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## The Role of National Culture in International Financial Reporting Standards Adoption

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### ABSTRACT

Prior research shows that the development of national accounting systems follows different patterns in different countries over the world. This was recently supported by the staggered manner in which countries adopt IFRS. Extant evidence shows that IFRS adoption decisions at the country level are determined by institutional and economic factors. In this context, cultural factors have not been considered. This paper examines the relationship between five cultural dimensions and countries' decisions to adopt International Financial Reporting Standards (IFRS) around the world during the period 2003-2014. We find that countries with higher levels of uncertainty avoidance are more likely to adopt IFRS. Additionally, they are more likely to commit to early adoption largely on a mandatory rather than voluntary basis. On the other hand, countries with higher values of masculinity are more likely to adopt IFRS early, but the extent (whether voluntary or mandatory adoption) of adoption is not significantly related to masculinity. Finally, we show that countries with higher power distance (long-term orientation) are more (less) likely to adopt IFRS on a mandatory basis. The results are in line with Gray's theory of cultural influence and suggest that differences in national culture had a significant role in countries' reaction to the introduction of IFRS as a set of unified accounting standards targeting the harmonization of accounting standards adopted across different jurisdictions.

### 1. Introduction

Accounting and finance researchers have been for a long time interested in documenting empirical evidence on the link between human and societal values on one hand and capital market and accounting related outcomes on the second hand (Han et al. 2010). During the last two decades there has been an increasing interest in providing empirical evidence on the impact of culture on accounting and financial reporting outcomes in different countries (Gray, 1988; Hope, 2003; Ding et al., 2005; Han et al., 2010; Gray et al., 2015), and at a larger scale how cultural values can indirectly influence the national accounting environment through its institutions (Cieslewicz, 2014), where the national accounting environment usually refers to the quality of the local set of accounting standards adopted in a country as well as how the country aims to regulate and enforce financial reporting in a manner that leads to greater transparency and enhanced accounting quality. However, prior literature has been silent on the role of culture in countries'

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decisions to adopt IFRS which implies country's acceptance to incorporate a set of external accounting standards and allowing it to emerge into their national accounting environments. In other words, how culture as a set of shared values and beliefs in a nation can significantly affect how countries react to the introduction of IFRS as a unified set of accounting standards is rather unknown.

Therefore, the objective of this paper is to investigate the association between five cultural dimensions and IFRS adoption decisions between 2003 and 2014. We focus our study on non-EU countries IFRS adoption decisions. EU countries adopted IFRS collectively in 2005. This implies that the IFRS adoption decision was taken at the EU level and not at the country level. The worldwide turn to IFRS adoption is one of the most significant institutional changes that have been of interest for researchers and practitioners during the last fifteen years (Koning et al., 2017). In an assessment of 150 jurisdictions in 2017, the IFRS official website reported that IFRS is permitted or mandated in 138 countries worldwide. Historically, IFRS adoption was aimed due to its importance and relevance to international business and the development of financial markets. In 1973, professional accounting bodies of nine countries agreed to adopt, at that time, International Accounting Standards (IAS) for cross-border listings. Recently, after an important moment in the history of IFRS development was in 2002, whereby the European Commission of the EU pronouncement made the use of IFRS mandatory for all listed firms in their jurisdictions with the effective date in 2005. The adoption of IFRS/IAS has gained considerable momentum around the world (Barth et al., 2008). International accounting literature provides evidence on the economic consequences of IFRS adoption.<sup>2</sup> The economic consequences include effects on cost of capital, efficiency of capital allocation and international capital mobility. The positive reaction to IFRS adoption are attributed to the fact that different accounting practices applied in different countries make it difficult for users of financial statements to compare financial performance for firms listed in different countries (Prather -Kinsey, 2006). Therefore, this variation leaves some investors or users of financial statements at an unfavourable position. Supporters of IFRS argue that the standards reduce information costs and make it easier for capital market participants to become familiar with one set of global standards than with several local standards (Leuz, 2003). However, it is worth noting that there is a stream of studies that document negative outcomes associated with IFRS adoption. For example, Lantto and Sahlstorm (2009) find that IFRS adoption affects financial ratios in Swedish firms where profitability ratios increase while P/E ratios decrease. In Germany, Lin et al. (2012) provide evidence on decreased accounting quality after IFRS adoption. Ahmed et al. (2013) provide evidence that IFRS adoption was associated with more earnings management. Jeanjean and Stolowy (2008) analyze the effect of mandatory adoption on earnings quality in UK, France and Australia. They report that earnings quality did not increase after IFRS adoption, yet it decreased in France. Similarly, Callao and Jarne (2010) show that EM have intensified in eleven EU countries after IFRS adoption. Doukakis (2014) show that IFRS adoption had no significant effect on real or accrual EM. Christensen et al. (2015) show that IFRS adoption does not improve accounting quality. Finally, Capkun et al. (2016) find evidence that EM increased around IFRS adoption. However, we expect that IFRS adoption will be less associated with EM.

Despite the importance of IFRS adoption in the context of the harmonisation of accounting standards, very little is known about the country-level determinants of IFRS adoption (Hope et al., 2006). With a better understanding on the country-level characteristics that are associated with a country's decision whether to adopt IFRS or otherwise, the International Accounting Standards Board (IASB) might be able to promote IFRS more effectively, or help countries with specific institutional settings that might be impairing the countries' ability to adopt and apply IFRS with the possibility of reaping its full benefits (Hope et al., 2006).

Studies examining why and how countries adopt IFRS or the national and institutional characteristics of the countries adopting IFRS are rare. In this case, studies by Hope et al. (2006), Judge et al. (2010), Ramanna and Sletten (2014), Koning et al. (2017) and El-Helaly et al. (2020) are exceptional.<sup>3</sup> For example, Hope et al. (2006) find that disclosure practices, accessibility and size of equity markets and investor protection are associated with IFRS adoption decisions. Similarly, Ramanna and Sletten (2014) find evidence that IFRS adoption decisions are systematically related to the perceived benefits that a country can gain from its network of countries that adopted IFRS. Judge et al. (2010) find that foreign aid, import penetration and level of education achieved within a national economy are significant determinants IFRS adoption decision in 132 countries. Koning et al. (2017) complement the findings of both Ramanna and Sletten (2014) and Judge et al. (2010) and document that IFRS adoption decisions by countries could also be driven by adoption decisions of other, neighbouring countries and pressure from influential international organizations. Finally, in a more recent study, El-Helaly et al. (2020) find that the level of control of corruption is positively associated with the speed and extent of IFRS adoption.

Although the studies mentioned above investigate country-level determinants of IFRS adoption, we argue that investigating the role of culture in IFRS adoption is warranted for the following reasons. First, Judge et al. (2010)<sup>4</sup> and Koning et al. (2017) find evidence that IFRS adoption decisions by countries are functional of institutional pressures that play a key role in the decision process and the decision to adopt IFRS by a country is less likely to be driven by economic reasons. While those findings contribute to the literature, they belong to the

<sup>2</sup> Several literature reviews of the effects and drivers of IFRS adoption exist (e.g., Ball, 2016; De George et al., 2016; Soderstrom & Sun, 2007).

<sup>3</sup> Shima and Yang (2012) examine the relationship between a set of environmental variables and IFRS adoption. Among the variables, they investigate whether uncertainty avoidance is associated with IFRS adoption or not. They document mixed results between uncertainty avoidance and IFRS adoption. Moreover, in robustness tests, uncertainty avoidance does not exhibit a significant association with IFRS adoption, therefore we aim to provide robust evidence on the association between uncertainty avoidance and IFRS adoption. Additionally, the research design employed by Shima and Yang (2012) is not suitable for cultural dimensions. Since they use panel data, they replicate the same uncertainty avoidance score of each country for all years in their sample period. This introduces inherent limitations to the model and could bias the results. This research design also ignores the configurational approach suggested for international culture research to include multiple cultural values in any study (Kirkman et al., 2017). Therefore, our paper extends their findings on the determinants of IFRS adoption by examining five cultural dimensions rather than a single dimension.

<sup>4</sup> Judge et al. (2010) examine the adoption status of 132 countries by the end of 2008

stream of literature that addresses the relationship between institutions and accounting (see Han et al., 2010 and Cieslewicz, 2014) while ignoring that culture as a set of shared values and beliefs can influence the behaviour of institutions (Cieslewicz, 2014) as well as the accounting values that consequently influence the national accounting environment (Gray, 1988). Second, the evidence by Hope et al. (2006) addresses the institutional determinants of countries that adopted IFRS by the end of 2004. We complement this evidence in two aspects. The first aspect is that we trace IFRS adoption decisions over a larger period from 2003 to 2014. The second aspect is that since culture can influence how institutions behave, it is not clear whether those institutional variables exhibited a significant association with IFRS adoption due to the direct relationship between institutions and the accounting system or due to the indirect relationship between culture and the national accounting system. Finally, Ramanna and Sletten (2014) provide evidence on the role of rule of law and network effects in IFRS adoption decisions. Similar to the arguments about Hope et al. (2006) we argue that it is difficult to isolate the effect of rule of law on IFRS adoption if culture is not controlled for. However, a very important finding by Ramanna and Sletten (2014) is that IFRS adoption decisions are systematically related to the perceived benefits that a country can be gain from its network of countries that adopted IFRS. Since network benefits are not necessarily related to institutions we control for network effects in our models to avoid omitted correlated variable bias and to show that cultural traits can explain significantly variations in IFRS adoption decisions while taking network benefits and other country-level determinants of IFRS adoption into consideration.

Observably, none of these studies examine the extent to which national culture may explain variations in IFRS adoption decisions by different countries. Given the prior evidence on the role of culture in shaping accounting environments and adopting accounting systems (Gray, 1988; Salter and Niswander, 1995), it is surprising that up to this date there is no evidence on the relationship between cultural values and IFRS adoption. We argue that while IFRS adoption decisions by countries could be explained by the above-mentioned factors, yet differences in national culture can still explain significant parts of the variation in countries decisions to adopt IFRS. We complement this research by developing and testing the hypothesis that IFRS adoption decisions by different countries can be explained by variations in national cultural values, even when other significant determinants of IFRS<sup>5</sup> adoption are taken into consideration to avoid omitted correlated variable bias.

The reaction of non-EU countries to the introduction of IFRS as a unified set of accounting standards and to its widespread in a relatively short time-period vary significantly. Variations in response to IFRS adoption are two-fold. First, the time of IFRS adoption (the speed of adoption) and what extent will the country adopt IFRS. Second, the extent of adoption. IFRS adoption within a jurisdiction can be in different forms. Some countries mandated IFRS for listed firms from the first adoption, others only allowed voluntary adoption and in between are countries that allowed voluntary adoption for few years then mandated IFRS reporting to all listed firms within its jurisdiction. Thus, we argue that the varying responses of countries to IFRS adoption can partially be due to how culture, as a determinant of human behaviour, affects the decisions related to both time and extent of IFRS adoption. Additionally, cultural factors are exogenous to our research design by nature since they are predetermined and are several decades old. Therefore, cultural variables are not likely to be influenced by IFRS adoption or accounting environment. Our central argument is that for non-EU countries, IFRS is a set of externally developed set of accounting standards and the acceptance of non-EU countries to allow a set of external standards to emerge into their accounting systems should be related to differences in national culture.

We use IFRS adoption data between 2003 and 2014 covering 76 non-EU countries. We measure cultural dimensions (uncertainty avoidance, masculinity, individualism, power distance and long-term orientation) using Hofstede (1980) cultural dimensions and data from to measure economic and capital market indicators for each country. Our findings are as follows. First, we find that countries with high *uncertainty avoidance* values are more likely to adopt IFRS earlier and to a larger extent (are more likely to mandate IFRS). Second, we document that *power distance (long-term orientation)* is positively (negatively) associated with the extent of IFRS adoption. Finally, we find evidence that *masculinity* is positively linked with earlier adoption of IFRS. Our results are robust to the inclusion of observable factors that could be associated with IFR adoption.

Our findings complement the findings of Hope et al. (2006), Judge et al. (2010), Ramanna and Sletten (2014) and Koning et al. (2017), who focus on country-level determinants of IFRS adoption. Our evidence informs IASB on a potential factor that might impede or facilitate a country's decision to adopt IFRS. We argue that our contribution<sup>6</sup> to the literature investigating *ex ante* determinants of IFRS adoption is important for the following reasons. First, the decision of a country whether to allow or mandate IFRS determines whether firms can use IFRS for financial reporting purposes or not. Therefore, it is crucial to understand the factors that explain why countries allow or mandate IFRS. Second, our evidence shows that even though a country's accounting environment, which includes the set of accounting standards adopted, accounting enforcement, investor protection, disclosure regulation, litigation risks and other factors is a function of a country's economic, political and legal conditions, other variables like culture can still be important in explaining variations in accounting environments across countries. This is also supported by evidence on how cultural factors influence earnings management even post-IFRS adoption (Gray et al., 2015). Third, a growing stream of studies show that culture have a significant impact on a wide range of economic activities (Guerzmazi & Halioui, 2020), yet empirical evidence on how

<sup>5</sup> Among others, we control for rule of law, capital market size, economic development, network effects to validate our contribution. Our results are robust and significant even when controlling for all other determinants of IFRS adoption

<sup>6</sup> Isidro et al. (2016) argue that among different 72 variables (including cultural dimensions) that each appear to explain variations in financial reporting differences around the world, a single underlying factor explains across-country variations in six reporting quality measures. The position of the current study is different for two reasons. First, reporting quality (earnings management) is affected by firm incentives as well as the interaction of firms with the institutional environment (legal enforcement, accounting standards enforcement, firms' capital market incentives, audit environment and regulations, etc.), yet the decision of IFRS adoption is a country-level decision that is subject to different factors and motives. Second, Isidro et al. (2016) limit their analysis to financial reporting quality and thus, their findings cannot be generalized to IFRS adoption decisions.

culture could influence a country's reaction to IFRS is missing. A main contribution of this study is that the findings indicate that the extent to which a country chooses to adopt IFRS also varies across different countries and some of this variation could be explained by cultural dimensions like uncertainty avoidance and power distance.

The remainder of this paper is organized as follows. Section 2 develops our main hypotheses. Section 3 presents our research design and descriptive statistics. Section 4 describes the results. Section 5 illustrates our additional and robustness tests. Section 6 concludes.

## 2. Hypothesis Development

Several studies have investigated the association between cultural dimensions and accounting and finance related outcomes. For example, past empirical studies have demonstrated that national culture matters in explaining discernible differences in CEO/executive pay (Bryan et al., 2014; Haynes, 2014; Schuler & Rogovsky, 1998; Tosi & Greckhamer, 2004; Grenness, 2011), voluntary disclosure (Gray, 1988; Hope, 2003), divergence of local accounting standards from international accounting standards (Ding et al., 2005), accounting professionalism (Belkaoui, 1989), development of local accounting systems and reforms (Chow et al., 1995; Perera, 1989), corporate social responsibility (Haniffa & Cooke, 2005), earnings management (Han et al., 2010; Gray et al., 2015), internal auditing (Kachelmeier and Shehata, 1997), reporting of questionable acts (Schultz et al., 1993), capital structure of firms (Gleason et al., 2000), corporate tax evasion (Bame-Alderred et al., 2013) and corporate governance practices across different countries (Licht et al., 2005; Haxhi & van Ees, 2010; Daniel et al., 2012), sensitivity of investment to stock prices (Farooq & Amin, 2017) and risk taking behaviours of foreign affiliates of multinational banks (Ashraf and Arshad, 2017). Moreover, at a macro-level, Cieslewicz (2014) provides evidence that culture influences the supporting institutions that shape accounting practices in different countries and Lavezzolo et al. (2018) provide evidence that national culture is a good predictor on whether a country's financial system is bank based or market based. This evidence is in line with the arguments of the theory of cultural influence on the development of accounting standards. Gray (1988) argues that cultural characteristics shared across a country or a society leads to shared accounting values that influences the nation's accounting system. While several studies investigating accounting related consequences of culture employ a firm-level research design<sup>7</sup>, we prefer to conduct our analysis at the country-level for two reasons. First, as mentioned earlier, IFRS adoption is a country-level decision (Ramanna and Sletten, 2014) and because Hofstede's cultural framework is best applied in a country-level setting (Beugelsdijk et al., 2017). We, therefore, draw inspiration from these studies in conjecturing that the various dimensions of national culture can influence the decision of a nation towards IFRS adoption.

Hofstede's seminal work on explaining human and corporate attitudes from a cultural perspective have been widely received (Hofstede, 1980, 1983, 1991, 2001). In this case, Hofstede defined culture as "...collective programming of the mind; it manifests itself not only in values, but in more superficial ways: in symbols, heroes and rituals (Hofstede, 2001, p.1). Originally based on an attitude survey of IBM employees in 66 countries during the 1970s, Hofstede developed country-based indices corresponding to four dimensions of national culture for each country surveyed. With the help of this model, cultural differences between countries can be described in detail (Ding et al., 2005). The definitions of these dimensions are as follows: *Uncertainty avoidance*: The extent to which people feel threatened by uncertain or unknown situations. This is expressed in a need for formality, predictability, and clear rules.<sup>8</sup>

*Individualism*: In individualistic societies, there are few ties beyond those of nuclear family, whereas in collectivist societies, people belong to strong, cohesive in-group units. *Power Distance*: The extent to which less powerful members of society accept that power is unequally distributed. *Masculinity*: In masculine societies men are assertive, tough and concerned with material success, whereas women are more modest, tender and interested in the quality of life. In feminine societies, both are equally concerned with the quality of life. *Long-term orientation*: As opposed to short-term orientation it measures the choice of whether the focus for people's effort should be on the future or the past. Choosing the past is represented in maintain traditions and viewing societal changes with suspicion.<sup>9</sup>

Gray (1988) made a significant contribution to the accounting literature by extending the cultural dimensions and linking them to

<sup>7</sup> A firm-level research design for IFRS adoption is achievable by investigating the role of culture in voluntary IFRS adoption in countries that allow firms to use IFRS for financial reporting purposes. However, this question is beyond the scope of the current study.

<sup>8</sup> It is worthy to note that following academic criticisms (e.g., Baskerville, 2003) of Hofstede's original four cultural dimensions (Hofstede, 1980, 1983) that have been briefly explained above, extensions (Hofstede, 1991, 2001) have been incorporated in subsequent studies. For example, Hofstede introduced two new dimensions, namely long-term versus short-term orientation and indulgence versus restraint societies following further analysis in China. Notable criticism of, and extension to, Hofstede's work has been by the GLOBE team (Global Leadership and Organizational Behavior Effectiveness Research). Conceived and led by House et al. (2004), the conducted a large scale study following Hofstede's original work and identified nine major cultural values. However, differences in the measures and classifications are very small and largely center on Hofstede's original work. Additionally, Douppnik (2008) argues that the use of Hofstede's dimensions is beneficial because they have been linked theoretically to accounting (Gray, 1988). Also, empirical studies provide evidence that Hofstede's cultural dimensions are related to cross-national differences in accounting practices (Douppnik and Tsakumis 2004; Tsakumis, 2007). Finally, no other better alternative measures of cultural dimensions has been developed and accepted to-date by cross-cultural researchers (Douppnik, 2008). We did not run additional tests using GLOBE as when we matched our sample with GLOBE data, we lost more than 50% of our sampled countries.

<sup>9</sup> We are not able to include indulgence for two reasons. First, Hofstede (2011) mentions that the sixth dimension (Indulgence) is complementary to long-term orientation. Our empirical checks show a significant negative correlation (> 0.5). Second, and more importantly, indulgence is related to enjoying life, human needs and happiness. The nature of the dimension makes it difficult to find an intuition that it can be related to IFRS adoption. Furthermore, the lack of empirical studies examining this dimension in Business and Management literatures at large make it difficult to develop a hypothesis for this dimension. We include Indulgence in our robustness tests to assure our results are not affected by its exclusion.

accounting practices. Based on Hofstede's model, he developed four accounting values, *Professionalism*, *uniformity*, *conservatism* and *secrecy*. *Professionalism*: The extent of preference given to the exercise of professional judgement and self-regulation rather than the compliance with perspective legal requirements and statutory control. *Uniformity*: a preference for uniform accounting practices across different companies and less tolerance for flexible accounting practices that could suit the circumstances of individual companies. *Conservatism*: A preference for a cautious approach to measurement so as to cope with the uncertainty of future events as opposed to more optimistic and risk-taking approach (Ding et al., 2005). *Secrecy*: A preference for confidentiality and the restriction of disclosing information about the business to external stakeholders.

We develop our hypotheses based on the relationship between Hofstede's cultural dimensions and Gray's accounting values. We mainly focus on two main accounting values – *conservatism* and *Uniformity* – for two reasons. First, *secrecy*, is closely related to *conservatism* in that both values imply a cautious approach in financial reporting, yet *secrecy* is related to the disclosure dimension rather than the measurement dimension. Therefore, we believe that it is difficult to attribute IFRS adoption decisions to *secrecy* as it is related to the quality and content of disclosures *de-facto* rather than disclosures required by accounting standards *de-jure*. Additionally, the relationship between Hofstede's cultural dimensions and *conservatism* is identical to the relationship between the former and *secrecy*. Second, we exclude *professionalism* as its implications are more related to the institutions and regulations governing financial reporting process rather than the set of accounting standards adopted.

According to Gray (1988), countries that are highly uncertainty avoidant are more likely prefer uniformity of accounting standards as this uniformity leads to consistency within companies and comparability of financial statements between companies (Gray, 1988). The fundamental characteristic of an uncertainty avoidant society is that it tries to control the future rather than let it happen (Hofstede, 1980). Following this reasoning, uncertainty avoidance could be positively associated with IFRS adoption for two reasons. First, as mentioned earlier, a flexible set of standards that grant managers more discretion over reported earnings could prevail in these societies and gain preference because it provides managers with tools to exercise discretion to *avoid* the *uncertainty* that could arise from negative outcomes, such as missing analysts' forecasts or violating debt covenants (Doupnik, 2008). Second, several studies on the *ex post* consequences of IFRS adoption provide evidence that IFRS adoption is associated with significant economic and financial benefits to adopting firms and countries (De George et al., 2016). Those benefits include improved transparency, lower cost of capital, more cross-country investments, better comparability of financial statements and increased following by foreign analysts. Daske et al. (2008), Daske et al. (2013) and Florou and Kosi (2015) report an overall increase in market liquidity and decrease in cost of capital associated with IFRS adoption. IFRS adoption is also associated with more foreign debt and equity investments in firms residing in an IFRS-adopting jurisdiction (DeFond et al., 2011). Given the *ex post* positive consequences that could be expected from a country's adoption of IFRS, it is reasonable that a country adopts IFRS due to the uncertainty associated with the consequences of failing to adopt IFRS. This reasoning is consistent with the idea that perceived network benefits increase the possibility of IFRS adoption (Ramanna and Sletten, 2014). In this case, a country with high uncertainty avoidance would prefer IFRS adoption so that they can have control over the future of those perceived benefits. This is supported by evidence that IFRS adoption is associated with other *ex post* positive consequences like lower cost of trade (Márquez-Ramos, 2008).

However, prior empirical evidence shows that countries with a higher level of uncertainty avoidance is less likely to prefer uniformity (Salter and Niswander, 1995) and, thus equally less likely to adopt IFRS (Ding et al., 2005). Given this we present our hypothesis in null form:

**Hypothesis 1.** The Uncertainty avoidance dimension of national culture is not related to IFRS adoption in a certain country

Individualism refers to a preference of society members to take care of themselves and their immediate families only (Salter and Niswander, 1995). Since the fundamental issue addressed by this dimension is the degree of interdependence that a society maintains, individualism could influence IFRS adoption in two ways. First, compared to a collective society, nations with higher levels of individualism are self-oriented (Hofstede, 2001). This implies that maintaining a degree of independence from other countries could result in lower levels of interaction in terms of trade and other types of connections. Therefore, this could decrease the expected benefits of IFRS adoption. Additionally, individualistic nations are expected to value their local accounting standards and resist IFRS because adopting IFRS could reduce the emphasis on the nation's individual achievements represented by the local accounting standards the nation developed and accepted for itself. Second, according to Gray (1988) *individualism* is negatively related to *uniformity*. Therefore, it could be argued that countries with higher values of *individualism* who, therefore, tend to have less preference for uniformity, are less likely to adopt IFRS. However, there is no empirical evidence to justify a directional hypothesis. Therefore, we present our second hypothesis in the null form:

**Hypothesis 2.** The Individualism dimension of national culture is not related to IFRS adoption in a certain country.

We also explore the relation between power distance and IFRS adoption. It is assumed that power distance has a negative effect on a nation's accounting environment (Cieslewicz, 2014). In cross-country studies, reported evidence suggests that power distance is associated with higher levels of earnings management (Kanagaretnam et al., 2011; Kinnunen and Koksela, 2003). This reasoning is supported by the fact that power distance is usually associated with lower levels of control of corruption, voice and accountability and regulatory quality (Cieslewicz, 2014). In large power-distance countries, accounting systems are used as a tool to present the desired image (Doupnik, 2008). This implies that from a financial reporting perspective, large power distance countries could be in favour of IFRS adoption as managers in those societies can influence financial reporting choices for opportunistic reasons (Kanagaretnam et al., 2011). This is supported by the evidence that firms in large power distance societies are more likely to engage in "cosmetic earnings management" (Kinnunen and Koksela, 2003). This intuition also could be valid at the country level as a country might opt to adopt IFRS as a "cosmetic fix" to the accounting environment in the nation and adopt the label of "IFRS adopter".

Additionally, Gray (1988) argues that countries with higher *power distance* are more likely to prefer *uniformity* accounting standards. The notion behind this relationship is that uniformity is more easily facilitated in a large power-distance society. In such societies, the imposition of uniform laws and codes are more likely to be accepted. However, due to the lack of empirical evidence, we present the hypothesis in the null form:

**Hypothesis 3.** The power distance dimension of national culture is not related to IFRS adoption in a certain country.

Next, we explore the relation between masculinity dimension of national culture and IFRS adoption. Masculinity refers to the preference in a society for achievement, assertiveness and material success (Doupnik, 2008). High masculine societies focus on risk-taking and achieving performance targets (Hofstede, 2001). In masculine societies, men are assertive, tough and concerned with material success, whereas women are more modest, tender and interested in the quality of life. In feminine societies, both are equally concerned with the quality of life. This implies that countries with high masculinity are more likely to prefer IFRS adoption, and earlier than other countries, to have a sense of achievement and heroism. This further implies that masculine nations are more likely to focus on the event of adopting IFRS and not the extent or the quality to which those standards are adopted. Moreover, Gray (1988) argues that masculine societies are less likely to prefer a cautious approach to measurement (*conservatism*) due to the emphasis on heroism and individual achievements. Therefore, it could be argued that IFRS, as a set of accounting standards that could offer a less conservative approach to measurement (Lu and Trabelsi, 2013) could be preferred by countries with higher values of *masculinity*. However, there is no sufficient empirical evidence that suggests a clear relationship between masculinity and IFRS adoption. Thus, we present our fourth hypothesis in the null form.

**Hypothesis 4.** The masculinity dimension of national culture is not related to IFRS adoption in a certain country.

Finally, we investigate the relationship between long term orientation and IFRS adoption. House et al. (2004) define this dimension "Cultures with high future orientation have a strong capability and willingness to imagine future contingencies, formulate future goal states, and seek to achieve goals and develop strategies for meeting their future aspirations". Examining the relationship between long term orientation and IFRS adoption on the country-level is warranted because it is subject to two opposing views.

The first view is that countries with high long-term focus orientation are more likely to adopt IFRS. The reasoning for this argument is that, as argued by Hofstede (2011), societies who score high on this dimension encourage thrift and efforts that could enable the society to be prepared for the future. It is important to note that the adoption of IFRS by EU countries was announced before our sample period and therefore, the EU decision to mandate IFRS signals that the future of financial reporting is heading towards a unified set of accounting standards. This has implications for *ex post* benefits in terms of international trade and capital market development (Márquez-Ramos, 2008, Hope et al., 2006). Therefore, due to the increased importance and the globalization of capital markets and the need for comparable financial statements across jurisdictions, it is more likely that long-term oriented countries will be more likely to adopt IFRS. The second opposing view is that long term-oriented cultures that exhibit a strong capability to imagine future contingencies might be able to perceive that IFRS adoption, although could be associated with several benefits, could also be associated with problems and challenges that could negatively affect the accounting environment in a country. For example, Barth et al. (2008) argue that IFRS could reduce accounting quality because it eliminates alternatives that are more suitable to present the financial position and performance of a business in a fair manner and because IFRS lack implementation guidance that can increase the discretion granted to managers over financial reporting. Several prior studies provide evidence that IFRS adoption is associated with higher levels of earnings management (Callao and Jarne, 2010; Capkun et al., 2016; Ahmed et al., 2013). Another reason why countries with long term-oriented culture could resist the transition to IFRS is their ability to predict that any positive effect of accounting standards is conditional on the institutional variables related to the financial reporting process and that accounting standards are known to be inconsequential in weak enforcement environments (Hope, 2003). This argument is supported by empirical evidence (Daske et al., 2008; Landsman et al., 2011; Christensen et al., 2013). Therefore, given the need for concurrent enforcement changes that are required to ensure proper adoption of IFRS and the possibility that IFRS could reduce accounting quality especially in the presence of weak institutions, countries with long-term orientation could perceive that IFRS is not suitable for them and hence, resist or delay IFRS adoption.

**Hypothesis 5.** The long-term orientation dimension of national culture is not related to IFRS adoption in a certain country.

### 3. Research Design

#### 3.1. Model and Sample

Our primary tests are OLS regressions of the categories of adoption that capture the diffusion in IFRS adoption on the cultural dimension as shown in equations (1) and (2). Additionally, since the *Adopted* measure is a binary variable, we estimate the coefficients of equation (3) using binary logistic regression.<sup>10</sup>

<sup>10</sup> The dependent variable (*Adoption Extent*) is an ordinal variable with four distinct categories and hence, the coefficients could be estimated using multinomial logistic regression. Due to the limited sample size, the number of observations in each category is not sufficient to run a multinomial logistic regression. However, in additional tests (not reported), our results do not change when multinomial logistic regression is used to estimate Equation (2).

$$\text{Adoption Year} = \beta_0 + \beta_1 * \text{UA} + \beta_2 * \text{IDV} + \beta_3 * \text{MAS} + \beta_4 * \text{PDI} + \beta_5 * \text{LTWOVS} + \sum \beta_n \text{Controls}_n + \varepsilon \quad (1)$$

$$\text{Adoption Extent} = \beta_0 + \beta_1 * \text{UA} + \beta_2 * \text{IDV} + \beta_3 * \text{MAS} + \beta_4 * \text{PDI} + \beta_5 * \text{LTWOVS} + \sum \beta_n \text{Controls}_n + \varepsilon \quad (2)$$

$$\text{Adopted (0, 1)} = \beta_0 + \beta_1 * \text{UA} + \beta_2 * \text{IDV} + \beta_3 * \text{MAS} + \beta_4 * \text{PDI} + \beta_5 * \text{LTWOVS} + \sum \beta_n \text{Controls}_n + \varepsilon \quad (3)$$

We obtain the information about the adoption status for 93 non-EU countries. We exclude nine countries with missing data for the cultural variables. Out of those 84 countries we drop additional nine countries with missing data for our control variables. The final sample is based on 76 non-EU countries. Data on IFRS adoption dates by different countries are presented in Appendix B.<sup>11</sup>

### 3.2. Dependent Variable(s): IFRS Adoption

Countries vary with regards to IFRS adoption in terms of time (year of adoption) and extent of IFRS adoption (voluntary or mandatory). To have a comprehensive view on the relationship between cultural dimensions and IFRS adoption, we intend to capture different dimensions of IFRS adoption.

Our first variable is (*Adoption Year*), which simply refers to the year of the first IFRS adoption in a given country regardless of whether this adoption is voluntary or mandatory. In other words, it represents the first year in which IFRS was allowed or mandated in a given country. We assign the value of 2017 to countries that did not allow or mandate IFRS till 2014<sup>12</sup>. Second, (*Extent of Adoption*), which considers “how” a specific country adopts IFRS. This variable classifies countries based on how their adoption status changed during the period 2003 to 2014. Countries who did not at all adopt IFRS are classified as non-adopters and receive a value of 0. Countries that allowed voluntary adoption, yet did not mandate IFRS adoption later, receive the value of 1. Next, countries that allowed voluntary IFRS adoption, before subsequently mandating IFRS receive the value of 2. Finally, countries that mandated IFRS adoption from the first adoption event receive the value of 3<sup>13</sup>. Finally, we include an indicator variable (*Adopted*) that takes the value of 0 for non-adopters and the value of one for all countries that allowed or mandated IFRS adoption between 2003 and 2014. This variable serves two main objectives. First, to show that our results are robust across different regression models. Second, since several independent variables are binary variables, it is worth investigating whether this affects our results or not.

### 3.3. Independent Variables

The primary independent variables that we are investigating are the country-level scores of the four cultural dimensions from the Hofstede Index. The cultural dimensions are uncertainty avoidance (*UA*), masculinity (*MAS*), power distance (*PDI*) individualism (*IDV*) and long-term orientation (*ltowvs*). The index assigns a score for each country in each cultural dimension, where a higher score shows higher presence in the prescribed cultural dimension as defined in Section 2. Each dimension is scored based on a scale from 0 to 100, and higher scores (i.e., scores above 50) on each dimension shows a country that is more individualistic, masculine, power distant and exhibit higher uncertainty avoidance and vice-versa (i.e., scores below 50).<sup>14</sup>

### 3.4. Control Variables

To ensure that we have valid results, we include a set of relevant control variables. First, we control country level variables that potentially relate to the decision to adopt IFRS. In particular, we control for the legal origin of each country by adding a dummy variable for each legal origin (*Legal-UK*, *Lgeal-French*, *Legal-German*) as it is a valid proxy for investor protection (Leuz, 2003)<sup>15</sup>. Additionally, we control for the audit environment as it might drive the county’s decision to adopt IFRS (Ramanna and Sletten, 2014). We proxy audit environment by the variable (*Audit*) that takes the value of one for countries, where three out of the Big 4 audit firms (Deloitte and Touche, Ernst and Young, KPMG and PWC) have offices located in the country and zero otherwise.

<sup>11</sup> Each country is represented only once in our sample, therefore clustering standard errors or controlling for fixed effects is not applicable to our research design.

<sup>12</sup> In regressions, we multiply (*Adoption Year*) by -1 so that higher values indicate earlier IFRS adoption for two reasons: (i) this is to help render the year of adoption (*Adoption Year*) to be consistent with the extent of adoption (*Adoption Extent*) and (*Adopted*); and (ii) to also facilitate the interpretation of the relationship between culture and IFRS adoption.

<sup>13</sup> Since we are investigating the effect of culture on variations in IFRS adoption across countries, we think that including the EU countries in the study is not possible for two reasons. First, all EU countries mandated IFRS in 2005, and hence this group of countries does not exhibit variation in response to IFRS. Second, it is not possible to treat all EU member states as one country since the EU member states are diversified in terms of cultural dimensions.

<sup>14</sup> We follow recommendations from international business literature to refrain from using cultural distance as a proxy for cultural dimensions (Kirkman et al., 2006). Another reason we do not use cultural difference is that Ramanna and Sletten (2009) failed to document a significant relationship between culture closeness to Europe and IFRS adoption by non-EU countries.

<sup>15</sup> In additional tests we control for *Rule of Law* to assure that our results are not affected by a potentially correlated variable. Ramanna and Sletten (2014) show that *Rule of law* is positively associated with the decision to adopt IFRS.

Second, we address concerns about potentially correlated omitted variables. Prior international accounting literature found that the size of a country's capital market was positively related to International Accounting Standards (IAS) (Salter and Niswander, 1995). In a similar vein, Hope et al. (2006) documents that access to equity capital is positively associated with IFRS adoption. Therefore, we argue that the development of a country's capital market can be a significant determinant of its decision to adopt IFRS in order to capture the above-mentioned benefits. IFRS adoption might be associated with the size of the capital market and stock market activity.<sup>16</sup> Therefore, we control for market capitalization and value of shares traded on the stock market as a percentage of the country's GDP. For each variable, we use the mean value for years 2003 and 2014.

Third, larger and more economically successful countries (e.g., US, China and India) are more likely to rely on their local accounting standards compared with small and less economically successful countries (e.g., Botswana, Gambia, and Ghana). Moreover, prior IFRS adoption literature provides empirical evidence that emerging stock markets developed significantly after their respective country's IFRS adoption and hence could perceive IFRS adoption as a channel to enhance the performance and the growth of their local capital markets (Ben Othman and Kossentini, 2015). Therefore, we control for the economic development of the country-year by including the natural logarithm of GDP (*LNGDP*)<sup>17</sup>, calculated as the natural logarithm of the average GDP for years 2003-2014.

Finally, we control for political and regional ties as they could influence countries' decisions towards IFRS adoption. Prior studies show evidence that IFRS adoption decisions are significantly explained by the existence of networks across different countries (Ramanna and Sletten, 2014). Therefore, a group of countries that belong to a specific body could have similar reaction to IFRS adoption. Therefore, there might be an unobservable agreement to adopt or not to adopt IFRS. Therefore, we control for political, regional and geographical relationship. Precisely, we control for several attributes by creating an indicator variable for each of the following OECD, G20, Africa, Asia, Europe, North America and South America<sup>18</sup>. A description of all variables, definitions and data sources is detailed in Appendix A.

### 3.5. Descriptive Statistics

Table 1 provides descriptive statistics for the measures of cultural dimensions. In Panel (A) countries are clustered by (*Adoption Extent*), while in Panel (B) countries are clustered to adopters and non-adopters corresponding to the dependent variable of Equation (3) (*Adopted*). IFRS adoption and cultural dimensions data are available for a total of 84 countries. While Panel (A) does not show a consistent or a monotonic pattern that draws attention that one of the cultural dimensions exhibit large differences than others, Panel (B) shows that uncertainty avoidance (*UA*) and long-term orientation (*ltovvs*), each exhibits a mean for adopters that is sufficiently different from the mean for non-adopters. As panel (B) shows for IFRS adopters the mean is observable higher (lower) for the cultural dimension uncertainty avoidance (long-term orientation). Our interpretation to this finding is that, descriptively, higher uncertainty avoidance and lower long-term orientation are more likely to be associated with IFRS adoption. Otherwise, other cultural dimensions exhibit almost equal means when we compare between adopters and non-adopters.

In Table 2, we provide descriptive statistics for our control variables. Table 3 presents the correlations for the main variables of interest. The correlations between the variables are averagely low (even the correlations between the cultural variables) not to pose multicollinearity concerns, with a variance inflation factor below 2.0 for the main variables of interest in an OLS regression. The correlation coefficients show that the variables *UA*, *AUDIT* and *Legal-UK*<sup>19</sup> have positive and significant correlation coefficients with IFRS adoption variables. Therefore, the correlation coefficients provide a moderate indication that cultural dimensions could be associated with IFRS adoption. However, in the reported correlations, this is only valid for uncertainty avoidance (*UA*). To adequately draw conclusions on the association between cultural dimensions and IFRS adoption, we will draw our inferences from the regression analysis conducted in the next section.

## 4. Empirical Results and Discussion

The main results of our OLS and binary logistic regressions specified in Equations (1),(2) and (3) are represented in Tables 4–6, respectively. The results in Table 4 show that, the coefficient of *uncertainty avoidance (UA)* is positive and statistically significant.

Our interpretation is that the cultural dimension *uncertainty avoidance* is associated with earlier IFRS adoption. In terms of economic significance, our interpretation to the coefficients of *UA* is that its economically significant to the extent that it explains at least 7.3% (Model 1) from the variation in the IFRS adoption years. This result is in line with the arguments of Gray (1988) that the preference of uniformity, indicated by adopting a uniform set of standards like IFRS, is consistent with the preference of strong

<sup>16</sup> In additional tests, we control for financing orientation measured as Domestic Credit to Private Sector by Banks and our results and inferences remain unchanged.

<sup>17</sup> In additional tests, we control also for inflation, percentage of change in imports and percentage of change in exports and our results and inferences remain unchanged.

<sup>18</sup> We report the regressions controlling for OECD and G20 only to preserve space. The results of regressions including continent dummies are not reported, yet the results are not changed. Collectively, legal origin and continent dummies also control for the effect of supra-national culture (see Beugelsdijk et al., 2017; Ronen and Shenkar, 2013).

<sup>19</sup> We observe a high correlation coefficient between *UA* and *Legal-UK*. Therefore, we perform some additional tests (not reported) to ensure that the high correlation is not affecting our estimates. *Legal-UK* only shows a significant association with IFRS adoption variables when *UA* is controlled for in our regressions. However, *UA* is significantly associated with IFRS adoption whether *Legal-UK* is controlled for or otherwise. In other words, our tests confirm that *UA* and *Legal-UK* are not explaining the same variation in our IFRS adoption variables.

**Table 1**  
Descriptive Statistics for measures of cultural dimensions.

Panel (A) IFRS Adoption = Adoption Extent Cultural Dimension	Panel (B) IFRS Adoption = Adopted (0,1) Cultural Dimension																			
	UA	IND	PDI	MAS	LTOWVS	UA	IND	PDI	MAS	LTOWVS										
Adoption Extent																				
Non-Adopter = 0 N = 16	Mean 61.792	27.896	70.219	47.323	27.9375	62.209	31.868	70.686	50.752	39.791	Mean 60.000	29.000	77.000	48.000	32.000	Median 20.988	16.768	16.579	12.039	23.397
	SD 14.795	18.988	14.532	10.726	19.313	8.000	11.000	22.000	21.000	7.000	Min 41.333	8.000	35.000	21.000	9.000	Max 86.333	91.000	81.000	73.000	70.000
	Max 86.333	91.000	81.000	73.000	70.000															
Voluntary Adopter = 1 N = 27	Mean 62.457	34.222	70.963	52.784	46.815	69.671	31.817	70.341	49.085	33.537	Mean 68.000	29.500	75.000	47.000	26.000	Median 24.189	15.189	17.943	12.499	23.052
	SD 19.088	23.445	22.576	12.213	23.283	8.000	11.000	22.000	34.000	7.000	Min 8.000	6.000	13.000	28.000	0.000	Max 96.333	104.000	104.000	95.000	88.000
	Max 96.333	79.000	104.000	95.000	88.000															
Voluntary then Mandatory = 2 N = 14	Mean 71.893	37.107	65.464	52.393	37.571															
	Median 71.500	30.000	67.000	50.500	29.000															
	SD 19.088	23.445	22.576	12.213	23.283															
	Min 45.000	8.000	13.000	36.000	13.000															
	Max 100.000	90.000	93.000	69.000	84.000															
Mandatory = 3 N = 27	Mean 68.519	29.074	72.870	47.370	31.444															
	Median 68.000	27.000	77.000	44.000	23.000															
	SD 19.302	9.908	12.859	10.310	23.006															
	Min 13.000	6.000	45.000	28.000	0.000															
	Max 101.000	39.000	95.000	68.000	100.000															
Total N = 84	Mean 65.851	31.843	70.518	49.938	36.738	65.851	31.843	70.518	49.938	36.738	Mean 68.000	29.500	77.000	47.500	31.000	Median 20.298	16.318	16.638	11.555	23.276
	SD 19.088	23.445	22.576	12.213	23.283	8.000	11.000	22.000	34.000	7.000	Min 8.000	6.000	13.000	28.000	0.000	Max 101.000	104.000	104.000	95.000	88.000
	Max 101.000	91.000	104.000	95.000	100.000															

This table provides descriptive statistics for the cultural dimensions clustered by Adoption categories. UA = Uncertainty Avoidance, IND = Individualism, PDI = Power Distance MAS = Masculinity and LTOWVS = Long-term orientation.

**Table 2**  
Descriptive Statistics for other independent variables.

Variable	Mean	Median	SD	Min	Max
Market Capitalization	50.035	24.307	109.103	0.000	897.045
Value Traded	27.387	1.850	67.251	0.000	496.246
OECD	0.122	0.000	0.329	0.000	1.000
G 20	0.183	0.000	0.389	0.000	1.000
Audit	0.798	1.000	0.404	0.000	1.000
Legal-UK	0.321	0.000	0.470	0.000	1.000
Legal-French	0.464	0.000	0.502	0.000	1.000
Legal-German	0.036	0.000	0.187	0.000	1.000
LNGDP	3.369	3.038	1.950	0.176	9.318

This table provides descriptive statistics for the variables used in the main analysis. All variables are defined as described in Appendix A.

**Table 3**  
Correlation Table (Culture and IFRS Adoption Variables).

	Adoption Year	Adoption Extent	Adopted	UA	IND	PDI	MAS	LWVOVS
Adoption Year	1.000							
Adoption Extent	0.644***	1.000						
Adopted	0.507***	0.904***	1.000					
UA	0.105	0.154	0.185*	1.000				
IND	0.145	-0.008	-0.002	-0.114	1.000			
PDI	-0.051	0.039	-0.010	0.123	-0.482***	1.000		
MAS	0.051	-0.058	-0.073	-0.330***	0.277	-0.068	1.000	

This table presents Pearson's Correlation coefficients for our main variables of interest. All variables are defined in the Appendix. \*, \*\* and \*\*\* indicate significance at the 1%, 5% and 10% levels, respectively. All variables are defined in Appendix A.

**Table 4**  
Cultural Dimensions and IFRS Adoption Year.

	Model (1)		Model (2)		Model (3)		Model (4)		Model (5)		Model (6)	
	Coeff.	Sig.	Coeff.	Sig.	Coeff.	Sig.	Coeff.	Sig.	Coeff.	Sig.	Coeff.	Sig.
UA	0.073**	0.035									0.106***	0.007
IDV			0.012	0.768							0.018	0.681
PDI					0.033	0.428					0.035	0.423
MAS							0.047	0.362			0.102*	0.085
LWVOVS									-0.038	0.360	-0.016	0.703
Market Capitalization	0.029**	0.026	0.028**	0.032	0.028**	0.037	0.028**	0.031	0.030**	0.026	0.029**	0.024
Value Traded	-0.028	0.217	-0.033	0.168	-0.030	0.199	-0.032	0.169	-0.033	0.155	-0.026	0.251
OECD	-0.466	0.817	-0.096	0.966	1.030	0.656	0.256	0.900	-0.067	0.974	-0.206	0.930
G 20	0.950	0.656	0.300	0.891	0.287	0.895	0.423	0.846	0.573	0.793	1.320	0.538
Audit	6.040***	0.000	6.466***	0.000	6.678***	0.000	6.742***	0.000	6.495***	0.000	6.532***	0.000
Legal-UK	3.212*	0.084	1.514	0.379	2.098	0.260	1.513	0.376	0.332	0.877	4.018	0.100
Legal-French	-0.638	0.677	-0.865	0.592	-0.663	0.681	-0.902	0.565	-2.607	0.274	-0.584	0.815
Legal-German	-0.079	0.980	0.182	0.957	0.679	0.842	-0.743	0.829	0.768	0.821	-0.871	0.814
LNGDP	-0.483	0.306	-0.364	0.452	-0.434	0.375	-0.469	0.342	-0.285	0.560	-0.779	0.127
N	76		76		76		76		76		76	
Adjusted R2	0.290		0.240		0.247		0.249		0.249		0.304	

This table reports the results of our main OLS regression specified in Equation (1). Models (1) -(5) present the results for the relationship between individual cultural dimensions and the time of IFRS adoption, after controlling for OECD, G20, AUDIT, Legal origin and LNGDP. In Model (6) all cultural factors as well as control variables are included. All variables are defined in Appendix A. \*, \*\* and \*\*\* indicate significance at the 1%, 5% and 10% levels, respectively.

uncertainty avoidance. It also supports the argument that countries with higher values of uncertainty avoidance are more likely to adopt IFRS to avoid the uncertainty of losing the *ex post* benefits that are associated with IFRS adoption. *Masculinity* is also positive and significant with *Adoption Year*. This is also in line with the predictions of Gray (1988) and shows that masculine societies are more likely to be concerned with material success and hence, are more likely to rush into IFRS adoption regardless of the extent or the quality of this adoption. It also supports the argument that in masculine societies, less conservative accounting standards could be preferred due to the emphasis on individual achievements and material success.

Finally, Table 4 also shows that *Market Capitalization* and *Audit* are positive and significant determinants of IFRS adoption variables. The interpretation is that countries with larger capital markets and higher presence of Big-4 auditors are more likely to adopt IFRS. This is in line with extant theory and evidence on the role of investor protection, capital market development and the

**Table 5**  
Cultural Dimensions and the extent of IFRS Adoption.

	Model (1)		Model (2)		Model (3)		Model (4)		Model (5)		Model (6)	
	Coeff.	Sig	Coeff	Sig	Coeff	Sig	Coeff	Sig	Coeff	Sig	Coeff	Sig
UA	0.021***	0.006									0.021**	0.011
IDV			-0.011	0.244							-0.007	0.459
PDI					0.016*	0.087					0.016*	0.087
MAS							-0.004	0.744			0.006	0.634
LTOWVS									-0.014	0.121	-0.016*	0.080
Market Capitalization	0.005*	0.076	0.005	0.102	0.005	0.118	0.005*	0.098	0.005*	0.067	0.005*	0.065
Value Traded	-0.008	0.108	-0.009*	0.096	-0.008	0.111	-0.009*	0.084	-0.010*	0.065	-0.007	0.130
OECD	0.223	0.612	0.650	0.196	0.814	0.112	0.402	0.384	0.315	0.490	0.691	0.171
G 20	0.165	0.722	0.040	0.934	-0.037	0.938	-0.012	0.981	0.077	0.872	0.270	0.558
Audit	0.711**	0.029	0.865**	0.011	0.929***	0.007	0.821**	0.018	0.841**	0.013	0.846**	0.010
Legal-UK	0.780*	0.055	0.305	0.423	0.571	0.163	0.297	0.438	-0.152	0.748	0.564	0.278
Legal-French	-0.266	0.426	-0.450	0.209	-0.215	0.544	-0.365	0.301	-0.977*	0.066	-0.865	0.108
Legal-German	0.203	0.772	0.159	0.830	0.535	0.473	0.315	0.683	0.508	0.498	0.622	0.435
LNGDP	-0.117	0.256	-0.088	0.410	-0.115	0.283	-0.076	0.492	-0.053	0.624	-0.129	0.237
N	76		76		76		76		76		76	
Adjusted R2	0.204		0.125		0.146		0.108		0.139		0.247	

This table reports the results of our main OLS regression specified in Equation (2). Models (1) -(5) present the results for the relationship between individual cultural dimensions and the extent of IFRS adoption, after controlling for OECD, G20, AUDIT, Legal origin and LNGDP. In Model (6) all cultural factors as well as control variables are included. All variables are defined in Appendix A. \*, \*\* and \*\*\* indicate significance at the 1%, 5% and 10% levels, respectively.

**Table 6**  
Cultural Dimensions and IFRS Adoption (Adopted = 1, Otherwise = 0).

	Model (1)		Model (2)		Model (3)		Model (4)		Model (5)		Model (6)	
	Coeff.	Sig.	Coeff.	Sig.	Coeff.	Sig.	Coeff.	Sig.	Coeff.	Sig.	Coeff.	Sig.
UA	0.045**	0.018									0.052**	0.024
IDV			-0.023	0.267							-0.022	0.400
PDI					0.017	0.403					0.023	0.341
MAS							-0.006	0.791			0.021	0.512
LTOWVS									-0.037*	0.093	-0.039	0.117
Market Capitalization	0.014	0.117	0.013	0.147	0.010	0.204	0.011	0.187	0.010	0.239	0.017	0.113
Value Traded	-0.026	0.105	-0.027	0.109	-0.024	0.123	-0.025	0.111	-0.027*	0.084	-0.029	0.101
OECD	1.259	0.246	2.041*	0.085	1.935*	0.097	1.510	0.151	1.291	0.216	2.112	0.116
G 20	1.397	0.233	1.173	0.301	0.979	0.363	0.933	0.385	1.248	0.268	2.009	0.129
Audit	1.160	0.138	1.410*	0.068	1.501*	0.058	1.338*	0.086	1.524*	0.065	1.645*	0.066
Legal-UK	1.555	0.120	0.305	0.703	0.645	0.466	0.346	0.666	-0.744	0.489	0.926	0.520
Legal-French	-0.110	0.883	-0.600	0.413	-0.200	0.784	-0.372	0.595	-1.954	0.105	-1.740	0.223
Legal-German	-0.218	0.898	-0.547	0.745	0.009	0.996	-0.207	0.907	0.495	0.789	0.363	0.870
LNGDP	-0.396	0.118	-0.299	0.211	-0.312	0.199	-0.252	0.288	-0.162	0.500	-0.449	0.137
N	76		76		76		76		76		76	
Pseudo R2	0.195		0.147		0.142		0.136		0.166		0.250	

This table reports the results of our main binary logistic regression specified in Equation (3). Models (1) -(5) present the results for the relationship between individual cultural dimensions and our IFRS adoption indicator variable, after controlling for OECD, G20, AUDIT, Legal origin and LNGDP. In Model (6) all cultural factors as well as control variables are included. All variables are defined in Appendix A. \*, \*\* and \*\*\* indicate significance at the 1%, 5% and 10% levels, respectively.

audit environment on IFRS adoption (Ramanna and Sletten, 2014).

Table 5 shows the results of regressing our variables of interest on IFRS Adoption Extent. The results in Table 5 show a robust, positive and significant coefficient for *uncertainty avoidance* (UA). This result is also economically significant as uncertainty avoidance explains around 2.1% in the variation in Adoption Extent. This implies that countries with higher values of *uncertainty avoidance* are more likely to exhibit a greater extent of IFRS adoption. This finding is also in line with the arguments of Gray (1988) that such countries prefer *uniformity* of accounting standards that leads to consistency within companies. Allowing firms to voluntarily use IFRS for financial reporting purposes or mandating IFRS only for some firms does not create accounting uniformity across firms residing in a specific country. Therefore, we argue that in an uncertainty avoidant country, partial adoption of IFRS does not serve the incentives related to unifying the set of accounting standards adopted.

The results in Table 5 also shows a positive and significant association between *Power distance* (PDI) and the *Extent of Adoption*. The interpretation is that as a cultural dimension, PDI does not explain sufficient variation in the time of adoption measured by *Adoption Year*, yet it is positively associated with the variation in the degree of adoption and explains more than 1% of the variation.

This means that countries with higher *power distance* values are not likely to adopt IFRS earlier than other countries, yet they are more likely to mandate IFRS for companies residing in their jurisdiction. This result falls within the predictions of Gray (1988) since mandating IFRS after local GAAP is more likely to require law, order and rigid codes. This is supported by the fact that IFRS adoption is associated with changes in enforcement in most of the countries that adopted IFRS. This enforcement should be more successful in countries with higher values of *power distance*. Therefore, those countries can mandate IFRS and issue relevant rules and regulations to ensure proper adoption of IFRS (Christensen et al., 2013) and the society is more likely to accept and comply with the prescriptive legal requirements and statutory control.

Finally, Table 5 shows that *long-term orientation* (LTOWVS) shows a negative and significant (statistically and economically) association with the *Extent of Adoption*. Our interpretation is that long-term oriented countries are more likely to expect the challenges associated with introducing IFRS to their accounting systems. Those challenges, as explained earlier, are represented in either coupling IFRS adoption with concurrent enforcement changes and hence, introducing other changes to the accounting system in addition to switching from local GAAP to IFRS or the probability that IFRS adoption could grant more discretion to managers or eliminate accounting alternatives and thus reduce the quality of reported earnings. In other words, countries scoring high on this dimension might be able to anticipate that IFRS is not (yet) suitable for them or that it can cause more problems due to the lack of implementation guides, additional discretion and elimination of alternatives. Therefore, such countries are less likely to mandate IFRS adoption for firms listed within its jurisdiction.

The results of our third model represented in Equation (3) are presented in Table 6. In this model, our dependent variable (*Adopted*) is an indicator variable that receives the value of one for countries that adopted IFRS (voluntary or mandatory) during our sample period. In particular, this variable disregards the year of adoption and the extent of adoption. The results in Table 6 show that IFRS adoption in general is positively (negatively) associated with *uncertainty avoidance* (*long-term orientation*). This confirms our results about uncertainty avoidant and long-term oriented countries and their reaction towards IFRS adoption.

## 5. Sensitivity Analyses

We acknowledge that our results might be subject to omitted correlated variable bias. Ramanna and Sletten (2014) find evidence that perceived network benefits are a significant determinant of IFRS adoption. Additionally, they control for the rule of law in each country using Kaufmann et al. (2014) *Rule of Law*. Their evidence also suggests that countries with higher *Rule of Law* are more likely to adopt IFRS<sup>20</sup>. Therefore, controlling for network effects and rule of law is crucial to identify the reliability and the robustness of our findings. Following Ramanna and Sletten (2014), the perceived network benefits are measured using two variables, *Network Predict* and *Network Raw*. *Network Predict* is the predicted ratio of a country's trade with all countries where IFRS is mandated relative to their GDP, where trade and GDP as year *t-3* predict the ratio in the adoption year *t*. *Network Raw* is the ratio of a country's trade with all countries that mandated IFRS relative to the country's GDP, where trade and GDP are measured as of year *t-3*. We also include *Rule of Law* measured as the average of Kaufmann et al. (2014) rule of law index for each country. The results of these tests are reported in Table 7.

Table 7 presents the results of our main regressions specified in equations (1)–(3) while controlling for network effects and rule of law. However, for each equation there are two models, the first uses (columns 1,3 and 5) *Network Predict* as a proxy for network effects and the other (columns 2, 4 and 6) uses *Network Raw* as a proxy for network effects. We maintain all observations and variables used in Table 3.

The results in Table 7 confirm our findings as follows. First, *uncertainty avoidance* is positively and significantly associated with all IFRS adoption variables. This indicates that countries with higher values of *uncertainty avoidance* adopted IFRS earlier and with a larger extent than other countries. We conclude that this evidence is sufficient to support the arguments of Gray (1988) that uncertainty avoidance is associated with the demand for uniformity and contradicts the findings of Salter and Niswander (1995) and Ding et al. (2005). Second, there is no sufficient evidence to conclude that *individualism* is related to countries' IFRS adoption decisions. Third, the results confirm our findings about *power distance*. *Power distant* societies are more likely to exhibit a larger extent of adoption, given that in such societies issuing rules to mandate IFRS coupled with regulations and rules to ensure a strict implementation of the standards will be accepted by the members of the society. The results in Table 7 also show that *long-term orientation* is negatively associated with the *Extent of Adoption*. Finally, we show that *masculinity* is associated with earlier adoption of IFRS only when we control for network effects using *Network Predict*, regardless whether this early adoption will be followed with more serious efforts to reach a full adoption status (mandatory adoption) of IFRS or not. *Masculine* societies are more likely to be concerned with material success that could be achieved by adopting the label of "IFRS adopter". In summary, the results of our sensitivity checks are in line with the results of our main analysis and confirm the role of cultural dimensions in IFRS adoption decisions by non-EU countries.

## 6. Summary and conclusion

The primary research question addressed in this study is whether and how various dimensions of national culture influence countries' decisions towards IFRS adoption. Given the importance of the country-level determinants of IFRS adoption, and the

<sup>20</sup> We also control for Rule of law as it is highly correlated with disclosure practices, securities regulations and investor protection. Those variables can explain variations in IFRS adoption decisions (Hope et al., 2006).

**Table 7**  
Alternative Explanations (Controlling for Network Effects and Rule of Law).

	OLS		OLS		OLS		OLS		Binary Logistic		Binary Logistic	
	(1)	(2)	(3)	(4)	(5)	(6)	(5)	(6)	(5)	(6)	(5)	(6)
IFRS Adoption =	Adoption Year				Extent of Adoption				Adopted (0,1)			
Network =	Network Predict		Network Raw		Network Predict		Network Raw		Network Predict		Network Raw	
Variables	Coeff.	Sig.	Coeff.	Sig.	Coeff.	Sig.	Coeff.	Sig.	Coeff.	Sig.	Coeff.	Sig.
UA	0.104***	0.008	0.110***	0.007	0.022**	0.012	0.023***	0.007	0.053**	0.022	0.062**	0.013
IDV	0.004	0.938	0.016	0.772	-0.006	0.562	-0.001	0.963	-0.018	0.564	-0.003	0.931
PDI	0.036	0.406	0.045	0.325	0.016*	0.096	0.020**	0.041	0.022	0.355	0.037	0.155
MAS	0.144**	0.025	0.099	0.119	0.006	0.645	0.001	0.920	0.016	0.632	0.006	0.852
LTOWVS	-0.010	0.810	-0.014	0.740	-0.016*	0.090	-0.017*	0.070	-0.040	0.114	-0.045*	0.086
Market Capitalization	0.025*	0.061	0.029**	0.036	0.005*	0.073	0.006**	0.038	0.018*	0.094	0.021*	0.061
Value Traded	-0.023	0.301	-0.027	0.240	-0.008	0.129	-0.008	0.101	-0.029	0.102	-0.032*	0.093
OECD	0.925	0.728	-0.819	0.747	0.678	0.247	0.641	0.231	2.075	0.160	2.399	0.113
G 20	1.495	0.495	1.441	0.520	0.257	0.592	0.196	0.676	1.888	0.169	1.868	0.190
Audit	6.422***	0.000	6.471***	0.000	0.820**	0.016	0.888***	0.008	1.594*	0.077	2.012**	0.036
Legal-UK	3.619	0.155	3.127	0.237	0.509	0.360	0.321	0.559	0.877	0.563	0.539	0.729
Legal-French	-0.080	0.975	-1.363	0.607	-0.877	0.120	-1.122**	0.047	-1.797	0.223	-2.580	0.100
Legal-German	-4.227	0.338	-1.760	0.685	0.602	0.532	0.740	0.415	0.612	0.806	0.899	0.727
LNGDP	-1.122**	0.042	-0.878	0.103	-0.116	0.331	-0.163	0.147	-0.386	0.222	-0.613*	0.067
Rule of Law	0.530	0.707	0.706	0.623	0.000	1.000	-0.047	0.876	-0.157	0.837	-0.380	0.638
Network	29.861*	0.081	-5.267	0.428	-0.213	0.954	-2.449*	0.081	-2.967	0.736	-7.463*	0.059
N	75		75		75		75		75		75	
Adjusted R2	0.316		0.2867		0.21		0.251					
Pseudo R2									0.2473		0.2856	

This table reports the results of our main regressions specified in Equations (1)–(3), while controlling for Rule of Law (Kaufmann et al. 2014) and Network Effects (Ramanna and Sletten, 2014). Models (1), (3) and (5) use Network Predict as a proxy for network effects, while models (2), (4) and (6) use Network Raw as a proxy for Network Effects All variables are defined in Appendix A. \*, \*\* and \*\*\* indicate significance at the 1%, 5% and 10% levels, respectively.

importance of differences in national culture to the institutional and accounting environments, it is surprising that there is no prior evidence on the implications of national culture for IFRS adoption decisions.

We conduct our main analysis using a sample of 76 non-EU countries and IFRS adoption decisions during the period 2003–2014. We examine the relation between five dimensions of national culture and three IFRS adoption proxies. We find that countries with high *uncertainty avoidance* values adopt IFRS earlier and with a larger extent. Additionally, we find that *Power distance (long-term orientation)* exhibits a positive (negative) and significant association with *Extent of Adoption* Finally, we also show that *masculinity* exhibits a positive association, yet with (*Adoption Year*) only.

Our findings have several important implications for academics, policy-makers, regulatory authorities, accounting standards-setters and enforcement bodies. For regulatory bodies, accounting standard-setters and enforcement bodies, our evidence that national culture matters provides them with additional impetus to carefully consider culture and accordingly make appropriate adjustments when setting, implementing, enforcing and assessing the effectiveness IFRS adoption, especially that prior empirical evidence shows that cultural values are more capable in explaining cross-country variations in earnings management even after IFRS adoption (Gray et al., 2015). For accounting academics, our evidence shows that and confirms that Gray's theory of accounting values can offer rich and new theoretical insights when employed in empirical analyses, and thus, future accounting researchers may employ the theory to analyze different sets of accounting issues, such as the adoption and diffusion of auditing and governance standards around the world. Future researchers may be able to offer rich qualitative insights by conducting in-depth interviews with companies, managers, standard-setters, investors and regulatory authorities focusing on the issues that we have strived to address through a quantitative means.

Finally, our study is subject to the following limitations. First, due to mandatory adoption of IFRS in the EU, we have excluded EU countries from our sample and thereby, relatively reducing our sample size. As more countries adopt the IFRS and more data becomes available in the future, researchers may be able to offer further insights by replicating our analyses. Second, Hofstede's cultural values are constant over time. Therefore, we are not able to address our research question by adopting a time-series or a panel data research design similar to Ramanna and Sletten (2014) and Koning et al. (2017). However, we adjust our dependent variables to adequately resolve this issue. Third, while we control for all variables that could possibly influence IFRS adoption, there might be other unobservable factors that are not controlled for<sup>21</sup>. Fourth, while we aimed to follow the configurational approach suggested for

<sup>21</sup> A potential variable that we considered controlling for is the pre-adoption divergence between national GAAP and IFRS (Cai et al., 2014). However, given that this score is only available for 31 countries and some of those countries are EU countries, thus the number of observations with available data for our variables and the divergence measure is not sufficient.

international culture research which ensures that multiple cultural values are included in any study (Kirkman et al., 2017), yet we are not able to include *Indulgence* due to the lack of extant theory and evidence on how it can be linked to accounting and due to its high negative correlation with *Long-term orientation*. Finally, we note that the reported results are observed associations. Therefore, we caution that our findings are interpreted as a claim for the presence of a causal relationship between cultural dimensions and IFRS adoption.

### Author Statement

All authors contributed equally to all stages of the research project.

### Appendix A. Variable Definitions

Variable	Measure	Description	Data Source
Dependent Variable Time of Adoption	<i>Adoption Year</i>	The year of first IFRS adoption as stated in Table 1. This date refers to the first adoption of IFRS by the country regardless of the extent of adoption (voluntary or mandatory). The <i>Adoption Year</i> value is multiplied by -1 in regressions so that higher values indicate earlier adoption so that this variable is consistent with <i>Adoption Extent</i> and <i>Adopted</i> and for ease of interpreting regression coefficients.	Ramanna and Sletten (2014) Deloitte IASplus Website (2015)
Extent of IFRS Adoption	<i>Extent of Adoption</i>	Ordinal Variable created based on the extent of IFRS Adoption for a Country. Receives the value of 3 for a country that mandated IFRS in the first adoption, 2 for countries that allowed voluntary adoption then mandated IFRS, 1 for a country that allowed voluntary IFRS adoption but never mandated IFRS, 0 for a country that never allowed or mandated IFRS.	Ramanna and Sletten (2014) Deloitte IASplus Website (2015)
Adopted (0,1)	<i>Adopted</i>	An indicator variable that takes the value of 1 in the country mandated IFRS adoption between 2003 and 2014, otherwise 0.	Ramanna and Sletten (2014) Deloitte IASplus Website (2015)
Independent Variables Culture ( <i>Uncertainty Avoidance</i> )	<i>UA</i>	The extent to which people feel threatened by uncertain or unknown	Hofstede (1980)

Culture ( <i>Individualism</i> )	<i>IDV</i>	situations. This is expressed in a need for formality, predictability, and clear rules. In individualistic societies, there are few ties beyond those of nuclear family, whereas in collectivist societies people belong to strong, cohesive in-groups.	Hofstede (1980)
Culture ( <i>Power Distance</i> )	<i>PDI</i>	The extent to which less powerful members of society accept that power is unequally distributed.	Hofstede (1980)
Culture ( <i>Masculinity</i> )	<i>MAS</i>	In masculine societies men are assertive, tough and concerned with material success, whereas women are more modest, tender and interested in the quality of life. In feminine societies, both are equally concerned with the quality of life.	Hofstede (1980)
Culture ( <i>Long-termOrientation</i> )	<i>LTOWVS</i>	The extent to which the focus for people's effort should be on the future or the past. Choosing the past is represented in maintain traditions and viewing societal changes with suspicion	
Legal Origin	<i>Legal-UK Legal-French Legal-German</i>	Each variable is a dummy variable that takes the value of one for observations of a country following the specified legal system and zero otherwise	La Porta et al., (1999)
Audit Environment	<i>Audit</i>	A Dummy variable that receives the value of one for countries where three out of the Big 4 audit firms (Deloitte and Touche, Ernst and Young, KPMG and PWC) have offices located in the country.	Manually Collected
Other Country Controls Natural Log of GDP	<i>LNGDP</i>	Natural logarithm of the gross	World Bank (2014)

Market Capitalization	<i>Market Capitalization % of GDP</i>	domestic product in USD current Prices. Total market capitalization as a percentage of the GDP.	World Bank (2014)
Share Value Traded	<i>Share Value Traded % of GDP</i>	Total value of shares traded as a percentage of the GDP.	World Bank (2014)
Rule of Law	<i>Rule of Law</i>	Rule of law index score. Reflects perceptions of the extent to which agents have confidence in and abide by the rules of society, and the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence. Index score ranges from approximately -2.5 to 2.5, with a higher score indicating less corruption and vice-versa.	Kaufmann et al. (2014)
Network	<i>Network Predict</i>	Predicted ratio of a country's trade with IFRS adopters relative to the country's GDP.	Ramanna and Sletten (2014)
Network	<i>Network Raw</i>	Ratio of a country's trade with IFRS adopters relative to the country's GDP.	Ramanna and Sletten (2014)

## Appendix B. List of Countries in the Dataset and IFRS Adoption Dates

Country	Latest Adoption		Second Adoption		First Adoption		Country	Latest Adoption		Second Adoption		First Adoption	
	Extent	Year	Extent	Year	Extent	Year		Extent	Year	Extent	Year	Extent	Year
Argentina	2c	2009					Macedonia	2a	2004				
Armenia	3	2011					Malawi	3	2003				
Australia	3	2010	2c	2009	2a	2005	Malaysia	2c	2012				
Azerbaijan	2c	2004	2a	2003			Mali	1					
Bahrain	3	2005					Mauritius	3	2003				
Bangladesh	2a	2013					Mexico	3	2012	2b	2008		
Belarus	2c	2008					Moldova	3	2008				
Benin	1						Morocco	2c	2008				
Bolivia	1						Mozambique	2c	2007				
Bosnia	3	2007					Namibia	3	2005				
Brazil	3	2010	2b	2003			Nepal	2a	2013				
Burkina Faso	1						New Zealand	2a	2005				
Canada	3	2015	2c	2011	2b	2005	Nicaragua	3	2011	2b	2004		
Chile	3	2009					Niger	1					
China	2a	2007					Oman	3	2003				
Colombia	3	2015					Pakistan	2a	2006				
Costa Rica	1						Panama	2c	2003				
Croatia	2a	2006		Joined the EU in 2013			Paraguay	2b	2003				
Dominican Republic	3	2014	2a	2003			Peru	3	2012	2a	2003		
Ecuador	3	2012	2c	2011			Philippines	2a	2003				
Egypt	2a	2007					Qatar	3	2003				
Salvador	2a	2004					Russia	3	2015	2c	2004		
Georgia	3	2006					Saudi Arabia	2c	2007				
Ghana	3	2007					Singapore	2a	2012				
Guatemala	3	2003					South Africa	3	2005	2b	2003		

Guyana	3	2003			Sri Lanka	2a	2009	2b	2004
Honduras	3	2008			Switzerland	2b	2003		
Hong Kong	2a	2003	2b	2003	Syria	1			
India	2a	2015			Tajikistan	3	2007		
Indonesia	1				Tanzania	3	2004		
Iran	1				Thailand	2a	2007		
Israel	3	2008	2b	2006	Togo	1			
Ivory Coast	1				Trinidad And Tobago	3	2003		
Jamaica	3	2003			Tunisia	1			
Japan	2b	2010			Turkey	2b	2003		
Jordan	3	2003			Ukraine	3	2011		
Kazakhstan	3	2005	2c	2003	UAE	3	2003		
Kenya	3	2003			USA	1			
South Korea	3	2011			Uruguay	3	2007	2a	2004
Kuwait	3	2003			Venezuela	1			
Kyrgyzstan	3	2006	2c	2003	Zambia	3	2005		
Laos	1				Zimbabwe	3	2003		
Lebanon	3	2003							

This table shows the date and extent of adoption of each country in our dataset. This table is based on a similar table reported in Appendix B in Ramanna and Sletten (2014), as well as our extension to this data to cover years till 2014. Each country receives a score for adoption based on the following: non-adopter = 1, countries attempting to reconcile their domestic standards with IFRS, without directly adopting = 2a, or countries allowing voluntary IFRS adoption = 2b, countries requiring only some listed firms to use IFRS = 2c and countries requiring all listed firms to use IFRS = 3.

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