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The impact of public governance perception on the quality of financial reporting

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ABSTRACT

The article examines the relationship between public governance perception (PG) and the overall quality of the financial reporting index (OQFRI). The study combines the World Bank's Worldwide Governance Indicators (WGIs), which are used as a measure for country-level governance. In addition, the study of Tang et al. for the overall financial reporting index (OQFRI) is used to measure the quality of financial reporting. Our balanced panel data set has 418 observations, constructed with 38 countries and the period from 2004 to 2014 is tested using a linear mixed model (LMM) to consider both random and fixed effects. The results indicate a positive relationship between regulatory quality, political stability, the rule of law, government effectiveness and quality of financial reporting. But, findings reveal that voice and accountability and control of corruption have no significant impact on the quality of financial reporting. Our results suggest that institutional quality and public governance perception should be considered by auditors while evaluating the quality of financial reports and their risk. Also, it is important to consider the role of public governance in addition to the role of corporate Governance in improving the quality of financial reporting.

1. Introduction

Financial scandals are witnessed over time all over the world. Regulators are always targeting improving the quality of financial reporting through using different tools, changes to the framework, modifying standards, setting new rules, and enhancing the governance codes to protect stakeholders. However, fraud scandals and misstatements still exist as firm-level factors affect the financial reporting quality (FRQ), and country-level determinants will impact the overall quality of financial reporting (OQFR). Prior literature used accounting and auditing-based proxies at the company and accounting firm-level to measure FRQ and establish indices for OQFR. A research

gap exists on the relationship between country-level governance's impact on OQFR. We utilised the accounting and auditing-based index proposed by Tang et al. (2016) to measure OQFR for each country. Our public governance proxies are based on the World Bank's Worldwide Governance Indicators (WGIs).

While the failure of prominent US companies was the main reason that motivated academic studies to investigate the relationship between governance and financial reporting (Baber et al., 2012). Previous research focussed more on the relationship between corporate governance and financial reporting from a micro-level perspective. It was giving less attention to the influence of institutional quality and country-level governance on financial reporting. Accounting is one of the primary economic institutions (Waymire & Basu, 2007), and the relationship between accounting institutions and non-accounting institutions is interlaced (Wysocki, 2011). However, the interrelationship between non-accounting institutions and accounting institutions needs more analysis. Bonetti et al. (2016) examined how country-level and firm-level governance can affect the quality of financial reporting. The results showed that firms in countries characterised by a high level of governance experienced an increase in the quality of financial reporting regardless of the power of the firm governance. However, the quality of financial reporting in countries characterised by weak public governance depends mainly on the strength of internal governance. This implies that good public governance could be a main determinant for the quality of financial reporting.

El-Helaly et al. (2018) tested the relationship between public governance and earnings management between 2000 and 2009. The authors measured public governance with the Anglo-Saxon corporate governance system and Governance Metrics International (GMI) metrics. The authors' empirical evidence shows that countries of the Anglo-Saxon system with high GMI ratings have lower earnings management practices, thus, higher OQFR. Al Maqtari et al. (2020) approached public governance differently and analysed its effect on Entrepreneurial Framework Conditions between 2014 and 2017. The authors find that public governance significantly affects various dimensions of Entrepreneurial Framework Conditions.[1] Saona and Muro (2018) claim that the inefficiency of Latin American financial markets creates more space for managers to misrepresent financial statements. The authors state that regulatory and legal systems efficiently reduce managers' opportunistic behaviour. Almaqtari et al. (2022) state that public governance significantly affects Indian banks' profitability. The authors' evidence shows that public governance increases the private banks' profitability more than it impacts the public banks.

Baber et al. (2012) state that "the efficacy of governance as a determinant of accounting restatements—or, more generally, as a determinant of financial reporting quality—is unresolved." Accordingly, this study tries to fill the gap of not considering the impact of public governance (Macro-level perspective) on financial reporting. It examines the relationship between the quality of non-accounting institutions through worldwide governance indicators (WGIs) and the overall quality of financial reporting. Also, this paper tries to overcome the problem of prior studies in measuring the quality of financial reporting. Most of the prior research was mainly from the financial perspective and ignored the auditing perspective while testing the quality of financial reporting. This paper depends on the overall financial reporting index

(OFRQI) based on the study of Tang et al. (2016) to be used as a proxy for the quality of financial reporting to include both financial and auditing dimensions.

Tang et al. (2016) accounting- and auditing-based index provides essential insights into how firm-level accounting and auditing quality create country-level financial reporting quality. The countries' economic, legal, and cultural diversity creates a causality between economic development and public governance that affects financial reporting quality. This paper hypothesis that the improvement of country-level governance has a significant effect on the quality of financial reporting. The study uses random-effects GLS regression to test panel data covering 2004–2014 for 38 countries (418 observations). Also, Geert Hofstede's culture variables are used as control variables because countries have different cultures, which might impact institutional quality (Daniel et al., 2012). Culture also might affect the application of accounting rules (Tsakumis, 2007), which can affect the quality of financial reporting.

This article investigates public governance's impact on OQFR. Different from previous literature, the data set covers the periods of pre-(2004–2007), during (2008–2011), and post- (2012–2014) Global Financial Crisis (GFC). The impact of public governance and cultural dimensions on OQFR and how GFC affected the above relationship need evidence in the accounting literature. We utilised Tang et al. (2016) OQFRI to obtain a single country-level FRQ consisting of accounting (the loss avoidance ratio, profit decline avoidance ratio, accruals ratio) and auditing (qualified audit opinion ratio, non-Big Four auditor ratio, and audit fee ratio) variables. This approach differentiates the article from the previous literature. Instead of obtaining a single perspective on FRQ, OQFRI provided a better insight into how public governance and cultural dimensions affect the country-level FRQ. Three months after the auditor's standard unmodified opinion on the semi-annual financial statement review, Lehman Brothers' bankruptcy attracted global interest in the FRQ. This article also evaluates whether public governance's impact on OQFR changed during the GFC.

This article contributes to accounting literature by providing evidence of the impact of macro-level governance quality on financial reporting quality. The previous literature primarily measures FRQ with discretionary accruals. Unlike the previous literature, we used an index that constitutes different FRQ measures, including small profit reporting, qualified opinions, discretionary accruals, Big-4 auditing, and audit fees. Thus, our results and interpretation extend to a level that evaluates the impact of public governance on OQFR with a wider perspective. Unlike the previous literature, this article examines OQFR with every aspect of accounting- and auditing-based factors that affect fair presentation. Evaluating OQFR only from the discretionary accruals perspective limits interpreting the importance of other factors that affect OQFR. Our empirical evidence points out that public governance's impact on OQFR does not change despite the global financial crisis. Our analysis shows that a country's public governance quality positively affects the overall financial reporting quality, controlled by cultural dimensions. Our results revealed that the country-level governance's impact on the FRQ did not decrease with the Global Financial Crisis 2008 that lasted until 2011. Our empirical evidence provides evidence that public governance will positively affect OQFR. Our results also create implications for politicians, practitioners, and academics. Our empirical evidence provides an important

implication for policymakers and investors because the analysis shows that increased country-level governance increases the FRQ, thus reducing information asymmetry. The consequence will increase investors' trust and listed companies' credibility, increasing interest in the country's stock exchange. Our empirical evidence highlights the policy implications for making equity markets more attractive in developing countries.

The rest of this article is formed as follows. The following section provides a literature review on the quality of financial reporting and hypotheses development. Afterward, it is followed by empirical analysis and results. Finally, the article is concluded with a discussion of the findings, including guidance for auditors and standard setters, the limitations, and future research.

2. Quality of financial reporting

In their conceptual frameworks, the International Accounting Standards Board (IASB, 2018) and the Financial Accounting Standards Board (FASB, 2018) state that relevant and faithful representation are the core determinants of useful financial information. Both boards characterise faithful representation with complete, neutral, and free-from-error information. These characteristics construct financial reporting quality (FRQ) in the countries where listed companies use International Financial Reporting Standards (IFRS) as the financial reporting framework (US-GAAP in the United States of America). As definitions may differ in the national accounting principles, how a reporting entity will achieve a fair presentation may not be appropriately designed and/or maintained by the regulatory bodies. Accounting literature developed different approaches to FRQ. Previous literature used financial statements and independent audit-based indicators to measure FRQ. Financial statement-based approaches are discretionary accruals estimation (Dechow & Dichev, 2002), accounting conservatism (Ball & Shivakumar, 2006), and earnings benchmark (Burgstahler & Dichev, 1997). The previous literature utilised a variety of approaches to measure total accruals and used financial variables to estimate discretionary accruals (Larson et al., 2018). The difference between total and non-discretionary accruals results in discretionary accruals that signal earnings management. The literature provides diversified opinions on understanding earnings management as acceptable or fraudulent (Hamilton et al., 2018).

On the other hand, audit-based indicators are Big4 auditors, fees, going-concern issues in an unmodified opinion, audit report lag, and restatements. Accounting literature uses Big4 auditors and fees to test auditors' independence. The literature states that Big4 provides a higher FRQ because they are independent with their deep pockets; thus, they will not be influenced by the client's pressure (Khurana & Raman, 2004). Fees from audit and non-audit services also show the auditor's independence from the client because increased independence results in higher FRQ (Eshleman & Guo, 2014). Companies with financial distress may push the management to make a decision that violates FRQ. Unmodified opinion with a going-concern paragraph is an essential indicator of financial distress, as financial statement users can expect a decline in FRQ in the current and upcoming years (Goodwin & Wu, 2016). Audit

report lag measures audit quality because it signals the client's pressure on the auditor (Habib et al., 2019). Restatement of financial statements may happen due to undetected material misstatement or immaterial error (Gul et al., 2013), but a restatement based on material issues reduces the FRQ's credibility (Schipper, 1989). As firm-level governance is crucial to the FRQ, accounting scholars use accounting firms' disclosures to measure their corporate governance quality (Ocak, 2021).

Accounting scholars test company-level FRQ using listed companies' financial statements and audit reports because they have publicly accessible their annual report, which contains management's discussion, corporate governance disclosures, audit reports, and financial statements. On the other hand, collecting financial data from private companies may not be possible in many countries as the private companies' data is not open to external parties, including paid membership databases such as Thomson Reuters Eikon. Due to the limitation of data access, the listed companies' average FRQ represents their respective countries' OQFR (Tang et al., 2016). Estimating a relationship between a country-level dimension and FRQ needs a data set per econometric requirements. Financial data accessibility differs for financial institutions due to their public interest. A financial institution may not be listed on any stock exchange, but its information may be publicly accessible. As financial industries are highly regulated, comparing a financial company's FRQ to a non-financial counterpart will not be appropriate.

Although there is no clear definition for the quality of financial reporting, Jonas and Blanchet (2000) explained two perspectives for financial reporting; the user needs perspective and the investor protection perspective. The user needs a perspective that mainly focuses on how useful the financial information is to the end-user. Accordingly, if financial reporting provides more reliable and relevant information, it indicates high quality. On the other hand, the investor protection perspective focuses on disclosure and transparency. It shows high quality as long as the information is transparent, not misleading, and directs the investor towards the right decision. In this article, we are following the other perspective that the quality of financial reporting means that reports are accurate and fairly presented. Accounting firm-level qualifications (Engagement partner qualifications, partner/firm rotations, accounting firm governance, and transparency reports) are considered highly important for FRQ (Jenkins et al., 2008). Country-level factors affect FRQ, but firm-level factors in underdeveloped and emerging markets become more critical (Bonetti et al., 2016). Factors such as the use of International Financial Reporting Standards (IFRS) (Habib et al., 2019), common law system (Porta et al., 1998), and cultural structure (Cassar et al. 2014) have a macroeconomic effect on FRQ.

3. Public governance and institutional quality

According to Kaufmann and Kraay (2007), governance is not a new concept, as it was discussed at least 400 BCE early on. There is no agreement on a definition of governance and institutional quality. Both governance and institutional quality are used interchangeably. World Bank (1992, p. 1) defined governance as "how power is exercised in the management of a country's economic and social resources for

development." Also, Kaufmann et al. (1999) improved the definition by including traditions and institutions as central tools for exercising authority. In addition, they also describe the process starting with government selection and how the government effectively formulated and implemented different policies. Their definition also includes the degree of citizens' respect for states and institutions. The process of conceptual improvement continued until they reached cross-country six world governance indicators (WGIs) as a result of a research project (Kaufmann et al., 2010). The six world governance indicators include voice and accountability, political stability, government effectiveness, regulatory quality, the rule of law, and control of corruption (see Table 2). The WGIs rely mainly on perceptions and are based on such perceptions. We expect that it will affect the actions of accountants and auditors, which will impact the quality of financial reporting actions, as perceptions can affect actions (Prinz, 1997).

Kaufmann et al. (2011) show that Worldwide Governance Indicators allow significant comparisons over cross-country and over time. Prior studies tested the relationship between corporate governance and the quality of financial reporting; some of these studies concluded that there is no relationship between corporate governance and financial reporting (Larcker et al., 2007). However, some others support the relationship between corporate governance and financial reporting (Habib & Jiang, 2015). Both ignored considering the external factors of having good public governance. According to Baber et al. (2012), there might be a substitution relationship between internal and external governance, which means that good public governance can improve the quality of financial reporting. Accordingly, it was essential to investigate the relationship between public governance and the quality of financial reporting.

Effective public governance that works within a high level of democracy, law enforcement, and the absence of a corrupted environment can create a business culture with high ethical standards that lead to improved business and economic performance (Casson, 1991). Cassar et al. (2014) conclude that trust is a substitute for formal institutions in the absence of strong formal institutions. According to the authors, impartial formal institutions result in more cooperative behaviour regardless of ethical norms and culture. Also, public governance can shape the corporate governance mechanism by affecting the implementation cost (Doidge et al., 2007). For example, countries characterised by weak public governance can increase the cost of implementing corporate governance at the firm level and increase the difficulty and infeasibility of application. According to Maijoor and Vanstraelen (2006), institutions' quality and public governance might affect earnings management through its formal processes by imposing rules and regulations.

4. OQFR and public governance

Leuz et al. (2003) explore how discretionary accruals vary across 31 countries. The authors suggest that insiders manipulate earnings to hide firm performance from outsiders and safeguard their private benefits of control. They point out that discretionary accruals are lower with increased investor protection. Maijoor and Vanstraelen (2006) reported that a stronger audit institutional setting increases FRQ regardless of

accounting firm size. The authors' evidence shows that FRQ enforcement strongly varies among the European Union member countries. Analysing a dataset constructed with Japanese, Thai, French, and German firms, Rahman et al. (2010) conclude that agency theory constructs do not explain the cause of discretionary accruals for the non-US setting. The authors state that agency relations among management, equity, and debt cannot universally explain FRQ in different institutional settings.

Desender et al. (2011) analyse how culture affects FRQ across countries. They find that countries with higher levels of individualism and egalitarianism tend to have lower FRQ. Using a dataset of 21 emerging countries, Chen et al. (2011) report that FRQ is lower in countries with bank-oriented financial systems, low investor protection, and financial reporting compliance with tax rules. The authors state that higher FRQ increases companies' investment efficiency. Jouber and Fakhfakh (2014) show that institutional factors strongly moderate the relationship between FRQ and CEO incentive-based compensation. They point out that firms from countries with the Anglo-American corporate governance model tend to have higher FRQ. González and García-Meca (2014) tested the impact of governability on discretionary accruals based on world governance indicators. The results showed an inverse relationship between public governance and discretionary accruals. Tang et al. (2016) developed an FRQ index for 38 main world capital markets using six accounting and auditing quality indicators. The authors state that FRQ is higher in developed and capital markets with stronger legal enforcement.

An et al. (2016) find that firms that manipulate their earnings tend to have more debt, but this effect is weaker in countries with strong institutions. They state that institutions and debt can reduce agency problems, but institutions are more cost-effective than debt. Bonetti et al. (2016) find that companies with strong corporate governance in weak enforcement countries have a higher financial reporting quality (FRQ). The authors state that strong enforcement increases financial reporting quality regardless of corporate governance quality. Wijayana and Gray (2019) test how IFRS adoption affects discretionary accruals with cultural diversity and accounting standards enforcement across countries in the Asia-Pacific region. The authors point out that IFRS adoption reduces discretionary accruals practices. Their empirical evidence shows that cultural values and accounting standards enforcement explain international differences in earnings management. Neville et al. (2019) report that board independence's effect on misconduct varies with national-level corruption. The authors' empirical evidence reports that corruption moderates board independence and CEO duality with corporate misconduct after adding the law system as a variable to the regression analysis.

Ding et al. (2021) analyse how climate risk influences firms' FRQ using data from 64 countries. The authors' empirical evidence shows that higher-risk firms tend to distort their earnings more, but public governance quality reduces this effect. Their robustness analysis shows that the main effect of climate risk is stronger for firms in developed countries. Martens et al. (2021) examine how FRQ levels are affected by various factors in 22 frontier market countries from 2000–2017. The authors state that lower FRQ is associated with better financial disclosure, legal environments, analyst coverage, wealth, GDP growth, firm size, and Big-4 auditor use. The authors mention that informal institutions are less effective as control monitors.

Dang et al. (2021) explore how capital structure decisions are related to the corporate information environment and how this relationship varies with cross-country institutional environments. Using earnings management as an indicator of the corporate information environment, the authors find that firms with higher earnings management activities have higher firm leverage ratios. Their empirical evidence indicates that earnings management's impact on leverage is stronger in countries with weaker institutional environments. Quagli et al. (2021) use composing corporate governance, independent audit, and legal enforcement activity as proxies for FRQ. The authors mention that these proxies can be used for cross-country accounting studies to measure FRQ differences of listed companies in different countries to remove the national accounting environment's impact.

According to Bonetti et al. (2016), when well-enforced laws in a country protect investors, they tend to be more willing to provide capital to firms. This results in increased liquidity and value of capital markets. Because investor rights are safeguarded, they are less likely to focus on protecting their investments, as they understand that a greater portion of the firm's profits will be returned to them in the form of interest or dividends rather than being taken away by insiders. Consequently, the level of investor protection in a country is strongly linked to the development of its financial system and the value of financial assets.

Based on what has been explained previously, we expect that improving public governance and institutional quality might lead to better financial reporting. Thus, our main hypothesis can be formulated as follows:

> H1:There is a significant positive relationship between public governance and the quality of financial reporting.

> H2: There is a significant positive relationship between the rule of law and the quality of financial reporting.

> H3: There is a significant positive relationship between government effectiveness and the quality of financial reporting.

> H4: There is a significant positive relationship between control of corruption and the quality of financial reporting.

> H4: There is a significant positive relationship between regulatory quality and the quality of financial reporting.

> H5: There is a significant positive relationship between voice and accountability and the quality of financial reporting.

> H6: There is a significant positive relationship between political stability and the quality of financial reporting.

5. Data collection and hypothesis testing

5.1. Sample and variables

The sample targeted in this research is 38 countries, includes 418 observations, and covers 2004 to 2014. See Table 1. We used the same sample (38 countries) used by Tang et al. (2016).

Table 1. List of countries used in our sample country.

Australia	Denmark	Indonesia	Netherlands	Singapore	Thailand
Austria	Finland	Ireland	New Zealand	South Africa	United Kingdom
Belgium	France	Israel	Norway	South Korea	USA
Brazil	Germany	Italy	Pakistan	Spain	
Canada	Greece	Japan	Philippines	Sweden	
Chile	Hong Kong	Malaysia	Portugal	Switzerland	
China	India	Mexico	Russia	Taiwan	

Source: prepared by the authors.

Our dependent variable is the overall financial reporting quality index OFRQI, which is used as a proxy for the quality of financial reporting. The OFRQI is based on 234,182 firm-year observations in the 38 capital markets (Tang et al., 2016). OFRQI captures six dimensions of accounting and auditing quality; it considers a full picture for measuring the quality of financial reporting as it considers the auditing and accounting variables. OFRQI tries to overcome the problems of using only the accounting variables performed by many other studies. For example, Leuz et al. (2003) used only accounting variables but ignored auditing, considering it is an essential part of the accounting process needed to enhance the quality of financial reporting. Also, the indicators used to build the OFRQI met the necessary criteria. For example, the measure needs to be satisfactorily reliable, data available, and there should be a direct link between the indicator and the quality of financial reporting, which improves the interpretation of the results.

Our independent variables are world governance indicators (WGIs) obtained from the World Bank (World Bank, 2019). WGIs are used as a proxy for public governance in previous studies (Yamen et al., 2018; Yamen et al., 2022; Yamen et al., 2023); the WGIs are the rule of law (ROL), government effectiveness (GE), control of corruption (CC), regulatory quality (RQ), voice and accountability (VA), and political stability (PS).

5.2. Control variables

Our control variables are mainly the national culture dimensions. We used Geert Hofstede's Culture dimensions (Hofstede, 2001), updated from Hofstede's insights (Hofstede, 2019). Table 2 summarises the definition of all variables used in our study and data sources. Culture has been addressed in literature as a determinant for disclosure (Hope, 2003), and it has an effect on earnings management (Doupnik, 2008) and earnings quality (Kanagaretnam et al., 2011). Also, it can affect accounting practice (Askary et al., 2008), such as conservatism (Kanagaretnam et al., 2014). Since our study focuses on country-level analysis, controlling the model for cultural differences between countries was important. One more control variable is a financial crisis (FC), as, according to Krishnan and Zhang (2014), cutting the audit fees during the Global Financial Crisis can affect the quality of financial reporting. Also, as stated by Bahraminasab and Mamashli (2017), managers have high incentives to use earnings management during a financial crisis, which can affect the quality of financial reporting.

Table 2. Data sources and variables description.

Measure	Variable	Definition
[a]Financial Reporting	Overall Financial reporting quality index OFRQI	Represents an arithmetic average of six indicators that measure financial reporting quality
[b]Public Governance	Average Governance AVGOV	This is the average of all governance indicators.
	Control of Corruption CC	"Capturing perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as 'capture' of the state by elites and private interests."
	Government Effectiveness GE	"Capturing perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies."
	Political Stability PS	"Capturing perceptions of the likelihood that the government will be destabilized or overthrown by unconstitutional or violent means, including politically-motivated violence and terrorism."
	Regulatory Quality RQ	"Capturing perceptions of the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development."
	Rule of Law ROL	"Capturing perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence."
	Voice and accountability VA	"Capturing perceptions of the extent to which a country's citizens are able to participate in selecting their government, as well as freedom of expression, freedom of association, and free media."
[c]Control Variables	Power Distance PD	"The extent to which the less powerful members of institutions and organizations within a country expect and accept that power is distributed unequally. (Hofstede, 2001, p. 98)
	Individualism INDV	"Individualism stands for a society in which the ties between individuals are loose. Oppositely, Individualism stands for a society in which people from birth onwards are integrated into strong, cohesive groups, which throughout people's lifetimes continue to protect them in exchange for unquestioning loyalty (Hofstede, 2001, p. 225)"
	Masculinity MASC	"Masculinity stands for a society in which social gender roles are distinct: Men are supposed to be assertive and focused on material success; women are supposed to be more modest and concerned with the quality of life."
	Uncertainty avoidance UNCER	"The extent to which the members of a culture feel threatened by uncertain or unknown situations."
	Financial Crisis	A dummy variable has been used to control for the financial crisis (the years 2008,2009,2010,2011 have been given 1, and all other years are given zero)

[a]Financial reporting index (Tang et al., 2016).
[b]Institutional Quality (World Bank, 2019) (https://databank.worldbank.org).
[c]Culture Dimensions (Hofstede, 2001) and (https://www.hofstede-insights.com/models/national-culture).
Source: prepared by the authors.

5.3. Model and variables

To test our hypothesis, we estimate a model that includes quality of financial reporting as the dependent variable and governance indicators as an independent variable; culture dimensions are used as control variables. Our model is estimated as follows:

$$OFRQI_{it} = \alpha_0 + \sum \beta_1 \text{AVGOV}_{it} + \sum \beta_2 CONT_{it} + \varepsilon_{it}$$

where *OFRQI*$_{it}$: overall financial reporting quality index for country i at year t; AVGOV $_{it}$: Public governance indicators for country i at year t; CONT$_{it}$: Control variables for country i at year t.

6. Empirical results

6.1. Descriptive statistics

The descriptive statistics of all dependent and independent variables are given in Table 3. The analysis findings indicated that the mean of OFRQI, our dependent variable is 31 (SD = 10.39), and the mean of average governance is 0.86 (SD = 0.85); the mean for each of the governance indicators was ROL 0.97 (SD = 0.92), GE 1.11(SD = 0.81), CC 0.98 (SD = 1.07), RQ 1.01(SD = 0.77), VA 0.78 (SD = 0.82), PS 0.3 (SD = 0.96). For control variables (culture dimensions), the mean of PD was 53.32 (SD = 22.59), COLL 49.13 (SD =24.73), MASC 49.74 (SD = 19.47), and UNCER 60.39 (SD = 23.67).

Table 4 states the person pairwise correlation between the dependent, independent, and control variables. All public governance indicators are significant and positively related to the quality of financial reporting. Thus, this denotes that the higher the public governance, the higher the quality of financial reporting. Also, the results revealed a high

Table 3. Descriptive statistics.

Variable	Observations	Mean	Std. Dev.	Min	Max
OFRQI	418	31.00	10.39	3.89	67.01
AVGOV	418	0.86	0.85	−1.18	1.96
ROL	418	0.97	0.92	−0.97	2.10
GE	418	1.11	0.81	−0.82	2.44
CC	418	0.98	1.07	−1.13	2.47
RQ	418	1.01	0.77	−0.91	2.23
VA	418	0.78	0.82	−1.75	1.80
PS	418	0.30	0.96	−2.81	1.62
PD	418	53.32	22.59	11.00	100.00
COLL	418	49.13	24.73	9.00	86.00
MASC	418	49.74	19.47	5.00	95.00
UNCER	418	60.39	23.67	8.00	100.00
FC	418	0.36	0.48	0.00	1.00

Source: prepared by the authors.

Table 4. Correlation matrix.

	OFRQI	ROL	GE	CC	RQ	VA	PS	AGOV	PD	INDV	MASC	UNCER
ROL	0.565*	1										
GE	0.536*	0.960*	1									
CC	0.556*	0.972*	0.961*	1								
RQ	0.564*	0.957*	0.950*	0.956*	1							
VA	0.604*	0.836*	0.736*	0.800*	0.784*	1						
PS	0.469*	0.869*	0.857*	0.863*	0.858*	0.725*	1					
AVGOV	0.578*	0.986*	0.963*	0.980*	0.969*	0.857*	0.915*	1				
PD	−0.619*	−0.700*	−0.622*	−0.688*	−0.660*	−0.712*	−0.488*	−0.680*	1			
INDV	−0.589*	−0.616*	−0.549*	−0.612*	−0.582*	−0.713*	−0.481*	−0.624*	0.654*	1		
MASC	−0.090	−0.160*	−0.170*	−0.190*	−0.126*	−0.139*	−0.090	−0.155*	0.078	−0.029	1	
UNCER	−0.000	−0.210*	−0.281*	−0.270*	−0.222*	0.065	−0.176*	−0.197*	0.118*	0.162*	0.076	1
FC	0.010	−0.008	−0.010	−0.008	−0.004	−0.027	−0.027	0.010	0.000	0.000	0.000	0.000

*$p<$ .05.
Source: prepared by the authors.

Table 5. OLS regression.

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
AGOV	2.673***						
	(0.61)						
ROL		2.091***					
		(0.54)					
GE			2.796***				
			(0.57)				
CC				1.883***			
				(0.48)			
RQ					3.054***		
					(0.64)		
VA						2.087***	
						(0.81)	
PS							1.836***
							(0.44)
PD	−0.137***	−0.140***	−0.139***	−0.140***	−0.134***	−0.152***	−0.160***
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
COLL	−0.118***	−0.125***	−0.125***	−0.124***	−0.123***	−0.114***	−0.127***
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
MASC	−0.0272	−0.0294	−0.0264	−0.0261	−0.031	−0.0295	−0.0353*
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
UNCERT	0.0559***	0.0560***	0.0654***	0.0615***	0.0597***	0.0334**	0.0549***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.02)	(0.01)
FC	0.288	0.249	0.265	0.252	0.239	0.314	0.316
	(0.76)	(0.76)	(0.75)	(0.76)	(0.76)	(0.77)	(0.76)
_cons	39.68***	40.57***	38.69***	40.21***	38.90***	42.37***	43.53***
	(2.20)	(2.26)	(2.20)	(2.23)	(2.26)	(2.35)	(1.71)
N	418	418	418	418	418	418	418
R-sq	0.481	0.474	0.484	0.476	0.485	0.468	0.48
adj. R-sq	0.473	0.467	0.477	0.468	0.477	0.46	0.472
Robust	Yes	Yes	Yes	Yes	Yes	Yes	Yes

*$p<.1$; **$p<.05$; ***$p<.01$.
Source: prepared by the authors.

correlation between all world governance indicators, indicating they are interrelated. The VIF values highlighted a multicollinearity issue regarding public governance indicators. Accordingly, it is important to include each indicator separately in the model to avoid multicollinearity and address each indicator's importance separately.

The VIF showed a multicollinearity problem in governance indicators; this supported previous studies' results, such as that of Lio and Liu (2008). Seven models were used to test the overall average governance and each governance indicator individually to avoid the multicollinearity issues indicated after measuring VIF. Table 5 summarises the results of OLS regression. The results reveal a significant relationship between all governance indicators and the quality of financial reporting.

However, it was important to consider the panel data and the time effect accordingly. We tried both fixed effect and random effect models, and then after using the Hausman test, it indicated that we should follow the random effect. Accordingly, we used the GLS random effect model. Table 6 summarises the panel regression results, where OQFRI is our independent variable in all seven models. Model 1 indicates a significant positive relationship between the average governance AGOV, which is the average of all governance indicators, and the OQFRI; this implies that effective public governance has a positive impact on increasing financial reporting quality. This result supports our first hypothesis.

We extended our analysis to test the relationship between each governance indicator and the quality of financial reporting. Model 2 examined the relationship between

Table 6. Random effect models.

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
AGOV	2.365**						
	(1.11)						
ROL		1.903**					
		(0.91)					
GE			2.373**				
			(1.06)				
CC				1.283			
				(0.87)			
RQ					3.293***		
					(1.20)		
VA						0.711	
						(1.46)	
PS							1.558*
							(0.89)
PD	−0.142***	−0.144***	−0.145***	−0.154***	−0.130***	−0.172***	−0.163***
	(0.03)	(0.04)	(0.04)	(0.04)	(0.04)	(0.05)	(0.04)
COLL	−0.121***	−0.127***	−0.128***	−0.131***	−0.121***	−0.136***	−0.130***
	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)
MASC	−0.0289	−0.0305	−0.0287	−0.031	−0.0301	−0.0375	−0.0362
	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.04)	(0.03)
UNCERT	0.0550**	0.0553**	0.0628**	0.0572**	0.0607**	0.0430*	0.0538**
	(0.02)	(0.02)	(0.03)	(0.02)	(0.02)	(0.02)	(0.02)
FC	0.28	0.246	0.258	0.241	0.241	0.25	0.301
	(0.65)	(0.65)	(0.64)	(0.65)	(0.64)	(0.68)	(0.65)
_cons	40.53***	41.16***	39.96***	42.39***	38.26***	45.45***	44.07***
	(3.73)	(3.68)	(3.55)	(4.01)	(3.75)	(4.23)	(2.87)
N	418	418	418	418	418	418	418
Random effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Robust	Yes	Yes	Yes	Yes	Yes	Yes	Yes

*$p<.1$; **$p<.05$; ***$p<.01$.
Source: prepared by the authors.

the rule of law and the quality of financial reporting; the results indicate a low positive significant relationship. The result implies that law enforcement can improve the quality of financial reporting. Model 3 tested the relationship between government effectiveness and the quality of financial reporting; the findings show a positive, highly significant relationship. Model 4 tested the relationship between the control of corruption and the quality of financial reporting. The results reveal a non-significant positive relationship between control of corruption and the quality of financial reporting. Standard errors are robust at the country/year level. Our results differ from those of Lourenço et al. (2018), as their findings showed that highly corrupted countries could motivate firms towards earnings management. Model 5 tested the relationship between regulatory quality and quality of financial reporting; a positive and highly significant relationship was found even compared to other public governance indicators. The evidence highlights that the government should increase its ability to formulate and implement sound policies and regulations, motivating firms to prepare high-quality financial reports. Model 6 tested the relationship between voice and accountability and the quality of financial reporting. The results show a non-significant positive relationship between freedom of expression and the quality of financial reporting. Model 7 tested the relationship between political stability and the quality of financial reporting, and the findings indicate a low positive significant relationship. The result implies that firms might manipulate the reports to protect themselves from future risks when they feel political instability.

Table 7. Linear mixed effect models.

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
AGOV	2.424**						
	(1.08)						
ROL		1.938*					
		(1.03)					
GE			2.450**				
			(1.01)				
CC				1.391			
				(0.88)			
RQ					3.251***		
					(1.10)		
VA						0.93	
						(1.33)	
PS							1.607**
							(0.74)
PD	−0.141***	−0.143***	−0.144***	−0.151***	−0.131***	−0.169***	−0.163***
	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)
COLLECT	−0.121***	−0.127***	−0.128***	−0.130***	−0.121***	−0.132***	−0.130***
	(0.04)	(0.04)	(0.03)	(0.04)	(0.04)	(0.04)	(0.04)
MASC	−0.0286	−0.0303	−0.0283	−0.0301	−0.0303	−0.0362	−0.0361
	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
UNCERT	0.0552**	0.0554**	0.0633**	0.0579**	0.0605**	0.0415	0.0540**
	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
FC	0.281	0.247	0.259	0.243	0.241	0.26	0.304
	(0.68)	(0.68)	(0.68)	(0.68)	(0.68)	(0.69)	(0.68)
_cons	40.37***	41.05***	39.72***	42.00***	38.37***	44.96***	43.97***
	(3.96)	(4.15)	(3.97)	(4.15)	(3.92)	(4.05)	(2.99)
lns1_1_1							
_cons	1.196***	1.230***	1.177***	1.222***	1.197***	1.265***	1.205***
	(0.16)	(0.16)	(0.16)	(0.16)	(0.16)	(0.16)	(0.16)
lnsig_e							
_cons	1.903***	1.902***	1.904***	1.904***	1.898***	1.903***	1.903***
	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)
N	418	418	418	418	418	418	418

Source: prepared by the authors.

6.2. Additional analysis

6.2.1. Linear mixed model

In this section, we introduce the linear mixed effect model as a kind of robustness to our main results and consider both fixed and random effects simultaneously. While Ordinary least square models (OLS) are widely used in statistical analysis, it sometimes becomes unsuitable for panel data analysis because some assumptions are overlooked (Hox et al., 2017). Accordingly, the Linear Mixed Model (LMM) can be a suitable key. Field (2013) supports the superiority of LMM over OLS in tracking variables over time for different countries by considering both random and fixed effects. Table 7 summarises the regression results based on linear mixed models, which are consistent with the OLS results and support the significant relationship between public governance and the quality of financial reporting.

6.2.2. Robustness

In this section, we are trying to have more robustness. The results of Eslamloueyan and Jafari (2019) revealed that institutional quality can offset the negative effects of financial crisis. Accordingly, we tested the effect of public governance on the quality of financial reporting in different time periods "before", "during" and "after" financial

Table 8. A comparison between "before", "during" and "after" the financial crime.

	Before (2004–2007) Model 1	During (2008–2011) Model 2	After (2012–2014) Model 3
AGOV	2.232**	3.020***	2.925**
	(0.999)	(1.04)	(1.15)
PD	−0.0780**	−0.176***	−0.162***
	(0.04)	(0.04)	(0.04)
COLLECT	−0.162***	−0.0884**	−0.0977**
	(0.03)	(0.03)	(0.04)
MASC	−0.00923	−0.0304	−0.0461
	(0.03)	(0.03)	(0.04)
UNCERT	0.0548**	0.0437*	0.0746**
	(0.02)	(0.03)	(0.03)
_cons	35.53***	41.20***	43.20***
	(3.59)	(3.77)	(4.20)
N	152	152	114
R-sq	0.486	0.534	0.543
adj. R-sq	0.468	0.518	0.521

Source: prepared by the authors.

Table 9. A comparison between developed and developing countries.

	Developed Model 1	Developing Model 2
AGOV	6.091***	3.670***
	(2.03)	(0.81)
PD	0.0242	−0.0827***
	(0.07)	(0.03)
COLLECT	−0.0166	−0.0513
	(0.05)	(0.04)
MASC	0.0294	0.117*
	(0.03)	(0.06)
UNCERT	−0.115**	0.177***
	(0.05)	(0.03)
_cons	32.86***	17.01***
	(5.17)	(6.13)
N	231	187
R-sq	0.254	0.36
adj. R-sq	0.238	0.343

Source: prepared by the authors.

crisis, and the results reveal that public governance was significant and positive related to the quality of financial reporting at all periods. Which means that institutional quality is effective regardless of the of the market stability (Table 8).

In addition, we tested the effect of public governance on the quality of financial reporting in both developing and developed countries, and the results reveal that public governance was significant in both countries, which indicates that regardless of the level of development, still, public governance can improve the quality of financial reporting. This results support the previous results of Rahmatika and Afiah (2014) that tested the relationship between quality of financial reporting and governance, and they mentioned that "Quality of Financial Reporting has implications for Good Government Governance" (Table 9).

7. Conclusion and implications

Financial reporting quality is a measure that creates investor reliance on the capital markets. Firm-, accounting-firm-, and country-level factors affect the financial

reporting quality (FRQ). A country's governance quality characterises its macro-level FRQ. Our result implies that good public governance could be one of the essential determinants of the quality of financial reporting. Increased FRQ depends on both accounting and auditing quality measures. Strong public governance positively affects transparency, shareholder protection, anti-director rights, and capital market depth. Investors mainly depend on firm-specific and accounting-firm-level measures in countries with weak public governance. This article fills the gap between country-level governance's impact on financial reporting quality by examining public governance's effect on the overall quality of financial reporting. We tested the relationship with the macro-level as proxies based on governance and culture.

Most of the prior research was mainly on the financial perspective and ignored the auditing perspective while testing the quality of financial reporting. We utilised Tang et al. (2016) statistics for the overall financial reporting index (OQFRI) proxy for financial reporting quality. OQFRI is constructed with three accounting and three auditing measures. We used the World Bank's Worldwide Governance Indicators (WGIs) to measure country-level governance quality. WGIs include voice and accountability, government effectiveness, control of corruption, the rule of law, regulatory quality, and political stability. Our research hypothesis depends on six components based on WGIs. A country's culture also affects the financial reporting quality on the macro-level. Thus, we constructed our control variables based on the culture measures proposed by Hofstede (2001).

Our balanced panel data set has 418 observations, constructed with 38 countries and the period from 2004 to 2014. We first ran the Breusch-Pagan test for a selection between pooled and random effects. The test's p-value resulted in less than 0.05. Then we tested our model with the Hausman test for choosing between random and fixed effects. The p-value of the test was greater than 0.05. Thus we ran our models with random effects. Due to the high correlation between governance-based variables, we ran our model for each governance by eliminating the other variables of interest. Our empirical evidence indicates a positive relationship between average governance score, regulatory quality, political stability, the rule of law, and government effectiveness and quality of financial reporting.

This article contributes to accounting literature by providing evidence of the impact of macro-level governance quality on financial reporting quality. Our results and interpretation provide an expanded evaluation of the impact of public governance on OQFR. Limiting the analysis of OQFR to discretionary accruals restricts examining other influential factors. Empirical evidence indicates that the effect of public governance on OQFR remains unchanged, despite the occurrence of the global financial crisis. Our analysis shows that a country's public governance quality positively affects the overall financial reporting quality, controlled by cultural dimensions. Our results revealed that the country-level governance's impact on the FRQ did not decrease with the Global Financial Crisis of 2008 that lasted until 2011. Our empirical evidence provides an important implication for policymakers and investors because the analysis shows that increased country-level governance increases the FRQ, thus reducing information asymmetry. Policymakers should consider empowering the equity market by increasing transparency, shareholder protection, and anti-director

rights. The consequence will increase investors' trust and listed companies' credibility, increasing interest in the country's stock exchange. Our results suggest that institutional quality and public governance perception should be considered by auditors while evaluating the quality of financial reports and their risk. Also, it is important to consider the role of public and corporate governance in improving the quality of financial reporting. This article has limitations. First, our data set is on the macro-level. Due to our research design, we did not use any firm-level data. Second, the sample contains 38 countries that were available on the World Bank. Future research can use the country's religiosity as a variable of interest.

Disclosure Statement

No potential conflict of interest was reported by the author(s).

Note

1. R&D Transfer, Commercial and Legal Infrastructure, Internal Market Openness, Physical Infrastructure, and Taxes And Bureaucracy.

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