume 22, Issue 3, March 2011, p. 273-287.

Hellman, N. (2008):
Accounting conservatism under IFRS, in: Accounting in Europe Volume 5, Issue 2, p. 71-100.

Hendriksen, E. S. (1982):
Accounting Theory, 4th edn, Homewood, Irwin.

Hens, T. (2012):
Wie Kultur die Anleger beeinflusst, in: Finanz und Wirtschaft, May, No. 43, p. 16.

Hens, T./Wang, M. (2007):
Does Finance have a cultural dimension?, in: National Centre of Competence in Research Financial Valuation and Risk Management, working paper, No. 377, p. 1-15.

Hills, M. D. (2002):
Kluckhohn and Strodtbeck's Values Orientation Theory. *Online Readings in Psychology and Culture, 4*(4). http://dx.doi.org/10.9707/2307-0919.1040. Downloaded on 3 January 2014.

Hofstede, G. (1980):
The Hofstede Centre: National Cultures – Dimensions. Weblink: http://geert-hofstede.com/dimensions.html. Download date: 5 October 2013

Hofstede, G. (1980):
Culture's Consequences: International Differences in Work-Related Values, Beverly Hills CA, Sage.

Hofstede, G. (1983):
Dimensions of National Cultures in Fifty Countries and Three Regions, in: J. B. Deregowski, S. Dziuraviec and R. Annis (eds), Explications in Cross-Cultural Psychology, Swets and Zeitlinger, 1983.

Hofstede, G./Bond, M.H. (1988):
The Confucius Connection: From Cultural Roots to Economic Growth, in: Organizational Dynamics, Volume 16, Issue 4, p. 5-21.

Hofstede, G./Hofstede, G.J. (2005):
Cultures and Organizations: Software of the Mind, second edition. New York 2005.

Hofstede, G. (2006):
Lokales Denken, globales Handeln: Interkulturelle Zusammenarbeit und globales Management, DTV, München 2006.

Hofstede, G. (2014):
Six dimensions for website.xls, status: Data as used in our books, internet: http://www.geerthofstede.com/dimension-data-matrix, download: 9 March 2014.

Hofstede, G. (2014):
Dimensions of national cultures, internet: http://www.geerthofstede.com/dimensions-of-national-cultures, download: 23 March 2014.

Hooi, G. (2007):
The effects of culture on international banking disclosures, n: Asia-Pacific Journal of Accounting and Economics, Vol. 14, p. 7-25.

Hope, O.-K. (2003a):
Firm-level disclosures and relative roles of culture and legal origin, in: Journal of International Financial Management and Accounting, Vol. 14, Issue 3, p. 218-248.

Hope, O.-K./Kang, T./Thomas, W./Yong, K.Y. (2008):
Culture and auditor choice: A test of the secrecy hypothesis, in: Journal of Accounting and Public Policy, Vol. 27, p. 357-373.

Hossari, G./Rahman, S. (2005):
A Comprehensive formal Ranking of the Popularity of Financial Risk Ratios in Multivariate Modelling of Corporate Collapse, in: Journal of American Academy of Business, Cambridge, March 2005, Volume 6 Issue 1, p. 321-327.

House, R.J./Javidan, M. (2004):
Overview of GLOBE, in: House, Robert J./Hanges, Paul J./Javidan, Mansour/Dorfman, Peter W./Gupta, Vipin (editors). Culture, leadership and organizations: The GLOBE study of 62 societies, SAGE, Thousand Oaks, p. 9-28.

Huang, A.G./Tian, Y./Wirjanto, T.S. (2011):
Reexamining accounting conservatisms: The importance of adjusting for firm heterogeneity, http://www.researchgate.net, download: 31 May 2014.

Hussein, M.E. (1996):
A comparative study of cultural influences on financial reporting in the US and the Netherlands, in: The International Journal of Accounting, Vol. 31, No. 1, p. 95-120.

IFRS (2014):
IFRS application around the world: Analysis of the IFRS jurisdictional profiles, internet: http://www.ifrs.org/Use-around-the-world/Pages/Analysis-of-the-IFRS-juris   dictional-profiles.aspx, download: 28 June 2014.

Jaggi, B. C. (1973):
The Impact of the Cultural Environment on Financial Disclosures, in: International Journal of Accounting (Spring), p. 75–84.

Jaggi, B./Low, P.Y. (2000):
Impact of culture, market forces, and legal system on financial disclosures, in: The International Journal of Accounting, Vol. 35, No. 4, p. 495-519.

Javidan, M./House, R.J./Dorman, P.W. (2004):
A Nontechnical Summary of GLOBE Findings, in: House, Robert J./Hanges, Paul J./Javidan, Mansour/Dorfman, Peter W./Gupta, Vipin (editors). Culture, leadership and organizations: The GLOBE study of 62 societies, SAGE, Thousand Oaks, p. 29-50.

Kaufmann, K. (2011):
Informelles Lernen im Spiegel des Weiterbildungsmonitors, PhD Thesis, Freie Universität Berlin.

Klages, H. (2005):
Modernization does not mean Westernization: Emergence of a different Pattern, in: Friedlmeier, W./Chakkarath, P./Schwarz, B.: Culture and Human Development: The Importance of Cross-Cultural Research to the Social Sciences, New York 2005, p. 273-287.

Kim, Y. (2001):
Determinants of financial reporting system: The case of South Korea; in: Biennial conference, 2nd, Monash, Australia, Sep 2001, p. 139-154.

Kimmel, P.D./Weygandt, J.J./Kieso, D.E. (2009):
Accounting, Hoboken 2009.

Kittler, M.G./Rygl, D./Mackinnon, A. (2011):
Beyond cultur or beyond control? Reviewing the use of Hall's high-/low-context concept, in: International Journal of Cross Cultural Management, 11 (1), p. 63-82.

Lara, J.M.G./ Mora, A. (2004) :
Balance sheet versus earnings conservatism in Europe, in: European Accounting Review, Vol. 13, Issue 2, p. 261-292.

Lederach, J.P. (1995):
Preparing for peace: Conflict transformation across cultures. Syracuse, NY: Syracuse University Press.

MacArthur, J.B. (1996):
An investigation into the influence of cultural factors in the international lobbying of the International Accounting Standards Committee: The case of E32, comparability of financial statements, in: The International Journal of Accounting, Vol. 31, No. 2, p. 213-237.

McClelland, D.C. (1961):
The achieving society. Princeton, NJ: Van Nostrand.

McComb, D. (1979):
The international harmonization of accounting: A cultural dimension, in: The International Journal of Accounting, Volume 14, Issue 2, p. 2–16.

Merinda, B. (2011):
Cultural impact on accounting practices: Does it disappear after the introduction of IFRS?, Erasmus University of Rottderdam bachelor thesis, internt: http://www.google.ch/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&ved=0CCEQFjAA& url=http%3A%2F%2Fthesis.eur.nl%2Fpub%2F9374%2FBA033-Merinda _326348.docx&ei=2QWpU57TKo-r0gXCj4HQAQ&usg=AFQjCNHcZs94ix YVQbmQl0S-WzTdXNuQQw&bvm=bv.69620078,d.d2k&cad=rja, download: 24 June 2014, p. 1-40.

Müller, G.G. (1967):
International Accounting, New York, Macmillan.

Müller, G.G. (1968):
Accounting Principles Generally Accepted in the United States Versus Those Generally Accepted Elsewhere in: International Journal of Accounting, Spring 1968, Vol. 3, Issue 2, p. 91-103.

Mulder, M. (1971):
Power equalization through participation, in: Administrative Science Quarterly, 31 (4), p. 31-38.

Nair, R. D./Frank, W.G. (1980):
The Impact of Disclosure and Measurement Practices on International Accounting Classifications, in: Accounting Review, July, p.426–451.

Nardon, L./Steers, R.M. (2009):
The culture theory jungle: divergence and convergence in models of national culture. In: Bhagat, Rabi S./Steers, Richard M., Cambridge Handbook of Culture, Organizations, and Work, p.3–22. Cambridge University Press.

Nasev, J. (2009):
Conditional and unconditional conservatism, Dissertation Gabler Verlag, Wiesbaden.

Nobes, C. (1983):
A Judgemental International Classification of Financial Reporting Practices, in: Journal of Business Finance and Accounting (spring), p.1-19.

Nobes, C. (1998):
Towards a General Model of the Reasons for International Differences in Financial Reporting, in: Abacus, September, p.162–187.

Nobes, C./Parker, R. (2004):
Comparative International Accounting, Pearson, Essex.

Nobes, C./Parker, R. (2008):
Comparative International Accounting, Pearson, Essex.

Noravesh, I./Dilami, Z.D./Bazaz, M.S. (2007):
The impact of culture on accounting: does Gray's model apply to Iran?, in: Review of Accounting and Finance, Volume 6, No. 3, p. 254-272.

Pae, J. (2007):
Unexpected Accruals and Conditional Accounting Conservatism, in: Journal of Business Finance & Accounting, Vol. 34, Issue 5-6, p. 681-704.

Parson, T./Shils, E.A. (1951):
Toward a General Theory of Action: Theoretical Foundations for the Social Sciences. Harvard University Press.

Penman, S.H./Zhang, X.-J. (2002):
Accounting Conservatism, the Quality of Earnings, and Stock Returns, in: Accounting Review, April 2002, Volume 77 Issue 2, p. 237-264.

Perera, H. (1989):
Towards a framework to analyse the impact of culture on accounting, in: International Journal of Accounting, Vol. 24, p. 42-56.

Perera, H./Mathews, M.R. (1990):
The cultural relativity of accounting and international patterns of social accounting, in: Advances in International Accounting, Vol. 3, p. 215-251.

Perera, H./Cummings, L./Chua, F. (2012):
Cultural relativity of accounting professionalism: Evidence from New Zealand and Samoa, in: Advances in Accounting, incorporating Advances in International Accounting, Vol. 28, p. 138-146.

Pourjalali, M.H.B./Meek, G. (1995):
Accounting and culture: The case of Iran, in: Research in Accounting in Emerging Economics, Vol. 3, p. 3-17.

Pourjalali, M.H.B./Meek, G. (1996):
The impact of changes in cultural values on accounting value systems: A case study, in: Iranian Accounting Review, Vol. 4, No. 14-15, p. 109-137.

Powell, N.C./Strickland, S./Burnaby, P.A. (1992):
Internal Auditing: The emergence of an international profession?, in: Journal of International Accounting Auditing & Taxation, Vol. 1, No.2, p. 209-228.

Radebaugh, L. H. (1975):
Environmental Factors Influencing the Development of Accounting Objectives, Standards, and Practices in Peru, in: International Journal of Accounting, Fall 1975, Vol. 11 Issue 1, p. 39-56.

Radebaugh, L. H./Gray, S.J./Black, E.L. (2006):
International Accounting and Multinational Enterprises, 6th Edition.

Ralston, D.A./Holt, D.H./Terpstra, R.H./Yu, K.-C. (1997):
The impact of national culture and economic ideology on managerial work values: A study of the United States, Russia, Japan, and China, in: Journal of International Business Studies, Vol. 28, p. 177-207.

Rapp, J.K./ Bernardi, R.A./ Bosco, S.M. (2011):
Examining the use of Hofstede's Uncertainty Avoidance construct in International Research: A 25-Year Review, in: International Business Research, Vol. 4, No. 1, January 2011, p. 3-15.

Ratmono, D./Mas'ud, F. (2000):
Cultural influence on perceived usefulness of Islamic corporate reporting model, in: JAAI, Vol. 9, No. 2, p. 95-116.

Richardson, G. (2007):
The influence of culture on tax systems internationally: A theoretical and empirical analysis, in: Journal of International Accounting Research, Vol. 6, No. 1, p. 57-79.

Roberts, C.B./Salter, S.B. (1999):
Attitudes towards uniform accounting: Cultural or economic phenomena?, in: The International Journal of Accounting, Vol. 10, No. 2, p. 121-142.

Robinson, R.V. (1985):
Review: Culture consequences, in: Work and Occupations, Vol. 10, p. 110-115.

Rugman, A.M./Collinson, S. (2009):
International Business, Essex 2009.

Salter, S.B./Niswander, F. (1995):
Cultural influence on the development of accounting systems internationally: A test of Gray's (1988) theory, in: Journal of International Business Studies, Vol. 26, p. 379-397.

Salter, S.B./Lewis, P.A. (2011):
Shades of Gray: An empirical examination of Gray's model of culture and income measurement practices using 20-F-data, in: Advances in Accounting, incorporating Advances in International Accounting, No. 27, p. 132-142.

Salter, S.B./Kang, T./Gotti, G./Doupnik, T.S. (2013):
The role of social values, accounting values and institutions in determining accounting conservatism, in: Management International Review, Vol. 53, p. 607-632.

Sarens, G./Abdolmohammadi, M.J. (2010):
Cultural dimension and professionalism and uniformity of Internal Auditing practice, in: CAAA Annual Conference 2010, internet: http://ssrn.com/abstract=1529033 or http://dx.doi.org/10.2139/ssrn.1529033, download: 9 June 2014.

Schein, E. (2010):
Organizational Culture and Leadership. 4th edition. Wiley. San Francisco.

Schülein, J.A./Reitze, S. (2012):
Wissenschaftstheorie für Einsteiger, 3th edition, Wien.

Schultz Jr., J.J./Lopez, T.J. (1995):
The impact of national influence on accounting estimates: Implications for international accounting standard setters, in: The International Journal of Accounting, Vol. 36, p. 271-290.

Schutte, D./Buys, P. (2011):
Cultural considerations and the implementation of IFRS: A focus on small and medium entities; in: J Soc Sci, Vol. 26, Issue 1, p. 19-27.

Schwartz, S.H./Cieciuch, J./Vecchione, M./Davidov, E./Fischer, R./Beierlein, C./Ramos, A./Verkasalo, M./Lönnqvist, J.-E./Demirutku, K./Dirilen-Gumus, O./Konty, M. (2012):
Refining the theory of basic individual values. In: Journal of Personality and Social Psychology, Vol 103(4), Oct, 2012, p. 663-688.

Schwartz, S.H. (1992):
Universals in the content and structure of values: Theory and empirical tests in 20 countries. In M. Zanna (Ed.), Advances in experimental social psychology
(Vol. 25, pp. 1–65). New York, NY: Academic Press.

Schwartz, S.H. (1994):
Are there universal aspects in the content and structure of values? Journal of Social Issues, 50, p. 19–45. doi:10.1111/j.1540-4560.1994.tb01196.x

Schwartz, S.H. (1999):
A Theory of Cultural Values and Some Implications for Work. In: Applied Psychology: An International Review, 1999, 48(1), p. 23–47.

Seidler, L.J. (1967):
International accounting – the ultimate theory course, in: Accounting Review, Vol. 42, No. 4. P. 775-781.

Silverthorne, C.P. (2009):
Organizational Psychology in Cross-Cultural Perspective, New York 2005.

Smith, P. (2000):
Cultural Theory: An Introduction, New York 2000, Blackwell Publishers.

Soeters, J./ Schreuder, H. (1988):
The interaction between national and organizational cultures in accounting firms, in: Accounting, Organizations and Society, Volume 13, Issue 1, p. 75-85.

Sorter, G.H./Becker, S.W. (1964):
Corporate Personality as Reflected in Accounting Decisions: Some Preliminary Findings, in: Journal of Accounting Research, Autumn64, Volume 2 Issue 2, p. 183-196.

Sorter, G.H./Becker, S.W. (1966):
Accounting and Financial Measures as Indicators of Corporate Personality, in: Research in Accounting Measurement, R.D. Jaedicke, Y. Ijiri and O. Nielsen (eds.), (American Accounting Association, 1966).

Spiller, Jr. E.A./Choi, F.D. S. (1973):
Forging Accounting Principles in Five Countries: A History and An Analysis of Trends, in: Accounting Review, July 73, Vol. 48 Issue 3, p. 651-652.

Strite, M./Straub, D./Loch, K./Evaristo, R./Karahanna, E. (2003):
Inquire into Definitions of Culture in IT Studies. In: Tan, Felix B., Advanced Topics in Global Information Management, Volume 2, p. 30-48. Idea Group. Hershey.

Straub, D./Loch, K./Evaristo, R./Karahanna, E./Strite, M. (2002):
Toward a Theory-Based Measurement of Culture, in: Journal of Global Information Management, January – March 2002, Volume 10 (1), p.13-23.

Sterling, R. R. (1967):

Conservatism: The Fundamental Principle of Valuation in Traditional Accounting", in: Abacus (December), p. 109-132.

Sudarwan, M./Fogarty, T.J. (1996):

Culture and accounting in Indonesia: An empirical examination, in: The International Journal of Accounting, Vol. 31, No. 4, p. 463-481.

Sulaiman, M./Willett, R. (2003):

Using the Hofstede-Gray-Framework to argue normatively for an extension of Islamic corporate reports, in: Malaysian Accounting Review, Vol. 2, Issue 1, p. 1-35.

Thomas, A./Utler, A. (2013):

Kultur, Kulturdimensionen und Kulturstandards. In: Genkova, Petia; Ringeisen, Tobias; Leong, Frederick T. L. (Hrsg.). Handbuch Stress und Kultur – Interkulturelle und Kulturvergleichende Perspektiven, p. 41-58. Springer. Wiesbaden. 2013.

Thomas, A. (1993):

Psychologie interkulturellen Lernens und Handelns. In A. Thomas (Hrsg.):
Kulturvergleichende Psychologie. Eine Einführung, p. 377 – 424. Göttingen: Hogrefe.

Triandis, H.C. (1995):

Individualism and Collectivism. Boulder, Co. Westview Press.

Trompenaars, F. (1994):

Riding the waves of culture: Understanding diversity in global business. Irwin Professional Publishing. Burr Ridge, Illinois.

Tsakumis, G.T. (2007):

The influence of culture on accountants' application of financial reporting rules, in: Abacus, Vol. 43, No.1, p. 27-48.

Urban, D./ Mayerl, J. (2006):

Regressionsanalyse: Technik, Theorie und Anwending, second edition, Studienskripten zur Soziologie, VS Verlag für Sozialwissenschaften, Wiesbaden.

Violet, W.J. (1983):

The development of international accounting standards: An anthropological perspective, in: The International Journal of Accounting Education and Research, Spring 1983, Volume 18, Issue 2, p. 1-12.

Wallace, R. S. O./Gernon, H. (1991):

Frameworks for international comparative financial accounting, in: Journal of Accounting Literature, Volume 10, p. 209-264.

Wallace, R. S. O./Meek, G. (2002):

Contributions we seek to publish, in: Journal of International Accounting Research, p. 1−2.

Walther, L. (2014):

Principles of Accounting. http://www.principlesofaccounting.com/chapter1/chapter1.html. Downloaded on 24 May 2014.

Wang, R.Z./Ó hÓgartaigh, C./van Zijl, T. (2009):

Measures of accounting conservatism: A construct validity perspective, in: Journal of accounting literature: The official journal of the Fisher School of Accounting, Warrington College of Business, University of Florida, Vol. 28, p. 165-203 and in: SSRN, internet: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1274044, download: 2 June 2014, p. 1.-61.

Watts, R.L. (1977):

Corporate Financial Statements: A product of the market and political process, in: Australian Journal of Management, April 77, Vol. 2 Issue 1, p. 53-75.

Watts, R.L. (2003):

Conservatism in Accounting Part I: Explanations and Implications, in: The Bradley Policy Research Center Financial Research and Policy Working Paper, No. FR 03-16, p. 1-3, and in: Accounting Horizons, Vol. 17, p. 207-221.

Watts, R.L. (2003):

Conservatism in Accounting Part II: Evidence and Research Opportunities, in: The Bradley Policy Research Center Financial Research and Policy Working Paper, No. FR 03-25, p. 1-32, and in: Accounting Horizons, Vol. 17, p. 287–301.

Watts, R.L./Zou, L. (2011):
Accounting Conservatism and Firm Value: Evidence from the Global Financial Crisis; Working Paper MIT Sloan School of Management, internet: http://accounting.eller.arizona.edu/docs/workshop_papers/ross%20watts.pdf, download: 31 May 2014, p. 1-51.

Weber, E.U./Hsee, C.K. (1998):
Cross-Cultural Differences in Risk Perception, in: Management Science, Volume 44, No.9, p. 1205-1217.

Weber, E.U./Hsee, C.K. (2000):
Culture and Individual Judgment and Decision Making, in: Applied Psychology: An International Review, 49(1), p. 32-61.

Williams, **R. (1976):**
Introduction to Keywords; in: Burke, Lucy (ed.); Crowley, Tony (ed.); Girvin, Alan (ed.). The Routledge Language and Cultural Theory Reader. London, England: Routledge, 2000, p. 74-81.

Williams, R.S./Tower, G. (1998):
Differential reporting in Singapore and Australia: A small business managers' perspective, in: The International Journal of Accounting, Vol. 33, No. 2, p. 263-268.

Williams, S.M. (1999):
Voluntary environmental and social accounting disclosure practices in the Asia-Pacific region: An international empirical test of political economy theory, in: The International Journal of Accounting, Vol. 34, No. 2, p. 209-238.

Wingate, M.L. (1997):
An examination of cultural influence on audit environments, in: Research in Accounting Regulation, Supp. 1, p. 129-148.

The World Bank (2013):
GDP (constant LCU), Internet: http://data.worldbank.org/indicator /NY.GDP.MKTP.KN, download: 12 July 2014.

Yussoff, H./Lehmann, G. (2009).

Culture and environmental reporting in Malaysia and Australia, in: 8th Australasian Conference on Social and Environment Accounting Research (CSEAR 2009), p. 1. 28.

Zarzeski, M.T. (1996):

Spontaneous harmonization effects of culture and market forces on accounting disclosure practices, in: Accounting Horizons, Vol. 10, No. 1, p. 18-37.

Zeff, S.A. (1972):

Forging accounting principles in five countries a history and an analysis of trends, Champaign, Ill. Stipes Publ.

Zhang, J. (2008):

Accounting conservatism and private debt contracting, in: Kellogg School of Management – Northwestern University Accounting Papers, internet: https://www.kellogg.northwestern.edu/accounting/papers/J.Zhang%20.pdf; ownload: 31 May 2014 and as: The Contracting Benefits of Accounting Conservatism to Lenders and Borrowers, in: Journal of Accounting and Economics.

Appendix

A)   Culture dimension scores from Hofstede

Power Distance Index (PDI) scores according to Hofstede (2014)[788]

Country	Power Distance	Country	Power Distance
Malaysia	104	Uruguay	61
Slovak Rep	104	Greece	60
Guatemala	95	Korea South	60
Panama	95	Iran	58
Philippines	94	Taiwan	58
Russia	93	Czech Rep	57
Romania	90	Spain	57
Serbia	86	Malta	56
Suriname	85	Pakistan	55
Mexico	81	Canada French	54
Venezuela	81	Japan	54
Arab countries	80	Italy	50
Bangladesh	80	Argentina	49
China	80	South Africa white	49
Ecuador	78	Trinidad and Tobago	47
Indonesia	78	Hungary	46
Africa West	77	Jamaica	45
India	77	Latvia	44
Singapore	74	Lithuania	42
Croatia	73	Estonia	40
Slovenia	71	Luxembourg	40
Bulgaria	70	U.S.A.	40
Morocco	70	Canada	39
Switzerland French	70	Netherlands	38
Vietnam	70	Australia	36
Brazil	69	Costa Rica	35
France	68	Germany	35

[788] Source: Hofstede (2014), Data excel file from webpage

Hong Kong	68	Great Britain	35
Poland	68	Switzerland	34
Belgium French	67	Finland	33
Colombia	67	Norway	31
El Salvador	66	Sweden	31
Turkey	66	Ireland	28
Belgium	65	Switzerland German	26
Africa East	64	New Zealand	22
Peru	64	Denmark	18
Thailand	64	Israel	13
Chile	63	Austria	11
Portugal	63		
Belgium Netherl	61		

Individualism (IDV) scores according to Hofstede (2014)[788]

Country	Individualism	Country	Individualism
U.S.A.	91	Jamaica	39
Australia	90	Russia	39
Great Britain	89	Arab countries	38
Canada	80	Brazil	38
Hungary	80	Turkey	37
Netherlands	80	Uruguay	36
New Zealand	79	Greece	35
Belgium Netherl	78	Croatia	33
Italy	76	Philippines	32
Belgium	75	Bulgaria	30
Denmark	74	Mexico	30
Canada French	73	Romania	30
Belgium French	72	Africa East	27
France	71	Portugal	27
Sweden	71	Slovenia	27
Ireland	70	Malaysia	26
Latvia	70	Hong Kong	25

Country	Masculinity	Country	Masculinity
Norway	69	Serbia	25
Switzerland German	69	Chile	23
Switzerland German	68	Africa West	20
Germany	67	Bangladesh	20
South Africa white	65	China	20
Switzerland French	64	Singapore	20
Finland	63	Thailand	20
Estonia	60	Vietnam	20
Lithuania	60	El Salvador	19
Luxembourg	60	Korea South	18
Poland	60	Taiwan	17
Malta	59	Peru	16
Czech Rep	58	Trinidad and Tobago	16
Austria	55	Costa Rica	15
Israel	54	Indonesia	14
Slovak Rep	52	Pakistan	14
Spain	51	Colombia	13
India	48	Venezuela	12
Suriname	47	Panama	11
Argentina	46	Ecuador	8
Japan	46	Guatemala	6
Morocco	46		
Iran	41		

Masculinity Index (MAS) scores according to Hofstede (2014)[788]

Country	Masculinity	Country	Masculinity
Slovak Rep	110	Singapore	48
Japan	95	Israel	47
Hungary	88	Malta	47
South Africa white	83	Africa West	46
Austria	79	Indonesia	46

Venezuela	73	Canada French	45
Switzerland German	72	Taiwan	45
Italy	70	Turkey	45
Switzerland	70	Panama	44
Mexico	69	Belgium Netherl	43
Ireland	68	France	43
Jamaica	68	Iran	43
China	66	Serbia	43
Germany	66	Peru	42
Great Britain	66	Romania	42
Colombia	64	Spain	42
Philippines	64	Africa East	41
Poland	64	Bulgaria	40
Ecuador	63	Croatia	40
U.S.A.	62	El Salvador	40
Australia	61	Vietnam	40
Belgium French	60	Korea South	39
New Zealand	58	Uruguay	38
Switzerland French	58	Guatemala	37
Trinidad and Tobago	58	Suriname	37
Czech Rep	57	Russia	36
Greece	57	Thailand	34
Hong Kong	57	Portugal	31
Argentina	56	Estonia	30
India	56	Chile	28
Bangladesh	55	Finland	26
Belgium	54	Costa Rica	21
Arab countries	53	Lithuania	19
Morocco	53	Slovenia	19
Canada	52	Denmark	16
Luxembourg	50	Netherlands	14
Malaysia	50	Latvia	9
Pakistan	50	Norway	8
Brazil	49	Sweden	5

Long-Term Orientation scores according to Hofstede (2014)[788]

Country	Long-term Orientation	Country	Long-term Orientation
Korea South	100	Malaysia	41
Taiwan	93	Finland	38
Japan	88	Georgia	38
China	87	Poland	38
Ukraine	86	Israel	38
Germany	83	Canada	36
Estonia	82	Saudi Arabia	36
Belgium	82	Denmark	35
Lithuania	82	Norway	35
Russia	81	Tanzania	34
Belarus	81	South Africa	34
Germany East	78	New Zealand	33
Slovak Rep	77	Africa East	32
Montenegro	75	Thailand	32
Switzerland	74	Chile	31
Singapore	72	Zambia	30
Moldova	71	Portugal	28
Czech Rep	70	Iceland	28
Bosnia	70	Burkina Faso	27
Bulgaria	69	Philippines	27
Latvia	69	Uruguay	26
Netherlands	67	Algeria	26
Kyrgyz Rep	66	U.S.A.	26
Luxembourg	64	Peru	25
France	63	Iraq	25
Indonesia	62	Ireland	24
Macedonia Rep	62	Mexico	24
Albania	61	Uganda	24
Italy	61	Arab countries	23
Armenia	61	Australia	21
Hong Kong	61	Argentina	20
Azerbaijan	61	Mali	20

Country	Score	Country	Score
Austria	60	El Salvador	20
Croatia	58	Rwanda	18
Hungary	58	Jordan	16
Vietnam	57	Venezuela	16
Sweden	53	Zimbabwe	15
Serbia	52	Morocco	14
Romania	52	Iran	14
Great Britain	51	Colombia	13
India	51	Dominican Rep	13
Pakistan	50	Nigeria	13
Slovenia	49	Trinidad and Tobago	13
Spain	48	Africa West	9
Bangladesh	47	Egypt	7
Malta	47	Ghana	4
Turkey	46	Puerto Rico	0
Greece	45		
Brazil	44		

Indulgence scores according to Hofstede (2014)[788]

Country	Indulgence	Country	Indulgence
Venezuela	100	Mali	43
Mexico	97	Zambia	42
Puerto Rico	90	Philippines	42
El Salvador	89	Japan	42
Nigeria	84	Germany	40
Colombia	83	Iran	40
Trinidad and Tobago	80	Africa East	40
Africa West	78	Kyrgyz Rep	39
Sweden	78	Tanzania	38
New Zealand	75	Indonesia	38
Ghana	72	Rwanda	37
Australia	71	Vietnam	35
Cyprus	70	Macedonia Rep	35
Denmark	70	Germany East	34

Great Britain	69	Arab countries	34
Canada	68	Croatia	33
Netherlands	68	Portugal	33
U.S.A.	68	Algeria	32
Chile	68	Georgia	32
Iceland	67	Hungary	31
Switzerland	66	Italy	30
Malta	66	Czech Rep	29
Andorra	65	Korea South	29
Ireland	65	Poland	29
South Africa	63	Slovak Rep	28
Austria	63	Serbia	28
Argentina	62	Zimbabwe	28
Brazil	59	India	26
Finland	57	Morocco	25
Malaysia	57	China	24
Belgium	57	Azerbaijan	22
Luxembourg	56	Montenegro	20
Norway	55	Romania	20
Dominican Rep	54	Russia	20
Uruguay	53	Bangladesh	20
Uganda	52	Moldova	19
Saudi Arabia	52	Burkina Faso	18
Greece	50	Hong Kong	17
Taiwan	49	Iraq	17
Turkey	49	Estonia	16
France	48	Bulgaria	16
Slovenia	48	Lithuania	16
Peru	46	Belarus	15
Singapore	46	Albania	15
Thailand	45	Ukraine	14
Bosnia	44	Latvia	13
Spain	44	Egypt	4
Jordan	43	Pakistan	0

Overview on Hofstede's cultural dimensions[788]

Country	Power Distance	Individualism	Masculinity	Uncertainty Avoidance	Long-term Orientation	Indulgence
Africa East	64	27	41	52	32	40
Africa West	77	20	46	54	9	78
Albania	N/A	N/A	N/A	N/A	61	15
Algeria	N/A	N/A	N/A	N/A	26	32
Andorra	N/A	N/A	N/A	N/A	N/A	65
Arab countries	80	38	53	68	23	34
Argentina	49	46	56	86	20	62
Armenia	N/A	N/A	N/A	N/A	61	N/A
Australia	36	90	61	51	21	71
Austria	11	55	79	70	60	63
Azerbaijan	N/A	N/A	N/A	N/A	61	22
Bangladesh	80	20	55	60	47	20
Belarus	N/A	N/A	N/A	N/A	81	15
Belgium	65	75	54	94	82	57
Belgium French	67	72	60	93	N/A	N/A
Belgium Netherl	61	78	43	97	N/A	N/A
Bosnia	N/A	N/A	N/A	N/A	70	44
Brazil	69	38	49	76	44	59
Bulgaria	70	30	40	85	69	16
Burkina Faso	N/A	N/A	N/A	N/A	27	18
Canada	39	80	52	48	36	68
Canada French	54	73	45	60	N/A	N/A
Chile	63	23	28	86	31	68
China	80	20	66	30	87	24
Colombia	67	13	64	80	13	83
Costa Rica	35	15	21	86	N/A	N/A
Croatia	73	33	40	80	58	33
Cyprus	N/A	N/A	N/A	N/A	N/A	70

Czech Rep	57	58	57	74	70	29
Denmark	18	74	16	23	35	70
Dominican Rep	N/A	N/A	N/A	N/A	13	54
Ecuador	78	8	63	67	N/A	N/A
Egypt	N/A	N/A	N/A	N/A	7	4
El Salvador	66	19	40	94	20	89
Estonia	40	60	30	60	82	16
Finland	33	63	26	59	38	57
France	68	71	43	86	63	48
Georgia	N/A	N/A	N/A	N/A	38	32
Germany	35	67	66	65	83	40
Germany East	N/A	N/A	N/A	N/A	78	34
Ghana	N/A	N/A	N/A	N/A	4	72
Great Britain	35	89	66	35	51	69
Greece	60	35	57	112	45	50
Guatemala	95	6	37	101	N/A	N/A
Hong Kong	68	25	57	29	61	17
Hungary	46	80	88	82	58	31
Iceland	N/A	N/A	N/A	N/A	28	67
India	77	48	56	40	51	26
Indonesia	78	14	46	48	62	38
Iran	58	41	43	59	14	40
Iraq	N/A	N/A	N/A	N/A	25	17
Ireland	28	70	68	35	24	65
Israel	13	54	47	81	38	N/A
Italy	50	76	70	75	61	30
Jamaica	45	39	68	13	N/A	N/A
Japan	54	46	95	92	88	42
Jordan	N/A	N/A	N/A	N/A	16	43
Korea South	60	18	39	85	100	29
Kyrgyz Rep	N/A	N/A	N/A	N/A	66	39
Latvia	44	70	9	63	69	13
Lithuania	42	60	19	65	82	16
Luxembourg	40	60	50	70	64	56

Macedonia Rep	N/A	N/A	N/A	N/A	62	35
Malaysia	104	26	50	36	41	57
Mali	N/A	N/A	N/A	N/A	20	43
Malta	56	59	47	96	47	66
Mexico	81	30	69	82	24	97
Moldova	N/A	N/A	N/A	N/A	71	19
Montenegro	N/A	N/A	N/A	N/A	75	20
Morocco	70	46	53	68	14	25
Netherlands	38	80	14	53	67	68
New Zealand	22	79	58	49	33	75
Nigeria	N/A	N/A	N/A	N/A	13	84
Norway	31	69	8	50	35	55
Pakistan	55	14	50	70	50	0
Panama	95	11	44	86	N/A	N/A
Peru	64	16	42	87	25	46
Philippines	94	32	64	44	27	42
Poland	68	60	64	93	38	29
Portugal	63	27	31	104	28	33
Puerto Rico	N/A	N/A	N/A	N/A	0	90
Romania	90	30	42	90	52	20
Russia	93	39	36	95	81	20
Rwanda	N/A	N/A	N/A	N/A	18	37
Saudi Arabia	N/A	N/A	N/A	N/A	36	52
Serbia	86	25	43	92	52	28
Singapore	74	20	48	8	72	46
Slovak Rep	104	52	110	51	77	28
Slovenia	71	27	19	88	49	48
South Africa	N/A	N/A	N/A	N/A	34	63
South Africa white	49	65	83	49	N/A	N/A
Spain	57	51	42	86	48	44
Suriname	85	47	37	92	N/A	N/A
Sweden	31	71	5	29	53	78
Switzerland	34	68	70	58	74	66

Switzerland French	70	64	58	70	N/A	N/A
Switzerland German	26	69	72	56	N/A	N/A
Taiwan	58	17	45	69	93	49
Tanzania	N/A	N/A	N/A	N/A	34	38
Thailand	64	20	34	64	32	45
Trinidad and Tobago	47	16	58	55	13	80
Turkey	66	37	45	85	46	49
U.S.A.	40	91	62	46	26	68
Uganda	N/A	N/A	N/A	N/A	24	52
Ukraine	N/A	N/A	N/A	N/A	86	14
Uruguay	61	36	38	100	26	53
Venezuela	81	12	73	76	16	100
Vietnam	70	20	40	30	57	35
Zambia	N/A	N/A	N/A	N/A	30	42
Zimbabwe	N/A	N/A	N/A	N/A	15	28

Curriculum Vitae

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Professional Experience

UBS AG, Zurich (Switzerland)	2010 - Present
Chief of Staff Group Treasury / Secretary to the Group ALCO	2014 – Present
Chief Administration Officer / Secretary to the Group ALCO	2011 – 2014
Director, Treasury Reporting / Secretary to the Group ALCO	2010 - 2014
Ciba (acquired by BASF), Basel (Switzerland)	2008 - 2010
Director, Foreign Exchange Risk Management, Group Finance	
Basler Kantonalbank, Basel (Switzerland)	2006 - 2008
Financial Analyst, Investment Research Energy & Communications	2007 - 2008
Portfolio Manager	2006 - 2007
HSZ Group, Zurich (Switzerland)	2005 - 2006
Assistant Investment Management (Asia ex Japan equity funds)	
Säntis Investment, Zurich (Switzerland)	2004 - 2005
Junior Investment Professional Private Equity	

Education

University of St. Gallen (Switzerland), PhD Studies in Management, specialization: Accounting)	2009 - 2015
AZEK/CFPI (Switzerland), Certified International Investment Analyst	2009
RWTH Aachen (Germany), Masters Psychology	2004
Tokyo International University (Japan), Japan Studies Program	1999
Karlsgymnasium Stuttgart (Germany)	1996