CULTURAL DIMENSIONS SHAPING ISA ADOPTION SPEED IN EMERGING COUNTRIES[1]

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ABSTRACT | This study investigates the cultural, economic, and political determinants of the speed of International Standards on Auditing (ISA) adoption in emerging economies. Utilizing Hofstede's cultural dimensions, the research explores the influence of factors such as uncertainty avoidance, individualism, long-term orientation, and motivation toward achievement on ISA adoption. Data from 22 emerging economies spanning 2010–2022 are analyzed using OLS and mixed-effects regression models. The findings reveal that cultural dimensions like uncertainty avoidance and indulgence positively influence ISA adoption speed, while power distance and motivation toward achievement hinder the process. Among economic and political variables, GDP positively impacts adoption speed, whereas countries with advanced financial markets show resistance to adopting ISA. The study emphasizes the need for culturally and economically sensitive approaches to facilitate the harmonization of auditing standards across diverse contexts.

Keywords: *International standards on auditing (ISA), cultural dimensions, emerging economies.*

JEL Codes: *M42, Z10, P52*

Scope: *Business Administration*
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[1] Compliance with the ethical rules of the relevant study has been declared.

GELİŞMEKTE OLAN ÜLKELERDE UDS BENİMSEME HIZINI ŞEKİLLENDİREN KÜLTÜREL BOYUTLAR

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ÖZ | Bu çalışma, Uluslararası Denetim Standartlarının (UDS) gelişmekte olan ülkelerde benimsenme hızını şekillendiren kültürel, ekonomik ve politik faktörleri incelemektedir. Özellikle, Hofstede'nin kültürel boyutları çerçevesinde belirsizlikten kaçınma, bireycilik, uzun vadeli yönelim ve başarıya yönelik motivasyon gibi unsurların, UDS'nin benimsenmesine olan etkileri değerlendirilmektedir. Araştırmada, 22 gelişmekte olan ekonomiden 2010-2022 dönemine ait veriler kullanılmış ve OLS regresyon ile karma etkili regresyon modelleri uygulanmıştır. Bulgular, belirsizlikten kaçınma ve hoşgörü gibi kültürel boyutların UDS benimsenme hızını pozitif etkilediğini, güç mesafesi ve başarıya yönelik motivasyonun ise bu süreci yavaşlattığını ortaya koymaktadır. Ekonomik ve politik kontrol değişkenleri arasında, ekonomik büyüklüğün UDS benimsenmesini teşvik ettiği, ancak gelişmiş finansal piyasalara sahip ülkelerin bu standartlara direndiği gözlemlenmiştir. Çalışma, küresel standartlaştırma çabalarını destekleyen kültürel ve ekonomik açıdan hassas yaklaşımlar geliştirilmesi gerektiğini vurgulamaktadır.

Anahtar Kelimeler: *Uluslararası denetim standartları (UDS), kültürel boyutlar, gelişmekte olan ekonomiler*

JEL Kodları*: M42, Z10, P52*

Alan: *İşletme*
Türü: *Araştırma*

1. INTRODUCTION

The growing need for universally understood financial information has become increasingly critical as globalization progresses (Fraser, 2010). Disclosure regulations and reporting standards are unlikely to achieve their intended effectiveness without the support of reliable auditing (Leuz & Wysocki, 2016), making International Standards on Auditing (ISA) an essential component in today's interconnected world. High-quality audits not only enhance the credibility of financial statements but also reduce agency costs and the cost of capital (Vanstraelen & Schelleman, 2017).

The heightened focus on ISA has often been linked to concerns over financial statement quality following the Asian economic crisis in the late 1990s and the global financial crisis, reflecting their critical role in building an efficient global economy (Boolaky & Soobaroyen, 2017). The establishment and implementation of suitable, high-quality standards is recognized as the foundational and critical step toward achieving quality audits (Burns & Fogarty, 2010).

Despite significant global convergence in implementing ISA (Boolaky & Soobaroyen, 2017; Elmghaamez & Elmagrhi, 2022) research on their adoption and commitment levels remains limited (Boolaky & Soobaroyen, 2017; Elmghaamez et al., 2020, 2024; Elmghaamez & Elmagrhi, 2022; Eltweri et al., 2022). A growing body of literature has increasingly acknowledged the importance of methodologically rigorous approaches to capture the complexities of ISA adoption. Studies have predominantly relied on regression models, particularly Ordinary Least Squares (OLS), but recent research has employed more sophisticated techniques, such as mixed-effects regression models and the Diffusion of Innovation (DOI) Theory, to better account for the multi-level and dynamic processes driving adoption (Elmghaamez et al., 2020; Elmghaamez & Elmagrhi, 2022).

ISA aim to formalize various elements of the audit process, including planning, engagement procedures, gathering and analyzing evidence, evaluating internal control systems, and defining the structure and content of audit reports (Mennicken, 2008). While prior studies have largely focused on technical elements of ISA adoption, such as procedural standardization, there is increasing recognition that these standards also carry cultural significance. The adoption of ISA represents a cornerstone in global efforts to enhance the quality and consistency of auditing practices. While considerable research has examined the adoption of International Financial Reporting Standards (IFRS), studies on the adoption of ISA remain relatively sparse, particularly regarding the role of cultural factors. As prior research demonstrates, cultural dimensions shape not

only organizational practices but also the speed and manner in which countries align with global standards (Hofstede, 2011; Zeghal & Lahmar, 2018).

This study explores these dynamics in the context of ISA adoption. By extending prior research, this study incorporates lesser-studied cultural dimensions, such as indulgence and motivation toward achievement, thereby offering a novel and more comprehensive perspective on ISA adoption dynamics in emerging economies. This gap is significant, as ISA are not merely technical tools but also cultural artifacts, shaped by and shaping the environments in which they are implemented. As emphasized by El-Helaly et al. (2020) cultural factors significantly influence how countries respond to the introduction of international standards. For instance, countries with high uncertainty avoidance often adopt standards more rapidly to mitigate future uncertainties. This underscores the need to explore the cultural dimensions that shape the adoption process of ISA.

While ISAs aim for global consistency (IAASB, 2024), their implementation remains deeply intertwined with national cultures, which shape local interpretations and practices (Mennicken, 2008). This cultural lens is particularly crucial in emerging economies, where rapid economic transitions create environments that either facilitate or hinder the alignment with international standards. Building on Gray's (1988) cultural accounting theory and Hofstede's (1980, 2011) cultural dimensions, this study explores how various cultural traits interact with economic and political factors to influence the speed of ISA adoption. While previous research has focused on dimensions such as power distance, uncertainty avoidance, and individualism, this study broadens the scope by incorporating newer dimensions like indulgence and motivation toward achievement and success. These newer dimensions provide valuable insights into the adoption dynamics in emerging economies, where cultural diversity and evolving economic landscapes present unique challenges and opportunities for standardization.

Methodologically, this study integrates a combination of cultural, economic, and political factors, while offering a more nuanced understanding of how these dimensions collectively shape ISA adoption. The adoption process in these contexts is not only a technical transition but also a cultural negotiation that influences the success or failure of international standards. By extending the literature with these insights, this study bridges the gap between theory and practice, offering a culturally nuanced understanding of ISA adoption and paving the way for more inclusive global standardization efforts.

2. CULTURAL INFLUENCE ON ISA ADOPTION AND HYPOTHESES DEVELOPMENT

While there is an extensive body of literature on the adoption of IFRS (De George et al., 2016), the adoption of ISA has been relatively less explored in academic research. Research on the adoption of ISA primarily examines the determinants (Boolaky & Omoteso, 2016; Elmghaamez & Elmagrhi, 2022; Eltweri et al., 2022), regional variations (Boolaky, 2012; Boolaky & Cooper, 2015), and impacts of ISA adoption (Elmghaamez et al., 2020, 2024; Zhou, 2007), as well as the challenges associated with its implementation (Lin & Chan, 2000; Samaha & Hegazy, 2010).

The adoption of ISA is influenced by a variety of factors, including institutional, political, economic, cultural, regional, and regulatory elements, which collectively reflect the complexity of this process (Boolaky & Omoteso, 2016; Elmghaamez & Elmagrhi, 2022; Mennicken, 2008). These dimensions highlight the complexity and interplay of global and local contexts in shaping ISA adoption practices.

Among these, national culture plays a pivotal role in shaping how countries respond to global standardization initiatives. Gray's (1988) cultural accounting theory highlights cultural diversity as a key determinant of accounting and auditing practices worldwide. Similarly, Hofstede's (1980, 2011) cultural dimensions provide a valuable framework for understanding these variations, influencing attitudes toward compliance, openness to external norms, and the balance between global and local practices. Supporting this perspective, Nobes (1998) argued that national culture is one of the internal local factors that could affect differences in national financial reporting, further emphasizing the critical role of cultural context in shaping accounting systems.

Recent research also highlights the role of culture in the adoption of international standards. El-Helaly et al. (2020) demonstrate that cultural dimensions such as uncertainty avoidance and power distance influence the adoption of IFRS, suggesting that cultural factors may also play a critical role in ISA adoption. For instance, countries with high levels of uncertainty avoidance are more inclined to adopt standards quickly to reduce ambiguity in financial reporting. In their study, El-Helaly et al. (2020) employ OLS and binary logistic regression analyses using a sample of 76 non-EU countries between 2003 and 2014. They examine the association between IFRS adoption and five cultural dimensions—uncertainty avoidance, masculinity, individualism, power distance, and long-term orientation—while controlling for economic, institutional, and regional factors. Building on this perspective, the present study expands the focus to ISA adoption, investigating how cultural dimensions interact with economic and political factors to shape adoption behaviors in emerging economies.

These cultural dimensions not only influence financial reporting but also play a critical role in shaping the adoption dynamics of auditing standards, as this study aims to explore in the context of emerging economies.

To the best of our knowledge, the relationship between ISA adoption and culture has been explored in a limited number of studies (Boolaky & Soobaroyen, 2017; Cowperthwaite, 2010; Elmghaamez & Elmagrhi, 2022; Eltweri et al., 2020).

Cowperthwaite (2010) highlights that ISAs are based on cultural assumptions that may not always align with local contexts. Using Hofstede's dimensions—power distance, uncertainty avoidance, and individualism vs. collectivism—the study analyzes how these mismatches can affect adoption. It finds that high power distance and uncertainty avoidance hinder open communication, and the adaptation required for ISA's principles-based framework, while individualistic societies are more aligned with the independence and professional judgment essential for effective ISA implementation. To explore these issues, Cowperthwaite (2010) conducts a conceptual and literature-based analysis, drawing on findings from other professions such as medicine, peacekeeping, aviation, and environmentalism, to predict cultural impacts on the global adoption and consistent implementation of ISAs.

Examining 89 countries, Boolaky & Soobaroyen (2017) demonstrate that lower power distance and lower uncertainty avoidance facilitate ISA adoption by fostering adaptability and openness to global norms. The study also underscores the interplay between cultural values and institutional factors, concluding that addressing cultural barriers is crucial for achieving global harmonization of auditing standards. Employing a neo-institutional theoretical framework, the authors conduct an empirical analysis using an ordinal logistic regression approach on archival data from 89 countries between 2009 and 2012. They integrate cultural, social, political, and economic variables to explain cross-national differences in ISA adoption levels.

Eltweri et al. (2020) examined how Libya's collectivist culture, marked by tribalism and nepotism, hinders the adoption of ISA by limiting individual initiatives. Despite these challenges, the study highlights those Islamic principles, which promote high ethical standards, align with ISA values, offering insights into the cultural factors shaping ISA adoption in North Africa. The research employed a mixed-method approach, consisting of expert interviews and archival analysis, which enabled the researchers to capture comprehensive insights from Libyan stakeholders in the auditing environment.

Focusing on Hofstede's dimensions, Elmghaamez & Elmagrhi, (2022) reveal that countries with high individualism, low power distance, and low

uncertainty avoidance are more likely to adopt ISAs proactively. The study also identifies regional variations, noting that Anglo-Saxon countries tend to adopt ISAs faster than more conservative continental European nations due to greater cultural alignment with ISA principles. The study used a large dataset of 162 countries spanning from 1995 to 2014, employing a combination of cultural, legal, and political factors as independent variables, alongside a logit model to assess the probability of ISAs adoption.

Although power distance and uncertainty avoidance have been extensively studied, newer dimensions like long-term orientation, indulgence and motivation toward achievement provide fresh insights into ISA adoption. By incorporating these newer dimensions, the literature provides a more nuanced understanding of how cultural traits influence the adoption and implementation of ISAs. This evolving approach enriches the global standardization discourse and highlights the importance of accounting for cultural diversity in implementing ISAs effectively.

According to Hofstede (2011) countries with a higher long-term orientation (LTO) adapt more easily to changing circumstances due to their focus on future benefits and pragmatic approaches. In the context of ISA adoption, this cultural trait facilitates quicker implementation, as high-LTO countries are more inclined to embrace change and effectively overcome barriers. This underscores how future-oriented cultural traits drive the adoption of global standards by aligning national practices with international norms.

In particular, the emphasis on pragmatism and long-term stability enables high-LTO countries to adapt more readily to the changes required for ISA implementation. In contrast, short-term-oriented societies, which prioritize stability and traditional methods (Hofstede, 2011), are more likely to resist adopting new international standards. These contrasting tendencies highlight the crucial role of cultural orientation in shaping adoption behaviors.

Indulgent societies, valuing freedom and openness, are more receptive to adopting international standards like ISA, leveraging benefits such as improved information quality and reduced equity costs (Hofstede, 2011). In contrast, restrained societies prioritize control and traditional practices, which may slow adoption despite mandatory compliance. Such openness and alignment with global principles suggest that indulgent societies are better positioned to implement ISAs effectively.

Hofstede's cultural dimensions further suggest that societies emphasizing achievement and success view ISA adoption as an opportunity to enhance global competitiveness and professional standards, accelerating their integration into international markets (Hofstede, 2011)

Based on the literature, the following hypotheses are formulated to explore the relationship between cultural dimensions and the ISA Adoption in emerging countries. These hypotheses capture both established and exploratory perspectives. While H1, H2, and H3 are rooted in well-established findings from previous studies, H4, H5, and H6 focus on lesser-studied cultural dimensions, providing a broader framework for understanding the complex interplay between traditional cultural attributes and emerging dimensions in shaping ISA adoption behaviors:

H1: Countries with lower power distances tend to adopt ISAs more proactively.

H2: Countries with higher levels of individualism tend to adopt ISAs less proactively.

H3: Countries with higher levels of uncertainty avoidance tend to adopt ISAs more proactively.

H4: Countries with a high level of long-term orientation tend to adopt International Standards on Auditing (ISA) more proactively.

H5: Countries with higher levels of indulgence tend to adopt International Standards on Auditing (ISA) more proactively.

H6: Countries with higher levels of motivation toward achievement and success tend to adopt International Standards on Auditing (ISA) more proactively.

This framework integrates well-established and emerging cultural dimensions, providing a comprehensive perspective on how culture shapes ISA adoption behaviors in diverse national contexts.

3. RESEARCH METHODOLOGY

This study uses Ordinary Least Squares (OLS) regression to analyze the relationship between cultural dimensions and ISA Adoption in emerging countries. The analysis focuses on identifying how cultural factors influence the likelihood of proactive ISA adoption, while economic and political variables are included as controls to account for broader contextual influences.

The sample comprises data from 22 emerging economies in the broader European region, covering the period from 2010 to 2022. Multicollinearity diagnostics, using tolerance and Variance Inflation Factor (VIF) values, confirm the suitability of the variables for regression analysis. This methodological framework provides a comprehensive basis for evaluating the impact of cultural dimensions on ISA adoption behaviors.

To ensure the robustness of the findings, mixed-effects ML regression was applied. This method is widely recognized for its ability to address dynamic relationships and control for biases in multilevel data.

Its effectiveness has been demonstrated in studies such as (Tariq et al., 2024) and (Cui et al., 2024), where it was used to validate findings in contexts involving complex interdependencies. Accordingly, its use here strengthens the reliability and generalizability of the results.

3.1. Definition of Variables

Table 1 summarizes the study's variables, including their definitions and sources. The dependent variable in this study is the speed at which countries adopt ISA, denoted as *ISAADOPS*. This categorization adopts the Diffusion Theory framework as utilized by (Elmghaamez et al., 2020, 2024) and (Elmghaamez & Elmagrhi, 2022). Using this approach, countries are coded on a scale from 1 to 5 based on their ISA adoption years, where 5 represents the earliest adopters and 1 represents the latest adopters or non-adopters. The classification relies on data from the IFAC (International Federation of Accountants) Action Plan Template and the World Bank's 'Reports on the Observance of Standards and Codes (ROSC),' applying (Rogers et al., 2014) Diffusion of Innovation Theory to categorize adoption stages.

Cultural variables, based on Hofstede's framework, include Power Distance (PoD), Individualism (Indv), Motivation toward Achievement and Success (MtAS), Uncertainty Avoidance (UncA), Long-Term Orientation (LTO), and Indulgence (Indg). These variables with the others will be referred to by their abbreviations from this point onward until the discussion and conclusion sections, where their full names will be used again for clarity.

Economic and political control variables include GDP (logarithm of gross domestic product), the Democracy Index (DemX), and the Financial Markets Depth Index (FDMI). The inclusion of *DemX* as a control variable is justified by its potential to capture the broader political and institutional environment that influences ISA adoption. Democratic governance fosters transparency, accountability, and institutional quality, which are critical factors in promoting the adoption of international standards. As noted by (Boolaky & Omoteso, 2016) countries with higher levels of democracy tend to adopt auditing and accounting standards more effectively due to their emphasis on openness and regulatory compliance. Including *DemX* allows for a nuanced analysis of how political systems shape the *ISAADOPS*. GDP is included as a measure of economic size, reflecting its potential role in facilitating ISA adoption. Prior studies (e.g., (Mueller et al., 1994; Zeghal & Mhedhbi, 2006) suggest that economic growth supports the efficient allocation of resources and strengthens investor confidence,

which could encourage earlier ISA adoption. Additionally, robust accounting and financial systems in wealthier economies, as highlighted by (Pirveli & Zimmermann, 2019), may provide the infrastructure necessary for implementing ISA more efficiently.

Similarly, *FDMI* reflects the size and liquidity of financial markets, which can indirectly support conditions favorable to ISA adoption. By fostering investor confidence and enhancing financial infrastructure, capital markets create an environment conducive to earlier adoption. Studies (e.g., Humphrey et al., 2009; Judge et al., 2010) emphasize the role of capital markets in promoting harmonization of standards to improve economic efficiency. Additionally, (Needles et al., 2002) highlight the importance of high-quality accounting information in sustaining financial system confidence, particularly in the wake of past market crises.

Table 1: Definitions of Variables

Analysis Code	**Description**	**Source**
ISAADOPS	The speed of ISA adoption, coded from 1 (latest/non-adopters) to 5 (earliest adopters).	(Elmghaamez et al., 2020, 2024; Elmghaamez & Elmagrhi, 2022)
PoD	Reflects hierarchical structures in society.	Hofstede's Framework
Indv	Captures the degree of individual vs. collective orientation.	Hofstede's Framework
MtAS	Motivation towards Achievement and Success; reflects societal focus on achievement.	Hofstede's Framework
UncA	Measures societal tendency to avoid ambiguity.	Hofstede's Framework
LTO	Indicates future-oriented cultural values.	Hofstede's Framework
Indg	Reflects societal focus on enjoyment and life satisfaction.	Hofstede's Framework
GDP	Logarithm of GDP; represents the economic size of a country.	World Bank's World Development Indicators
DemX	Democracy Index; captures the level of democratic governance.	World Bank 's Prosperity Data 360 Platform
FDMI	The Financial Markets Depth Index reflects the size and liquidity of financial markets.	IMF's Financial Development Index Database

3.2. Research Model

The study investigates the influence of cultural, economic, and political factors on *ISAADOPS* using Ordinary Least Squares (OLS) regression and incorporates mixed-effects regression to enhance robustness. The research model is represented as:

$$ISAADOPS_t = \beta0+\beta1PoD_t+\beta2Indv_t+\beta3MtAS_t+\beta4UncA_t+\beta5LTO_t+\beta6Indg_t+\beta7GDP_t+\beta8DemX_t+\beta9FDMI_t+\epsilon_t$$

This approach provides a comprehensive analysis of the determinants shaping ISA adoption, highlighting the interplay of cultural, economic, and political dimensions.

3.3. Sample Selection

The sample comprises emerging economies in the broader European region, focusing on the period from 2010 to 2022 and including a total of 286 observations. Initially, data was collected for 26 countries; however, due to data unavailability, 4 countries were excluded from the analysis. As a result, the study includes 22 countries: Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Czechia, Estonia, Hungary, Kosovo, Latvia, Lithuania, Moldova, Montenegro, North Macedonia, Poland, Romania, Serbia, Slovakia, Slovenia, Turkey, Ukraine, Georgia, and Armenia.

These countries were selected for their dynamic economic transitions, cultural diversity, and active engagement in global standardization efforts. By targeting this specific region and time frame, the study captures the complex interactions between cultural, economic, and political factors in shaping *ISAADOPS*. This sample provides a rich dataset for investigating how these factors influence the global alignment of auditing standards.

3.4. Descriptive Statistics

Table 2 provides descriptive statistics for the study's variables, highlighting key cultural, economic, and political factors influencing *ISAADOPS*. The *ISAADOPS* variable has a mean of 3.36, indicating moderate-to-early adoption among emerging economies. Cultural variables show significant variation: *PoD* is high (mean: 72), suggesting hierarchical societies, while Indv and *MtAS* have moderate averages of 46.23 and 44.77, respectively. *UncA* is notably high (mean: 83.55), reflecting strong preferences for structured

environments, whereas *Indg* is low (mean: 28.18), indicating a more restrained cultural approach.

Economic and political variables also vary considerably. *GDP* (mean: 24.55) reflects differences in economic size, while the *DemX* (mean: 6.31) indicates moderate levels of democratic governance. *FDMI* shows significant diversity (mean: 9.49), suggesting varying levels of financial market development. These findings underline the importance of cultural factors such as *UncA* and Indulgence, alongside economic and political contexts, in shaping ISA adoption behaviors.

Table 2: Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
ISAADOPS	286	2	5	3.360	0.480
PoD	286	40	92	72.000	17.590
Indv	286	15	81	46.230	17.760
MtAS	286	9	88	44.770	17.930
UncA	286	60	96	83.550	10.380
LTO	286	24	71	47.090	12.400
Indg	286	13	66	28.180	13.370
GDP	286	22.12	27.59	24.550	1.340
DemX	286	2,65	8,39	6.310	1.260
FMDI	286	0	0,45	9.490	8.800
Valid N (listwise)	286				

4. EMPIRICAL RESULTS

The analysis of Tables 3 and 4 provides valuable insights into the relationships between cultural dimensions and the *ISAADOPS*. Table 3, the correlation matrix, reveals significant relationships between several variables. *UncA* has the strongest positive correlation with *ISAADOPS* (0.480, $p<0.01$), indicating that societies with a low tolerance for ambiguity are more likely to adopt ISA standards proactively. Similarly, *Indg* is positively correlated with *ISAADOPS* (0.459, $p<0.01$), suggesting that cultures emphasizing openness and life satisfaction tend to embrace ISA adoption more quickly. On the other hand, *MtAS* exhibits a negative correlation with *ISAADOPS* (-0.221, $p<0.01$), implying

that achievement-oriented societies may prioritize domestic concerns over aligning with international standards. *PoD*, however, shows no significant correlation with *ISAADOPS* (p>0.05), indicating that hierarchical structures may have a limited direct impact on the speed of adoption.

Table 3: Correlation Matrix

	ISAADOPS	*PoD*	*Indv*	*MtAS*	*UncA*	*LTO*	*Indg*	*GDP*	*DemX*	*FDMI*
ISAADOPS	1.000 (1.000)									
PoD	0.022 (0.002)	1.000 (1.000)								
Indv	0.127* (0.049)	-0.613** (-0.562**)	1.000 (1.000)							
MtAS	-0.221** (-0.095)	0.164** (0.062)	-0.310** (-0.355**)	1.000 (1.000)						
Unca	0.480** (0.514**)	0.642** (0.538**)	-0.313** (-0.239**)	0.195** (0.058)	1.000 (1.000)					
LTO	-0.141* (-0.209**)	-0.307** (-0.193**)	0.332** (0.339**)	-0.281** (-0.275**)	-0.415** (-0.188**)	1.000 (1.000)				
Indg	0.459** (0.317**)	-0.065 (-0.076)	0.181** (0.012)	0.129* (0.315**)	0.401** (0.225**)	-0.420** (-0.596**)	1.000 (1.000)			
GDP	-0.105 (-0.178**)	-0.230** (-0.215**)	0.431** (0.517**)	0.085 (0.001)	0.021 (-0.094)	-0.094 (-0.036)	0.064 (0.068)	1.000 (1.000)		
DemX	0.149* (0.113)	-0.579** (-0.608**)	0.692** (0.768**)	-0.224** (-0.314**)	-0.318** (-0.232**)	0.248** (0.345**)	0.098 (-0.023)	0.091 (0.186**)	1.000 (1.000)	
FDMI	-0.048 (-0.053)	-0.356** (-0.497**)	0.346** (0.523**)	0.152* (0.079)	0.082 (-0.036)	-0.096 (0.022)	0.477** (0.367**)	0.668** (0.678**)	0.113 (0.369**)	1.000 (1.000)

Pearson coefficients (linear relationships) are shown outside parentheses; Spearman coefficients (monotonic relationships) are inside. Significance levels are indicated as follows: **p < 0.01 (denoted by **) and p < 0.05 (denoted by*).

The correlation matrix also highlights notable relationships among the cultural variables themselves. For instance, *Indg* and *UncA* are positively correlated (0.401, p<0.01), suggesting that indulgent societies may also value structured environments. Additionally, the strong negative correlation between Indv and PoD (-0.613, p<0.01) reflects the tendency of hierarchical societies to oppose individualistic values.

Table 4, which presents collinearity statistics, assesses the multicollinearity among variables to ensure the robustness of regression analysis. Indv has the highest VIF value (4.272), but it remains well within acceptable limits (below 10), indicating no severe multicollinearity issues. All tolerance values exceed 0.1, further confirming that multicollinearity is not a concern.

In summary, the correlation analysis underscores the importance of *UncA* and Indulgence as key cultural dimensions influencing ISA adoption. At the same time, collinearity diagnostics validate the suitability of the variables for regression analysis, ensuring reliable results. These findings provide a robust foundation for the subsequent regression analysis, which will further explore the relationships and causal dynamics between cultural factors and *ISAADOPS*.

Table 4: Collinearity Statistics

Variables	Tolerance	VIF
PoD	0.284	3.526
Indv	0.234	4.272
MtAS	0.797	1.254
UncA	0.358	2.794
LTO	0.503	1.989
Indg	0.313	3.194
GDP	0.279	3.587
DemX	0.415	2.412
FDMI	0.277	3.610

Model 1 evaluates the impact of cultural dimensions on *ISAADOPS*. The results reveal that *PoD* has a significant negative effect on *ISAADOPS* ($\beta = -0.017$, $p < 0.01$), indicating that societies with strong hierarchical structures are less likely to adopt ISAs quickly. This may be due to centralized decision-making and resistance to change, which are characteristics of high-*PoD* cultures. *MtAS* also shows a significant negative relationship with *ISAADOPS* ($\beta = -0.015$, $p < 0.01$). This suggests that achievement-oriented cultures might prioritize domestic agendas or exhibit skepticism toward externally imposed standards.

Conversely, *UncA* demonstrates a significant positive effect ($\beta = 0.056$, $p < 0.01$), indicating that societies with high levels of *UncA* adopt ISAs more proactively. This aligns with the idea that ISAs, by providing structured guidance, reduce ambiguity and align well with cultures favoring predictability. Similarly, *Indg* has a positive and significant effect on ISA adoption ($\beta = 0.014$, $p < 0.01$), implying that cultures valuing openness and life satisfaction are more receptive to adopting international standards. However, *Indv* and *LTO* do not show significant effects, suggesting that these dimensions may play a less direct role in shaping ISA adoption behaviors.

The adjusted R^2 value of 0.479 indicates that the cultural dimensions included in Model 1 explain approximately 47.9% of the variation in *ISAADOPS*.

Table 5: Regression Results

Variable	Model 1				Model 2			
	β	Std. Error	t-value	p-value	β	Std. Error	t-value	p-value
Constant	0.128	0.446	0.29	0.774	-2.332	1.1224	-2.08	0.039
PoD	-0.017**	0.003	-5.03	0.000	-0.027**	0.003	-8.12	0.000
Indv	-0.002	0.003	-0.59	0.558	-0.003	0.004	-0.76	0.450
MtAS	-0.015**	0.002	-6.97	0.000	-0.012**	0.002	-6.00	0.000
UncA	0.056**	0.005	10.14	0.000	0.063**	0.005	12.83	0.000
LTO	0.004	0.004	0.97	0.331	0.007	0.003	1.90	0.058
Indg	0.014**	0.004	3.84	0.000	0.027**	0.004	6.66	0.000
GDP					0.089*	0.043	2.06	0.040
DemX					0.028	0.038	0.73	0.465
FDMI					-0.053**	0.007	-7.93	0.000
N	286				286			
Adj R-Square	0.479				0.610			
F (sig.)	44.64 (0.000)				50.51 (0.000)			

Significance levels are indicated as follows: **p < 0.01 (denoted by **) and p <0.05 (denoted by*).

Model 2 incorporates economic and political control variables, providing a more comprehensive framework for understanding *ISAADOPS*. The negative effect of *PoD* becomes more pronounced (β = -0.027, p < 0.01), suggesting that hierarchical structures significantly hinder ISA adoption when accounting for economic and political factors. Similarly, the negative influence of *MtAS* persists but slightly decreases in magnitude (β = -0.012, p < 0.01), which might indicate that economic and political variables partially mediate the relationship between achievement orientation and ISA adoption.

The positive effects of UncA (β = 0.063, p < 0.01) and Indg (β = 0.027, p < 0.01) become stronger in Model 2. These findings reinforce the notion that cultures emphasizing structured environments and openness are more aligned with the principles underlying ISAs.

Among the control variables, *GDP* has a positive and significant effect on *ISAADOPS* (β = 0.089, p < 0.05), indicating that economically larger countries are more likely to adopt ISAs quickly. This may reflect the presence of more

robust financial infrastructures and greater resources to support the implementation of international standards. However, *DemX* does not exhibit a significant impact ($\beta = 0.028$, $p > 0.05$), suggesting that democratic governance alone does not directly influence ISA adoption. Interestingly, the *FDMI* has a significant negative effect ($\beta = -0.053$, $p < 0.01$). This finding could be attributed to mature financial markets being more resistant to external changes or favoring established local practices over international standards.

The adjusted R^2 for Model 2 increases to 0.610, indicating that the inclusion of economic and political control variables improves the model's explanatory power, accounting for 61.0% of the variation in *ISAADOPS*. These statistical findings are further supported by the overall model significance levels.

The F-statistics presented in Table 5 confirm that both models are statistically significant. Model 1, which includes only *PoD*, *Indv*, *MtAS*, *UncA*, *LTO*, and *Indg*, reports an F-statistic of 44.64 ($p < 0.001$), indicating a strong relationship between these cultural variables and *ISAADOPS*. The adjusted R^2 value of 0.479 shows that the model explains approximately 47.9% of the variation in *ISAADOPS*. When economic and political control variables—*GDP*, *DemX*, and *FDMI*—are added in Model 2, the F-statistic increases to 50.51 ($p < 0.001$), and the adjusted R^2 rises to 0.610. This suggests that the extended model offers a more comprehensive explanation of *ISAADOPS* by incorporating additional contextual influences. Overall, the results demonstrate the joint importance of cultural and structural factors in shaping ISA adoption patterns across countries.

The results from both models highlight the critical role of cultural dimensions in shaping ISA adoption behaviors. Societies with lower *PoD* and higher *UncA* and indulgence are more likely to adopt ISAs proactively, while those emphasizing achievement and success tend to delay adoption. Additionally, the inclusion of economic and political control variables demonstrates the importance of *GDP* and financial market structures in influencing adoption speed. These findings underscore the need for culturally sensitive approaches and targeted capacity-building efforts to facilitate the adoption of global auditing standards in diverse national contexts.

5. ROBUSTNESS CHECK

Table 6 presents the results of the mixed-effects maximum likelihood (ML) regression analysis, which was methodologically chosen as a robustness check for the Ordinary Least Squares (OLS) results presented in Table 5. By incorporating mixed-effects, this analysis accounts for potential variations across countries and evaluates whether the relationships identified in the OLS model hold under different methodological assumptions. The findings demonstrate a

high degree of consistency between the two models, underscoring the reliability of the OLS results.

The results in Table 6 reaffirm the main findings from the OLS model in Table 5. For instance, *PoD* continues to exhibit a significant negative effect on *ISAADOPS* (Mixed-Effects: $\beta = -0.027$, $p < 0.01$; OLS: $\beta = -0.027$, $p < 0.01$), suggesting that hierarchical cultures are less likely to adopt ISAs proactively. Similarly, *MtAS* also retains its negative and significant relationship (Mixed-Effects: $\beta = -0.012$, $p < 0.01$; OLS: $\beta = -0.012$, $p < 0.01$), indicating that achievement-oriented societies may prioritize domestic goals over international alignment. On the positive side, *UncA* (Mixed-Effects: $\beta = 0.063$, $p < 0.01$; OLS: $\beta = 0.063$, $p < 0.01$) and *Indg* (Mixed-Effects: $\beta = 0.027$, $p < 0.01$; OLS: $\beta = 0.027$, $p < 0.01$) remain strongly associated with faster ISA adoption. These consistent findings indicate that the core relationships identified in the OLS analysis are robust to alternative modeling approaches.

One of the main advantages of the mixed-effects ML regression is its ability to incorporate random effects, capturing country-specific unobserved heterogeneity. This approach allows the model to account for the influence of country-level characteristics that vary across but remain constant within countries. For instance, cultural and institutional factors unique to each country, which might not be explicitly included in the model, are indirectly accounted for through the random-effects structure. The results show that these random effects do not significantly alter the relationships between the independent variables and *ISAADOPS*, further supporting the robustness of the OLS findings.

The mixed-effects ML regression model demonstrates improved fit compared to the OLS model, as evidenced by the lower AIC (447.42) and BIC (487.63) values for Model 2. Additionally, the likelihood ratio test confirms the significance of the random-effects parameters, highlighting the importance of accounting for group-level dependencies in cross-country analyses. These metrics validate the use of mixed-effects regression to address potential biases in the OLS results, ensuring that the findings are both statistically reliable and generalizable.

The consistent results across the OLS and mixed-effects ML regression models underscore the robustness of the identified relationships. The negative effects of *PoD* and *MtAS*, along with the positive effects of *UncA* and *Indg*, are reliable and not sensitive to methodological variations. Furthermore, the inclusion of random effects demonstrates that these relationships hold even when accounting for unobserved country-level characteristics, strengthening the validity of the study's conclusions.

Table 6: Mixed-effects ML regression Results

Variable	Model 1				Model 2			
	β	Std. Error	z-value	p-value	β	Std. Error	z-value	p-value
Constant	0.128	0.440	0.29	0.771	-2.332*	1.103	-2.11	0.034
PoD	-0.017**	0.003	-5.1	0.000	-0.027**	0.003	-8.26	0.000
Indv	-0.002	0.003	-0.59	0.552	-0.003	0.004	-0.77	0.442
MtAS	-0.015**	0.002	-7.06	0.000	-0.012**	0.002	-6.11	0.000
UncA	0.056**	0.005	10.27	0.000	0.063**	0.005	13.06	0.000
LTO	0.004	0.004	0.99	0.324	0.007	0.003	1.94	0.053
Indg	0.014**	0.004	3.89	0.000	0.027**	0.004	6.78	0.000
GDP					0.089*	0.043	2.1	0.036
DemX					0.028	0.037	0.74	0.456
FDMI					-0.053**	0.007	-8.08	0.000
Log likelihood	-255.68496				-212.70945			
N	286				286			
Wald chi2 (9)	274.550				471.060			
Prob > Chi2	0.000				0.000			
AIC	527.370				447.419			
BIC	556.618				487.635			
Random-effects Parameters								
Estimate (S.E.)	0.5916 (0.025)				0.5090 (0.0213)			

Significance levels are indicated as follows: **p < 0.01 (denoted by **) and p < 0.05 (denoted by*).

In conclusion, this study methodologically chose robustness analysis to ensure the validity of the OLS results. The mixed-effects ML regression results not only confirm the robustness of the OLS findings but also provide additional insights into the role of country-level heterogeneity in shaping *ISAADOPS*. This robustness check enhances the credibility of the study, emphasizing the critical interplay of cultural, economic, and institutional factors in global standardization efforts.

6. DISCUSSION AND CONCLUSION

This study investigates the cultural, economic, and political determinants of ISA Adoption Speed in emerging economies, providing valuable insights into the global standardization process. The findings highlight the critical role of cultural dimensions while also emphasizing the influence of economic and political contexts. Importantly, some variables do not show significant relationships with ISA adoption, shedding light on the nuanced interplay of factors.

The results reveal a significant negative relationship between Power of Distance and ISA Adoption Speed, suggesting that hierarchical societies face challenges in aligning with international standards due to centralized decision-making and resistance to change. This finding is consistent with Boolaky & Soobaroyen (2017), who emphasized that lower Power of Distance facilitates adaptability to global norms, and Cowperthwaite (2010), who highlighted the difficulties hierarchical cultures face in adopting principles-based frameworks like ISA.

Conversely, Uncertainty Avoidance positively influences ISA Adoption Speed. Societies with high levels of Uncertainty Avoidance are more proactive in adopting ISAs, likely because the structured guidance provided by these standards reduces ambiguity. This finding aligns with El-Helaly et al. (2020) which demonstrated that high Uncertainty Avoidance cultures favor international standards that enhance predictability and control.

Indulgence also demonstrates a significant positive effect on ISA Adoption Speed. Cultures emphasizing openness, life satisfaction, and flexibility are better positioned to embrace global standards. This extends Hofstede's (2011)framework by illustrating how indulgent societies prioritize the long-term benefits of adopting international standards, such as improved transparency and reduced financial uncertainty.

Interestingly, Motivation toward Achievement and Success exhibits a negative relationship with ISA Adoption Speed. This suggests that achievement-oriented societies may focus on domestic objectives or prefer frameworks that align more closely with their specific priorities. This finding highlights the complex interplay between cultural traits and institutional contexts, indicating that the drive for achievement may not always align with externally imposed standards like ISA.

Among the economic variables, Financial Market Depth Index shows a significant negative effect on ISA Adoption Speed. This suggests that countries with more developed financial markets may resist adopting ISA due to the entrenchment of local practices or the self-sufficiency of existing frameworks. This finding aligns with studies such as (Humphrey et al., 2009) which highlight

how advanced financial markets can create inertia against the adoption of new international standards.

In contrast, Indv and LTO do not show significant relationships with ISA Adoption Speed in this study. While prior research, such as Elmghaamez & Elmagrhi (2022), has linked these dimensions to global standardization, their lack of significance here suggests that their influence may be context-specific. For instance, Indv might play a stronger role in regions with less collectivist cultural traits, while Long-Term Orientation could require additional factors, such as economic stability, to fully manifest its impact.

Among the control variables, GDP positively influences ISA Adoption Speed, consistent with (Zeghal & Mhedhbi, 2006) findings, which emphasize the role of economic size and capacity in enabling quicker adoption of international standards. However, the Democracy Index does not exhibit a significant relationship with ISA adoption. This suggests that democratic governance alone may not directly drive standardization efforts, a conclusion supported by Boolaky & Omoteso (2016), who highlighted the importance of institutional capacity and resources alongside transparency and accountability.

The findings validate Gray's (1988) cultural accounting theory, which posits that cultural diversity significantly shapes global standardization processes, and support Hofstede's (1980, 2011) dimensions in explaining variations in ISA adoption behaviors. The inclusion of newer dimensions like Indulgence and Motivation toward Achievement in this study adds depth to the discourse, offering a more comprehensive understanding of how cultural factors influence ISA adoption in emerging economies.

Practically, the results emphasize the importance of culturally and economically informed approaches to promoting ISA adoption. Policymakers and international organizations should design capacity-building programs tailored to address specific cultural barriers, such as resistance to change in hierarchical societies or the domestic focus of achievement-oriented cultures. Additionally, strategies should consider the potential resistance from countries with advanced financial markets, focusing on aligning ISA with existing frameworks to reduce implementation friction.

While this study provides valuable contributions, its focus on 22 emerging economies in the European region may limit the generalizability of its findings. Differences in ISA adoption patterns across regions, as noted by Boolaky & Cooper (2015), highlight the need for broader studies that include a wider range of countries and explore additional cultural, economic, and institutional variables. Future research could also integrate alternative cultural frameworks, such as Schwartz's value theory or the GLOBE study, to provide a

more nuanced perspective on how cultural traits influence global standardization efforts.

In conclusion, this study highlights the critical role of cultural, economic, and political factors in shaping ISA Adoption Speed. By bridging theoretical insights with empirical evidence, it advances the understanding of global standardization efforts and underscores the need for culturally and economically sensitive approaches to enhance the harmonization of auditing practices worldwide.

7. CONFLICT OF INTEREST STATEMENT

Authors don't have any competing interests.

8. FUNDING ACKNOWLEDGEMENTS

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9. AUTHOR CONTRIBUTIONS

This study was prepared by one author.

10. ETHICS COMMITTEE STATEMENT

The study does not require clearance from an ethics commission.

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