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# An Empirical Analysis for Determinants of Strength of Auditing and Accounting Standards in The World

*Dünyada Denetim ve Muhasebe Standartlarının Gücünün Belirleyicileri için Ampirik Bir Analiz*

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Günümüzde, karar verme sürecinde kullanılan finansal ve finansal olmayan bilgilerin işletme ve ülke düzeyinde doğruluğu ve güvenilirliği daha da önem kazanmıştır. Bu bağlamda, bu çalışmada muhasebe ve denetim standartlarının gücünü etkileyen faktörler, 141 ülke için 2019 verileri kullanılarak ampirik olarak analiz edilmiştir. Ampirik sonuçlara göre, ülkelerde şeffaflık seviyesi arttıkça, kurumsal yönetim seviyesi yükseldikçe, finansal sistem geliştikçe ve GSYİH büyüdükçe, denetim ve muhasebe standartlarının gücü de yükselmektedir. Denetim ve muhasebe standartlarının güçlendirilmesi, şirketlerin sunduğu mali tablolarındaki bilgilerin güvenilirliğini ve doğruluğunu artırdığı için başta yatırımcılar olmak üzere tüm menfaat sahipleri için kritik önem taşımaktadır. Bu nedenle, ülkelerin şeffaflık düzeyini artırmaya, kurumsal yönetim düzeyini artırmaya, finansal sistem geliştirmeye ve GSYİH büyümesine yönelik politika ve stratejiler geliştirmesi önemlidir.

### ABSTRACT

Nowadays, the accuracy and reliability of financial and non-financial information used in the decision-making process at the enterprise and country level has become more important. In this context, in this study, factors affecting the strength of accounting and auditing standards were analysed empirically by using 2019 data for 141 countries. According to the empirical results, in countries, as the level of transparency increases, the level of corporate governance improves, the financial system develops and the GDP grows, the strength of auditing accounting standards are also getting stronger. Strengthening of auditing and accounting standards is of critical importance for all stakeholders, especially investors, as it increases the reliability and accuracy of the information in the financial statements presented by the companies. For this reason, it is important for countries to develop policies and strategies aimed at improving the level of transparency, increasing the level of corporate governance, financial system development and GDP growth.

## 1. Introduction

The accuracy and reliability of financial and non-financial information used in the decision-making process becomes more critical day by day for individuals, businesses and countries. There is an asymmetrical information case among all stakeholders on the reliability and accuracy of the information in the financial statements presented by the

institutions. Under asymmetric information conditions, decision makers are more likely to make wrong decisions. In order not to allocate scarce resources incorrectly, the accuracy of the information used in the decision making process is of great importance. The development of accounting and auditing standards is of critical importance in the development of the reliability and accuracy of the information in the financial statements presented by the

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companies. The development of accounting and auditing standards plays an important role in solving the asymmetric information problem among all stakeholders. Therefore, in this study, factors affecting the strength of accounting and auditing standards are analysed empirically, using 2019 data for 141 countries.

The original aspect of the study according to the literature is that, as far as we know, this research subject is a study in which this research topic was examined for the first time using this data set and this method. The general framework of the study is determined as follows. After explaining the purpose, importance and method of the study, the relevant literature was analysed. Later, factors affecting the strength of accounting and auditing standards were analysed empirically. According to the results obtained, results and policy recommendations are included.

## 2. Literature on the Development of Auditing and Accounting Standards in The World

Accounting is as old as the recorded date. Records on business transactions and land sales have been observed in ancient civilizations. Double registered accounting system in Europe has made a great contribution to the development of accounting. In the world, economic and technological

developments, the growth of enterprises, ownership, share ownership and developments in the field of management have led to the development of accounting and auditing. Due to problems such as economic crises, fraudulent bankruptcy of companies, inflation and volatility, accounting principles and standards have started to develop at national and international levels. Today, there is a more effective accounting and auditing framework to protect the rights of all stakeholders (See, Edwards and Walker, 2009; Brown, 2014; Napier, 2001).

The audit activity has manifested itself as a control activity in ancient civilizations. In today's context, modern inspection techniques have developed with the industrial revolution. In this period, the main function of the audit is to ensure the accuracy of the accounts and to detect errors and frauds. In the 1980s, auditing contributed to increasing the integrity and reliability of financial information. By the 2000s, it is expected that the audit services will contribute in areas such as increasing the reliability of financial statements, reporting frauds, identifying business risks and improving the internal control environment. The financial collapse of large firms in different countries has accelerated the convergence of the roles of auditors (Lee and Ali, 2008; Cosserat, 2004; Leung et al, 2004).

**Table 1.** Development of Auditing

<i>Periods</i>	<i>Developments</i>
Before 1840s	<ul style="list-style-type: none"> <li>• There was no formal internal control system.</li> <li>• Verification of transactions was the main goal. There was no sampling method.</li> <li>• Determining the honesty of those responsible for financial transactions was a priority.</li> <li>• The auditors' main task was to detect fraudulent transactions.</li> </ul>
1840-1920s	<ul style="list-style-type: none"> <li>• The industrial revolution has contributed to the development of companies and audit activities.</li> <li>• In the UK, the law allowing auditors to be appointed to control the accounts of companies was passed.</li> <li>• Court decisions had an impact on the duties of the auditors.</li> <li>• It was stated that among the purposes of the audit, in this period, the detection of frauds, technical and principal errors.</li> <li>• As companies grew, ownership and management functions changed.</li> <li>• Agency theory was developed.</li> <li>• With the flow of funds from investors to companies, internal control functions have improved.</li> <li>• The reliability of the financial statements prepared by the managers for the stakeholders gained importance.</li> <li>• The theory of lending credibility developed.</li> </ul>
1920s-1960s	<ul style="list-style-type: none"> <li>• The main function of the audit has been to add credibility to the financial statements.</li> <li>• Sampling techniques began to be used.</li> <li>• Trust in the internal control system and sampling method has increased.</li> <li>• Audit evidence began to be gathered from internal and external sources.</li> <li>• It became important that financial statements are correct and fair.</li> <li>• Profit-Loss table was audited.</li> </ul>
1960s-1990s	<ul style="list-style-type: none"> <li>• During this period, there have been developments towards trusting the system from verifying the transactions in the ledgers.</li> <li>• Auditors have placed more reliance on the internal control system.</li> <li>• Auditors have started to use analytical procedures more.</li> <li>• Auditors have turned to risk-based audit.</li> </ul>
After 1990s	<ul style="list-style-type: none"> <li>• In this period, the adoption of the business risk approach increased the competencies of the auditors.</li> <li>• The purpose of the audit is to provide reliability to the financial and non-financial information prepared by the managers.</li> <li>• Audit services have developed according to the areas of expertise of accounting.</li> <li>• Computer aided control techniques have been used.</li> </ul>

Source: Ajao et al (2006), Leung et al (2004),

**Table 2.** Literature On the Development of Auditing and Accounting Standards in The World

<i>Author (s)</i>	<i>Findings</i>
Gibson and Arnold (1981)	In Australia, the need for effective auditing has played an important role in the development of the audit profession.
Roussey (1994)	Economic and financial globalization and increased commercial cooperation of businesses have contributed to the development and harmonization of accounting and auditing standards at national and international level. The development and harmonization of national and international accounting and auditing standards contributes to healthier decision-making by all stakeholders and to the sustainability of economic growth.
Levitt (1998).	It was emphasized in the study that international standards must meet the following conditions in order for the countries to be generally accepted. Standards should have a comprehensive and generally accepted accounting basis. Standards should be of high quality in terms of transparency and comparability. Investors should be able to accurately compare firm performances over time and other firms. Standards should be easy to interpret, apply and audit.
Francis et al. (2001)	In the study, it was emphasized that it is important to have a strong legal system in the development of international accounting and auditing standards. The efficiency of the legal system and the development of accounting and auditing standards play an important role in protecting investors.
Cooper et al. (2002)	In the development of auditing in China, the state, internal audit and public audit institutions and certified public accounting firms played important role.
Porter (2005)	The globalization of accounting standards contributes to the elimination of many uncertainties. The study emphasized that the US institutions, accounting and auditing standards have an important role in the development and globalization of accounting and auditing standards.
Prather-Kinsey (2006)	In the study, it has been determined that there is a mutual interaction between market infrastructure and accounting. In the study, it was stated that it is important for the Financial Accounting Standards Board (FASB) and the International Accounting Standards Board (IASB) to use this information in their standard suggestions for the development of accounting and auditing standards.
Benston et al. (2006)	It was emphasized in the study that international accounting standards tend to converge as in auditing, implementation and corporate governance.
Zeghal and Mhedhbi (2006)	In the study, the factors that may explain the adoption of international accounting standards in developing countries are analysed. Economic growth, education level, economic openness, culture and capital market are selected as the explanatory factors. According to the results, education level, existence of capital markets and culture have been identified as important explanatory variables.
Smith et al. (2008)	The policies followed for the convergence of financial reporting and auditing standards in the world have significant effects on all stakeholders related to this issue. On the other hand, due to the country-specific, cultural, legal, political, technological and economic conditions, the difference between countries in accounting and auditing standards continues to a certain extent. The development and spread of accounting and auditing standards in the world are expected to make significant contributions to the welfare of the society, especially investors.
Mashayekhi and Mashayekh (2008)	In ancient Iranian documents, BC. 550, it was determined that all records of the state's revenues and expenditures were kept meticulously and accurately. It is emphasized in the study that Iran has an important place in the historical development of accounting.
Hassan (2008)	Changes in political philosophy, regulatory trends, and processes of the accounting profession played an important role in the development of the Egyptian Accounting Standards.
Zehri and Chouaibi (2013)	In the study, it was stated that economic growth level, education level and legal system are important factors in the choice of IAS / IFRS implementation in developing countries.
Brown et al. (2014)	International Financial Reporting Standards (IFRS) contribute to the transparent and comparable financial performance of companies for investors. However, there are differences in the adoption and implementation of these standards for country-specific reasons.
Ilkhamov (2017)	Increasing joint cooperation with international investors and the need for more audit services in this field played an important role in the development of audit standards in Uzbekistan towards international standards.
Schmidhuber et al. (2020)	The process of developing International Public Sector Accounting Standards is ongoing. Despite the many advantages of the development of International Public Sector Accounting Standards, countries have not yet adopted these standards for various reasons and conditions.
Frintrup et al. (2020)	The increasing need for transparency and accountability towards the public and private sectors increases the demands on the implementation of international accounting and auditing standards in the public and private sectors. In this context, the European Commission aims to apply the European Public Sector Accounting Standards in the member countries.
Mann and Lorson (2021)	In the study, it was emphasized that uniform accounting standards weaken the targets of comparability and transparency and could cause problems in implementation.
Haija et al. (2021)	There are obstacles in the dissemination of Public Sector Accounting Standards due to the problems that countries may encounter with the implementation of the Public Sector Accounting Standards. In the study conducted for Jordan, it was revealed that local legislation and infrastructure are important factors in the adoption of Public Sector Accounting Standards.

Table 2. shows literature on the development of auditing and accounting standards in the world. It was emphasized that the development and widespread use of accounting and

auditing standards in the public and private sectors will make significant contributions to all stakeholders, especially investors. On the other hand, it has been stated that due to

country-specific conditions, differences in accounting and auditing standards by country may continue at a certain level.

### 3. Empirical Analysis

#### 3.1. Data

The data used in the model is obtained from WEF the Global Competitiveness Index dataset for 2019 and 141 countries. definitions of the variables in the equation 1. are given at Table 3.

**Table 3.** Definitions of the Variables in the Equation 1.

Variable	Definition
Strength of auditing and accounting standards	“Response to the survey question “In your country, how strong are financial auditing and reporting standards?” The scale for the score ranges from 0 to 100 (best)”.
Corporate Governance	“Corporate governance index is composed of the indices that are strength of auditing and accounting standards, conflict of interest regulation and shareholder governance. The scale for the score ranges from 0 to 100 (best)”.
Financial system	“The Financial system pillar of the Global Competitiveness Index 4.0 assesses the depth, namely the availability of credit, equity, debt, insurance and other financial products, and the stability, namely, the mitigation of excessive risk-taking and opportunistic behaviour of the financial system. The scale for the score ranges from 0 to 100 (best)”
Transparency	“Score on the Corruption Perceptions Index, which measures perceptions of corruption in the public sector. This is a composite indicator, and the scale ranges from 0 (highly corrupt) to 100 (very clean).”
GDP	“Gross domestic product (GDP) valued at purchasing power parity in billions of international dollars (constant 2011 prices)”

Source: WEF the Global Competitiveness Index 4.0 2019 dataset

#### 3.2. Method

The method used is the multiple regression analysis with OLS estimator. The estimated model is given in Equation 1.

$$Y = \alpha_0 + \alpha_1 X_1 + \alpha_2 X_2 + \alpha_3 X_3 + \alpha_4 X_4 + \varepsilon \quad (1)$$

Y : Strength of auditing and accounting standards

X<sub>1</sub> : Corporate Governance,

X<sub>2</sub> : Financial system

X<sub>3</sub> : Transparency

X<sub>4</sub> : GDP

#### 3.3. Empirical Results

The descriptive statistics in Table 4 for the variables shows that the mean of strength auditing accounting standards is 61.21, the mean of corporate governance is 58.67, the mean of Financial system is 62.41, the mean of Transparency is 46.06, the mean of GDP is 836.94.

**Table 4.** Descriptive Statistics for the Variables

	Strength auditing accounting standards	Corporate governance	Financial system	Transparency	GDP
Mean	61.21	58.67	62.41	46.06	836.94
Median	61.00	60.00	60.00	41.00	156.00
Variance	218.2	155.54	201.43	362.43	6836522.6
Std. Dev.	14.77	12.47	14.19	19.04	2614.67
Min.	20.00	23.00	29.00	14.00	3.00
Max.	92.00	83.00	91.00	88.00	22462.00
Range	72.00	60.00	62.00	74.00	22459.00
Interquartile Range	21.50	19.50	19.50	28.00	505.50
Skewness	-0.31	-0.26	0.34	0.60	6.53
Kurtosis	-0.03	-0.57	-0.61	-0.69	47.30

OLS regression results for the equation 1 are given Table 5. The coefficients of the for the variables, transparency, corporate governance, financial system, GDP are statistically significant at the level 0.05. The independent variables affect the dependent variable in the same direction. The model diagnostic tests provide the OLS assumptions.

According the empirical results, in countries, as the level of transparency increases, the level of corporate governance improves, the financial system develops and the GDP grows, the strength auditing accounting standards are also getting stronger. For this reason, it is important for countries to develop policies and strategies aimed at improving the level of transparency, increasing the level of corporate governance, financial system development and GDP growth.

Strengthening auditing and accounting standards is of critical importance for all stakeholders, especially investors, as it increases the reliability and accuracy of the information in the financial statements presented by the companies.

**Table 5.** OLS Regression Results for the Equation 1 (Dependent Variable is Strength auditing accounting standards)

Model	Coefficients <sup>a</sup>			t	Sig.	Collinearity Statistics	
	Unstandard. Coeff.	Standard. Coeff.				Tolerance	VIF
	B	Std. Err.	$\beta$				
(Constant)	1.81	3.41		0.53	0.60		
Transparency	0.13	0.05	0.16	2.44	0.02	0.38	2.65
Corporate governance	0.29	0.07	0.25	4.27	0.00	0.51	1.94
Financial system	0.59	0.08	0.57	7.35	0.00	0.29	3.43
GDP	0.00	0.00	-0.09	-1.95	0.05	0.89	1.12

$R^2=0,765$ , ( F Statistic=110.6 :  $p < 0.01$  ), Durbin Watson=1.88

In the model, multiple linear collinearity (VIF<10) in Table 5 and the Kolmogorov-Smirnov (N=141 and  $p > 0.01$ ) normality test results for standardized residual in Table 6 are hold.

**Table 6.** Tests of Normality for Standardized Residual

	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Standardized Residual	,043	141	,200*	,995	141	,932

a. Lilliefors Significance Correction

The error term's mean is zero given in Table 7.

**Table 7.** Descriptive Statistics for Residuals

	Minimum	Maximum	Mean	Std. Deviation
Residual	-2,036,379	1,696,271	,00000	716,283
Std. Residual	-2,802	2,334	,000	,986
Stud. Residual	-2,856	2,359	,000	1,001

#### 4. Conclusion

With the rise of globalization in the world economy, cooperation between international companies has also increased. In order for international investors to make the right investment decisions, it is critical that the financial and non-financial information provided by the companies are accurate and reliable, and the risky investments are correctly identified. In this context, the development of accounting and auditing standards and their widespread acceptance in the international arena are important. For this reason, nowadays, the accuracy and reliability of financial and non-financial information used in the decision-making process at the enterprise and country level has become more important. Because there is an asymmetrical structure among all stakeholders on the reliability and accuracy of the information in the financial statements presented by the enterprises. Therefore, it is possible for investors to make wrong investment decisions in case of asymmetric information. Wrong investment decisions will also lead to negative effects on social welfare by mis-allocating the already scarce economic resources.

It is emphasized in the literature that the development and widespread use of accounting and auditing standards in the public and private sectors will make significant contributions to all stakeholders, especially investors. On

the other hand, it has been stated that due to country-specific conditions, differences in accounting and auditing standards by country may continue at a certain level. Under all these circumstances, the development of accounting and auditing standards needs to be supported. However, considering country-specific conditions is important in achieving the benefits expected from international accounting and auditing standards itself.

In this context, in this study, factors affecting the strength of accounting and auditing standards were analysed empirically by using 2019 data for 141 countries. According the empirical results, in countries, as the level of transparency increases, the level of corporate governance improves, the financial system develops and the GDP grows, the strength auditing accounting standards are also getting stronger. Strengthening auditing and accounting standards is of critical importance for all stakeholders, especially investors, as it increases the reliability and accuracy of the information in the financial statements presented by the companies. For this reason, it is important for countries to develop policies and strategies aimed at improving the level of transparency, increasing the level of corporate governance, financial system development and GDP growth.

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