Influences of Institutional Factors on Corporate Governance Adherence: An Analysis of Multinational Corporations' Subsidiaries in an Emerging Market Context

ABSTRACT

Purpose: This study aims to investigate the influence of institutional factors on corporate governance (CG) compliance within subsidiaries of multinational corporations (MNCs) operating in India, drawing on institutional and legitimacy theories.

Methodology: The research approach employs a comparative analysis of CG compliance across MNC subsidiaries in India, focusing on the impact of institutional distance between home and host countries, the quality of national governance, and the level of corruption in the host country. It further examines how these factors vary between secondary and tertiary industries and between subsidiaries originating in developed versus developing economies. We employ a range of robust econometric techniques, including semi-parametric methods of panel data models, generalised method of moments (GMM), and non-parametric method of panel quantile regression (PQR), to conduct a comprehensive analysis.

Findings: The study presents three key findings: 1) Certain institutional mechanisms—such as institutional distance, national governance quality, and host country corruption—significantly impact CG compliance levels in MNC subsidiaries. 2) The effects of these institutional factors vary between secondary and tertiary industries, indicating that different industry types may be differently susceptible to institutional influences. 3) The role of institutional factors differs for subsidiaries based on the country of origin, with evidence suggesting that the compliance behavior of subsidiaries from developed and developing economies is influenced differently.

Originality: This research contributes to the existing literature by providing a comprehensive understanding of how institutional factors affect CG compliance in MNC subsidiaries, with a specific focus on India. It offers original insights into the differential impacts of institutional factors across industries and origin countries, thereby providing practical recommendations for enhancing CG practices within MNC subsidiaries in emerging economies like India.

Keywords: Corporate Governance, Emerging Economy, India, Institutional Theory, Legitimacy Theory, Multinational Corporations' Subsidiaries.

1 INTRODUCTION

The growing significance of corporate governance (CG) in the wake of corporate scandals and the 2008 global financial crisis has intensified academic discourse on CG compliance and disclosure practices (Mees & Smith, 2019). This heightened interest underlines the crucial role of CG in maintaining corporate integrity and accountability, particularly within subsidiaries of multinational corporations (MNCs) operating in emerging economies (Aguilera, Marano, & Haxhi, 2019). Despite the growing body of literature on CG disclosure and compliance within domestic firms—as evidenced by studies conducted by Filatotchev and Nakajima (2010), Al-Bassam, Ntim, Opong, and Downs (2018), Elmagrhi, Ntim, and Wang (2016), Sarhan and Ntim (2018), and Cumming, Girardone, & Śliwa (2021) —research specifically addressing the CG compliance of MNCs' subsidiaries remains limited (Du, Deloof, & Jorissen, 2015; Kostova & Marano, 2019).

Our research seeks to fill this gap by concentrating on the subsidiaries of MNCs as the primary unit of analysis and examining how institutional distance, alongside national governance quality and corruption level in the host country, affect CG compliance within these entities in India. Our study is motivated by the practical need to understand the governance challenges faced by MNCs' subsidiaries in navigating the institutional complexities of emerging economies (Srivastava, Das, & Pattanayak, 2018). India presents a compelling case study due to its substantial improvements in governance systems post-market liberalisation and the unique regulatory landscape that demands effective CG practices to protect foreign investors' interests (Bhaumik et al., 2019; Madhani, 2015; Uzma, 2018).

Our objectives in this study are to examine the impact of national governance quality, the institutional distance between home and host countries, and the corruption level in the host

country on the CG compliance levels of MNCs' subsidiaries operating in India. We employ a range of robust econometric techniques, including semi-parametric methods of panel data models, generalised method of moments (GMM), and non-parametric method of panel quantile regression (PQR), to conduct a comprehensive analysis. The key findings of this study have significant implications for both academia and practice, contributing to the literature on CG, institutional theory, and international business. By elucidating the complexities of CG compliance in the context of MNCs' subsidiaries, this research aids policymakers and practitioners in devising strategies to enhance governance practices, particularly in emerging economies, such as India.

Our study contributes to the CG literature in several key ways. Firstly, it highlights the importance of institutional distance and national governance quality as determinants of CG compliance in subsidiaries of MNCs, factors that were previously underexplored. Secondly, it conducts a sectoral analysis to uncover industry-specific variations in CG compliance, addressing the scarcity of research in this area. Thirdly, it offers a novel perspective by examining the influence of the subsidiary's country of origin on CG compliance. These contributions underscore the significance of national institutions in enhancing the CG regime in emerging economies and reinforce the assumptions of institutional and legitimacy theories regarding organizational compliance with societal norms and expectations for legitimacy, particularly in foreign environments.

The remainder of the paper is organized as follows: Section 2 delves into the relevant literature and develops hypotheses, laying the groundwork for the study's theoretical contributions. Section 3 outlines the research design and methodology, ensuring a robust empirical investigation. Empirical findings are presented in Section 4, offering insights into the dynamics of CG compliance among MNCs' subsidiaries. Finally, Section 5 concludes the paper

by summarizing the findings and discussing their practical implications for policymakers and corporate practitioners.

2 LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

2.1. Theoretical Framework

This study is based on institutional and legitimacy theories, focusing on how the concept of 'legitimacy'—the perception that an entity's actions are in line with societal norms, values, and beliefs—is crucial in both frameworks. According to institutional theory, all social actors, including companies, aim to achieve legitimacy in their environment, leading to uniform behaviour among organisations due to regulatory pressures. For subsidiaries of MNCs, this means their strategies and actions often reflect the practices of the host country, influenced by regulatory, social, and industry pressures to conform.

DiMaggio and Powell (1983) outlined three types of forces that lead to such conformity: coercive forces from legal requirements, mimetic forces from copying successful peers, and normative forces from professional standards. This results in CG practices that align with external demands for legitimacy through various forms of adaptation, such as compliance with regulations, emulation of successful companies, and adherence to professional norms.

Suchman (1995) described three kinds of organisational legitimacy: pragmatic legitimacy, based on the organization's self-interest; moral legitimacy, focused on promoting societal welfare; and cognitive legitimacy, which is about cultural acceptance. In terms of CG, following regulations is a way for organisations to maintain their legitimacy by meeting institutional expectations.

In settings like MNC subsidiaries, legitimacy can be challenged both internally and externally (Hillman & Wan, 2005; Kostova & Roth, 2002). External challenges come from the host country's institutional setup, while internal challenges may arise when subsidiaries don't

align with their parent company's policies (Hillman & Wan, 2005; Kostova & Zaheer, 1999). In the following sections, we will develop our main research hypothesis, drawing from institutional and legitimacy theories and previous studies' findings.

2.2. National Governance Quality and Corporate Governance Compliance

National governance involves both the formal and informal frameworks that guide corporate behaviour. This includes laws, ethical guidelines, and societal expectations (Kaufmann, Kraay & Mastruzzi, 2011). It places demands on companies through rules for listed companies and the influence of lobbyists, accounting organisations, and investors. Companies must adhere to CG regulations, facing coercive pressure to comply (DiMaggio & Powell).

Research has shown that better national governance is linked to higher CG compliance and transparency in MENA countries (Sarhan & Ntim, 2018). Factors, including government efficiency, adherence to the law, and regulatory quality also positively affect CG transparency in European countries (Matesscu, 2015). Further studies have investigated how national governance quality influences business performance and financial metrics (Nguyen, Locke & Reddy, 2015).

From the viewpoint of legitimacy theory, national governance quality is considered an external challenge for subsidiaries of MNCs (Elamer, Ntim & Abdou, 2017). High-quality governance positively impacts CG compliance, as a country's legal and regulatory framework significantly influences the governance and reporting behaviours of both local and foreign subsidiaries. Therefore, the first hypothesis proposes:

> **Hypothesis 1**: There is a positive relationship between national governance quality and CG compliance in MNCs' subsidiaries.

2.3. Institutional Distance and Corporate Governance Compliance

The concept of institutional distance, which first emerged in the 1990s in the field of international business, has become increasingly popular for its comprehensive approach to

understanding differences between countries. Unlike cultural distance, institutional distance includes regulatory, cognitive, and cultural dimensions, offering a more holistic view that is particularly useful for international business research (Kostova, 1996; Scott, 1995). In the context of emerging markets, researchers often use Kaufmann's Worldwide Governance Indicators to assess regulatory and institutional distance (Kolstad & Wiig, 2012; Shirodkar & Konara, 2017).

Recent studies have investigated the impact of institutional distance on subsidiary performance. Shirodkar and Konara (2017) suggest that the adverse effects of institutional distance on performance may be less pronounced for MNCs' subsidiaries with partial ownership and extensive experience in the host country. Conversely, a study focusing on foreign subsidiaries in Brazil found a positive correlation between institutional distance and financial performance (Marini Thome, Medeiros & Hearen, 2017).

Institutional distance involves the regulatory frameworks of a company's home and host countries and is linked to the concept of pragmatic legitimacy, considering both internal and external threats to a subsidiary. Previous research offers mixed results on how institutional distance affects firms' financial performance and has not yet explored its impact on corporate governance compliance in subsidiaries. Given the importance of understanding how institutional distance influences the governance of MNCs' subsidiaries and the current gap in empirical evidence, our study proposes the following hypothesis:

> **Hypothesis 2**: There is a positive relationship between the institutional distance of subsidiaries' home and host countries and their corporate governance compliance.

2.4. Corruption and Corporate Governance Compliance

Corruption is often defined as the misuse of public office for personal gain and involves public officials abusing their power (Rose-Ackerman, 1997). A country's socio-cultural environment significantly shapes the expected behavior of businesses (Roberts & Greenwood,

1997). Research indicates that poor legal systems and weak governance lead to opaque operations within government departments, fostering corruption (Hellman, 2003). Crucially, prior studies have shown that corruption negatively affects environmental, social, and governance (ESG) disclosures (Ioannou & Serafeim, 2012). Additionally, lower levels of corruption are linked to better corporate governance (Judge, Douglas, & Kutan, 2008). The impact of corporate governance and national culture on corruption levels has also been highlighted (Boateng, Wang, Collins, & Glaister, 2020).

In terms of a host country's corruption, cultural beliefs and the tendency of companies to mimic others play a crucial role. According to legitimacy theory, corruption can threaten a subsidiary's legitimacy by setting a norm that may not be legally correct but is culturally accepted. Although corruption is typically discussed in terms of illegal activities in corporate governance, its relationship with corporate governance compliance is less frequently explored. To fill this gap, our third hypothesis states:

> **Hypothesis 3**: The presence of corruption in a subsidiary's host country is inversely related to its compliance with corporate governance.

3 RESEARCH DESIGN

3.1. Sample Selection and Data

The research sample comprises 86 subsidiaries of MNCs listed on the BSE, covering the period from 2010 to 2019. These subsidiaries operate in 18 different industries and are based in 20 different home countries. The final dataset was obtained after applying specific criteria to include only those subsidiaries with sufficient observations and unbiased results, resulting in 86 subsidiaries out of the initial 100 listed on the BSE in the financial year 2010. The criteria required firms to be listed on the stock exchange for at least eight out of ten years and have annual reports available for at least six years.

The selected sample period (2010-2019) is deliberately chosen to ensure a balanced representation of time before and after the implementation of the Companies Act 2013 in India. This significant reform extended governance standards and aimed to align Indian regulations with international governance norms. The study aims to analyze differences in corporate governance compliance levels among subsidiaries due to this major regulatory transformation. Data availability was a critical consideration, and the availability of corporate governance information also drove the selected period during those years.

Data on institutional and organisational variables were manually collected. Data for the national governance quality index (NGQI), the institutional distance between the home and host countries index (IDHHI) was sourced from the World Bank's website (World Bank, 2021), while yearly data for assessing the corruption level of the host country was obtained from the Corruption Perceptions Index (Transparency International, 2020). Information on board attributes and firm characteristics was mainly extracted from integrated annual reports. Control variables related to subsidiary size, age, and financial ratios (profitability and leverage) were gathered from business databases Money Control and Osiris.

3.2. Research Variables

Table I presents an overview of the variables used in this study, categorised into three groups: dependent, independent, and control variables. The primary dependent variable is the corporate governance compliance index, which consists of 36 provisions covering rights and equitable treatment of shareholders, stakeholder involvement in corporate governance, disclosure and transparency, and board responsibilities. This index is based on and adapted from the Indian corporate governance scorecard, collaboratively designed by the Bombay Stock Exchange (BSE), International Finance Corporation (IFC), and Institutional Investor Advisory Services (IiAS) (BSE, IFC & IiAS, 2016).

INSERT TABLE I ABOUT HERE

The independent variables comprise the national governance quality index (NGQI), the institutional distance between the home and host countries index (IDHHI), and the corruption level (CL) of the host country. The NGQI serves as a proxy for evaluating the regulatory environment in the host country, while IDHHI is a relative measure to assess differences between the regulatory environments of the home and host countries. To avoid multicollinearity issues, the corruption level of the host country is treated as a separate variable despite its significance as a major institutional factor influencing firms' corporate governance compliance. This variable is proxied using a more reliable and comprehensive measure.

To address omitted variable bias, the third group of variables includes (i) internal board mechanisms, such as board size, board independence, and board gender diversity and (ii) firm-level characteristics, including subsidiary size, subsidiary age, profitability, and leverage.

3.3. Econometric Strategy and Modelling

This research employs panel data methods to increase the number of observations and address various statistical issues (Greene, 2014). Since panel data often suffer from heterogeneity and endogeneity, the study uses static, fixed effects (FE) and random effects (RE) models, along with the dynamic generalized method of moments (GMM) model, to tackle these problems (Greene, 2014). The FE and RE models handle heterogeneity and multicollinearity effectively, while the GMM model addresses endogeneity concerns (Greene, 2014).

For the main analysis, the FE model is preferred over the RE model based on the results of the Hausman test. The FE model controls for firm-level heterogeneity by excluding time-constant observations for individual entities (Gujarati, 2015).

Recognising the potential bidirectional causality between the dependent and independent variables, the study adopts the system-GMM approach (Blundell & Bond, 1998; Baltagi, 2008). This approach is considered suitable for this type of panel data and helps reduce

the effects associated with high persistence of CG variables while providing more precise estimations (Blundell & Bond, 1998; Nguyen et al., 2015).

To further ensure robustness and address the issue of non-normality in governance data, the study employs panel quantile regression (PQR) using the Canay (2011) model (Canay, 2011). PQR estimation is preferred over conventional linear regression models, such as OLS and fixed effects, due to its robustness against outliers and the absence of the normality assumption (Canay, 2011). Additionally, the PQR model accounts for unobserved heterogeneity and heterogeneous covariate effects, providing a better understanding of the relationship between independent variables and the conditional distribution of the main dependent variable (Canay, 2011; Koenker & Bassett, 1978). The quantile regression technique can be presented as follows:

$Y_{it} = X_{it}^{'}\beta(\tau) + \alpha_{i\tau} + \varepsilon_{it\tau},$	(1)

Where,

$\varepsilon_{it\tau} = X_{it}^{'}\big(\beta(U_{it}) - \beta(\tau)\big)$ and	(2)
$\varepsilon_{it\tau} = X_{it}^{'}\big(\beta(U_{it}) - \beta(\tau)\big).$	(3)

Then,

$Y_{it} = X_{it}^{'}\beta(U_{it}) + \alpha_{i},$	(4)

Where Y_{it} is an observable explained variable, $X_{it}^{'}$ is a vector of independent variables for country i at time t; t = 1 …, T; i= 1, …, n, the vector $X_{it}^{'}$ is assumed to contain a constant term, (U_{it}, α_i) are unobservable, and $U_{it} \rightsquigarrow U[0,1]. \beta$ is an unknown parameter; the function $\tau \mapsto X^{'}\beta(\tau)$ is assumed to be strictly increasing in $\tau \in (0.1)$ and the parameter of interest is assumed to be $\beta(\tau)$.

This paper proposes the model in the following form:

$$\mathrm{CGCI}_{i,j,t} = \beta_0 + \beta_1 \mathrm{NGQI}_{i,t} + \beta_2 \mathrm{IDHHI}_{i,j,t} + \beta_3 CL_{i,t} + x_{i,t} + \mu_{i,t} + \varepsilon_{i,t} \quad (5)$$

Where CGCI represents the corporate governance compliance index for firm i, sector j in year t, NGQI denotes the Index for quality of national governance, IDHHI is the Index for the institutional distance between host and home countries, CL implies corruption level in the host country, and x represents the control variables. βs are the estimated parameters which reflect the coefficients of the model.

4. EMPIRICAL FINDINGS

4.1. Descriptive Statistics

Table II presents a summary of statistics for the dependent, independent, and control variables during the sampled period. The dependent variable, CGCI, ranges from 0 to 98 percent, with a mean value of approximately 90.71 percent. This high mean value indicates that MNC subsidiaries generally maintain higher compliance standards. This finding aligns with previous evidence in the Indian context, suggesting that MNC subsidiaries are more compliant and transparent compared to domestic firms (Pattnaik & Gray, 2012). Theoretically, this supports the idea that MNC subsidiaries strive for higher compliance levels and better reporting practices to achieve dual legitimacy (Kostova, Roth & Dacin, 2008). The independent and control variables show considerable variation across the dataset.

INSERT TABLE II ABOUT HERE

The mean values of CGCI presented in Table III indicate that compliance levels increased by 4-5% following the introduction of new mandatory requirements in 2014. The improvements were evident from the financial year 2015 onwards, as changes were reported in

the subsequent year's annual reports. Over the entire sampled period, the aggregate CG compliance level increased from 84.36% in 2010 to 94% in 2019, indicating a significant rise of nearly 10%. These statistics suggest that the local regulatory environment significantly impacts the corporate governance compliance of subsidiaries, consistent with findings from previous studies on the quality of national governance (Matesscu, 2015; Sarhan & Ntim, 2018).

INSERT TABLE III ABOUT HERE

4.2. Correlation Analysis

Table IV displays the correlation matrix, presenting Pearson's parametric coefficients for the dependent, independent, and control variables. Multicollinearity concerns are addressed as the highest correlation coefficient observed between any two variables is 0.570 for BGD and CGCI. This implies that the magnitude and direction of the coefficients indicate that the data does not suffer from any serious non-normality issue in line with prior CG literature (e.g., Bhasin & Shaikh, 2013; Juhmani, 2017; Madhani, 2014; Peters & Bagshaw, 2014; Sarhan & Ntim, 2018).

INSERT TABLE IV ABOUT HERE

4.3. Regression Analysis

This subsection presents the empirical findings regarding the institutional determinants of CG compliance of subsidiaries of MNCs in India. We start by discussing national governance indicators' influence on MNCs' subsidiary CG compliance, building upon the model proposed in Equation (5). To facilitate a comprehensive analysis, this subsection is divided into two sub-sections. Firstly, the aggregated results will be reported to provide a general overview of the empirical relationships. Following that, we will delve into the disaggregate analysis conducted at two levels: sectorial and home country. This approach is crucial as it allows us to understand how national governance, institutional distance, and corruption levels impact the CGCI.

4.3.1. Results for Aggregate Level (Full sample)

The regression results for both FE and GMM models have been presented in Table V. The findings confirm the first hypothesis, indicating a positive and significant relationship between the NGQI and the CGCI. The FE is deemed appropriate for the estimations based on the Hausman test statistics (chi2(9) = 202.19; Prob > chi2 = 0.0000). The FE estimation demonstrates that a 1-point improvement in the national governance index results in an approximately 8% increase in CG compliance. Furthermore, when accounting for endogeneity, the impact of national governance on CGCI is further enhanced. The GMM estimate shows that a 1-point increase in the quality of Indian governance leads to a 9.6% rise in subsidiaries' CG compliance.

INSERT TABLE V ABOUT HERE

These empirical findings support the theoretical assumption that the regulatory environment of the host country plays a crucial role in determining the level of CG compliance among subsidiaries. It is evident that reforms in the CG regime can significantly improve compliance levels, particularly in countries with higher-quality rules, regulations, and effective government implementation. Subsidiaries in such environments tend to trust the CG Code and adhere more diligently to its regulations. These results are consistent with previous evidence from Baldini et al. (2016), Matesscu (2015), Nguyen et al. (2015), and Sarhan and Ntim (2018), which also reported a positive and significant association between national governance quality and CG compliance and disclosures. In the context of India, these findings align with prior research demonstrating the influence of legal, institutional, and regulatory configurations on the CG practices of foreign firms (Baldini, Maso, Liberatore, Mazzi & Terzani, 2016; Matesscu, 2015; Madhani, 2015; Nguyen et al., 2015; Sarhan & Ntim, 2018).

Secondly, we report the effect of institutional distance on CGCI. Our empirical results regarding the association between the Institutional Distance Host-Home Index (IDHHI) and

CGCI support the second hypothesis, revealing a positive and significant association between IDHHI and compliance levels. The FE estimation coefficient indicates that the CGCI increases by 3.8% with a 1-point increase in institutional distance. Although the magnitude of this coefficient is lower in GMM estimations, it still suggests that compliance levels improve with greater institutional distance between the host and home countries. Theoretically, a higher difference in regulatory and institutional distance implies increased costs for obtaining and maintaining legitimacy, which can put foreign firms at a competitive disadvantage (Kostova & Zaheer, 1999). Despite these challenges, MNCs' subsidiaries tend to demonstrate better CG compliance levels than domestic firms to enhance their reputation and foster goodwill within local communities (Kostova & Zaheer, 1999). Especially in the case of MNCs' subsidiaries based in developed countries, strict adherence to parent companies' governance practices is often observed, as it helps them gain internal legitimacy and thereby ensures better CG compliance.

Finally, concerning the corruption level of the host country, the findings confirm the third hypothesis, revealing an inverse relationship between the corruption level and the CG compliance of foreign subsidiaries. The FE estimation and the GMM model show negative coefficient values of -0.190 and -0.160, respectively. As expected from the theoretical standpoint, weaker institutions and higher corruption levels result in illegitimate and inefficient CG practices, leading to lower compliance levels. Even MNCs that uphold impeccable behaviour in their home countries seem susceptible to adopting a more lenient attitude in developing countries characterized by malleable laws and corrupt public officials (dela Rama, 2012). These findings align with prior claims that corruption negatively impacts CG practices (Sena et al., 2018).

To enhance the robustness of the model, a non-parametric approach using quantile regression is employed. The results from the Fixed Effect Panel Quantile Regression (FEPQR) (Canay, 2011), reported in Table VI, validate the positive relationship between the national governance quality index and CGCI in India. Additionally, the magnitude of this relationship is higher compared to FE and GMM estimations. The estimates indicate that a 1-point increase in the national governance index results in an average increase of 11.47%. Notably, the positive impact is more significant at higher quantiles, with CG compliance improving by approximately 15% at the 60th percentile and around 12% at the 10th, 30th, and 40th percentiles.

INSERT TABLE VI ABOUT HERE

Similarly, regarding corruption levels, the estimations show that higher corruption levels in the host country (India) lead to a lower level of CGCI, and this impact is significant across all percentiles. These results are consistent with the findings from the FE and GMM estimations, providing further support for the third hypothesis. Interestingly, the negative effect is amplified in FE and GMM estimations.

4.3.2. Results for Disaggregate Level based on Industry Type

The impact of the NGQI on corporate compliance has been explored thus far without considering the differentiation of effects by sector and home country. Thus, it is pertinent to investigate how compliance varies based on these factors. This section proceeds by re-estimating the model (Equation 5) using data specific to the manufacturing and service sectors. By conducting this disaggregated analysis, the study posits that these three antecedents - namely, national governance quality, the institutional distance between home and host countries, and corruption level - significantly influence compliance levels in both industries. However, the influence of institutional variables is more pronounced in the service sector, even though the direction of the relationship remains consistent for both industry types. A summary of the results of the sectorial analysis can be found in Table VII, which indicates that the

national governance index has a positive and significant effect on corporate compliance. Nevertheless, this impact varies across sectors, with subsidiaries in the service sector demonstrating higher compliance compared to those in the manufacturing sector. For instance, the findings reveal that a one-point increase in the NGQI leads to approximately a 10% increase in CGCI in the service sector and an 8% increase in the manufacturing sector.

INSERT TABLE VII ABOUT HERE

The service industries' greater responsiveness to changes in institutional configurations can be attributed to their predominant international operations and heightened competition (Narayanaswamy et al., 2012). Due to the nature and scope of their business activities and extensive international exposure, service firms display greater adaptability to changes in institutional configurations and exhibit more flexibility in adopting corporate governance practices. These empirical findings align with previous research in the corporate governance literature, indicating that service industries generally exhibit higher compliance and disclosure levels compared to other sectors (Bhasin & Shaikh, 2013; Juhmani, 2017; Madhani, 2014; Peters & Bagshaw, 2014). Additionally, these predictions corroborate the results obtained from the evaluation of domestic firms in India using the Indian Corporate Governance Scorecard (BSE, IiAS & IFC, 2018), which also demonstrated that service-focused firms tend to demonstrate higher compliance relative to firms in other sectors.

The negative and significant effect of corruption on CGCI persists for both manufacturing and service sectors, although it is more pronounced in the service sector. To ensure robustness, the model is re-estimated using quantile regression. The results of the FEPQ regression (Canay, 2011) for the manufacturing and service sectors are reported in Tables VIII and IX, respectively. These results reaffirm that the service sector exhibits higher compliance relative to the manufacturing sector. Specifically, the study highlights that enhancing the

national governance index by one point leads to a 15.46% increase in corporate compliance for the service sector and a 10.12% increase for the manufacturing sector.

INSERT TABLE VIII ABOUT HERE

INSERT TABLE IX ABOUT HERE

The variable measuring institutional distance (IDHHI) is found to have a significant impact on CG compliance only at the 0.95 quantiles, whereas NGQ and CL remain significant across all quantiles for manufacturing industries. In contrast, IDHHI is predicted to be significantly and positively associated with CG compliance levels at all quantiles except 0.10 and 0.20, with the magnitude of the coefficient being relatively higher in the case of service industries.

As for the effect of corruption on corporate compliance, it remains consistently negative and significant. An increase in the corruption level leads to a decrease in the CGCI of the subsidiaries in the Indian economy. Specifically, a one percent increase in corruption level in the host country results in a 0.3% decline in CGCI for the service sector and a more substantial reduction of about 0.4% for the manufacturing sector (Narayanaswamy et al., 2012).

4.3.3. Results for Disaggregate Level based on Country of Origin

In the presented analysis, Table X displays the empirical outcomes obtained from the employment of the FE model on subsidiaries originating from both advanced economies and developing countries. The results of the Hausman test for the specifications pertaining to advanced home countries indicate a p-value of 0.000. Consequently, the null hypothesis is rejected, leading to the acceptance of the FE model as the more suitable choice for this specific panel.

INSERT TABLE X ABOUT HERE

A noteworthy observation arising from the disaggregate analysis, which categorizes the subsidiaries based on the economic and developmental status of their country of origin, reveals a significant association between all institutional variables examined in the current study and the CG compliance of subsidiaries originating from advanced economies. Conversely, no significant association is found between the antecedent of IDHHI and the compliance levels of subsidiaries based in developing economies.

Furthermore, the empirical findings suggest a convergence of compliance levels among all subsidiaries, irrespective of the economic status of their home country. This phenomenon can potentially be attributed to the greater influence of local regulations in the host market on the compliance behaviour of subsidiaries compared to the governance norms of their home country. Consequently, subsidiaries tend to adapt to local institutions in order to establish and maintain external legitimacy while operating in foreign markets.

Unfortunately, due to data issues, it was not possible to obtain PQR estimations for the sample of subsidiaries based in developing countries. Consequently, PQR estimations for the disaggregate analysis based on the country of origin are not included in this report.

4.3.4. Additional Sensitivity Checks

In the course of this research, a series of supplementary sensitivity tests have been carried out to corroborate the robustness of the findings[1]. Firstly, an alternative weighted Composite Governance Quality Index (W-CGCI) has been employed in lieu of the unweighted CGCI. This alternative Index distributes equal weights of 25% to each of its four sub-indices.

Secondly, in order to reassess the regression results, an alternate proxy for national governance quality has been utilized. Following the approach adopted in prior governance

[1] The absence of reported results from supplementary sensitivity checks is attributed to document size restrictions. However, these results can be made available upon request.

research (Nguyen, Nguyen, Nguyen & Truong, 2021), an alternative national governance index, denoted as NGQI(a), has been constructed. NGQI(a) is derived using the first principal component extracted from three aggregate measures via Principal Component Analysis (PCA).

Thirdly, to test the generalisability of the findings of the current study, the institutional distance index utilised in the main analysis has been substituted with IDHHI(a). This alternative index, IDHHI(a), integrates measures obtained through PCA with varimax rotation, drawing from the methodology employed in previous studies within the International Business domain (Hernandez & Nieto, 2015; Nayyar, Mukherjee & Varma, 2021).

Lastly, an alternative regression model of pooled Ordinary Least Squares (OLS) regression has been conducted to re-estimate the results for the aggregate sample. The outcomes from this pooled OLS regression largely align with the main findings, displaying minor discrepancies.

Taken together, all of the aforementioned results suggest that the findings of the current study remain largely unaffected by the use of alternative indices and econometric models. Due to space constraints, detailed regression results for the additional sensitivity tests are omitted in this document.

5. CONCLUSION AND IMPLICATIONS

In this study, we examine how national governance quality, institutional distance, and corruption levels affect CG compliance in MNCs' subsidiaries in emerging economies. Our findings offer insights into the institutional factors that influence CG practices among these subsidiaries.

First, we find that the quality of governance in the host country significantly affects MNCs' subsidiaries' CG compliance, echoing findings from previous research (Mateescu, 2015;

Sarhan & Ntim, 2018). Notably, improvements in CG compliance among subsidiaries in India were observed following the implementation of the Companies Act 2013, suggesting the effectiveness of strengthening CG regulations.

Second, a greater institutional distance between the home and host countries is associated with higher CG compliance among subsidiaries. This implies that subsidiaries from countries with more robust institutions tend to have higher CG compliance. However, there is a cautionary note that subsidiaries from developed economies might lower their CG standards to leverage institutional gaps in emerging markets.

Third, we note a negative relationship between corruption in the Indian market and CG compliance, aligning with studies showing how societal corruption undermines ESG disclosures (Ioannou & Serafeim, 2012). Addressing corruption through effective policies and regulatory enforcement is essential.

Fourth, our analysis shows that governance quality, institutional distance, and corruption significantly impact both manufacturing and service industries, with a more pronounced effect in the service sector. This suggests the need for sector-specific policies to enhance CG compliance across industries.

Fifth, the influence of institutional factors on CG compliance varies by the subsidiary's country of origin, indicating differing behaviours between subsidiaries from developed and developing economies. This highlights the complex nature of institutional impacts based on economic and developmental contexts.

Despite providing new insights and using robust econometric models, our study has limitations. Our quantitative approach may not fully capture the nuances of actual governance practices. Future research could include primary data for a more nuanced understanding and

explore the relationship between institutional factors and organizational characteristics to broaden the scope of CG compliance studies.

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Table I:

Summary Table of Variables

Variable	Description	Operationalization
Corporate governance compliance index (CGCI)	This Index comprises 36 CG elements extracted from the Indian Corporate Governance Scorecard, developed jointly by BSE Limited, IFC and IiAS (2018). Each CG provision of the adapted Index is awarded a value of 1 if it follows reasonable practices for that element of corporate governance and 0 otherwise.	Category score is calculated as the aggregate score of all questions under the category, and then the total score is obtained by adding scores for all four categories of rights & equitable treatment of shareholders (25%), the role of stakeholders in CG (19.4%), disclosure & transparency (30.6%) and responsibilities of the board (25%).
Index for quality of national governance (NGQI)	Composite measure of national governance quality based on three of the six aggregate measures of WGIs.	A simple numerical average of the percentile ranks for WGIs of government effectiveness, regulatory quality and the rule of law.
Index for Institutional distance between host & home countries (IDHHI) (Regulatory Distance)	Composite measure of institutional distance on WGIs.	Institutional profile score (simple average value of the six measures) of the home country - Institutional profile score (simple average value of the six measures) of the host country.
Corruption level in the host country (CL)	Measured through Corruption Perceptions Index (CPI): a composite index based on multiple sources of data and multi-year averages.	Country score in the CPI for each year
Board size (BS)	Total number of directors, including both executive & non-executive directors on the subsidiary board.	The total number of directors on the subsidiary board.
Board Independence (BOCO)	The proportion of independent directors to total board members on the subsidiary board.	Number of independent directors/ total number of directors on the subsidiary board.
Gender diversity on Board (BGD)	The proportion of women directors to total board members on the subsidiary board.	Number of women directors/ total number of directors on the subsidiary board.
Subsidiary size (SS)	The magnitude of operations of the subsidiary in the host country.	Natural logarithm of the total number of employees.
Subsidiary age (SAGE)	Time since the incorporation of the subsidiary.	Natural logarithm of the age of the subsidiary.
Firm profitability (ROA)	Net income is divided by the total assets at the end of the year.	Net Income/ Total Assets.
Leverage (LEV)	Total long-term debt divided by total assets.	Total Debt/Total Assets.
CGCI(a)	This Index comprises 36 CG elements extracted from the Indian Corporate Governance Scorecard, developed jointly by the BSE, IFC and IiAS (2018).	Each category is assigned an equal weight of 25%.
NGQI(a)	Alternative Index for quality of national governance.	The first principal component of the three measures is extracted through Principal Component Analysis (PCA).
IDHH(a)	Composite measure of institutional distance based on PCA	The first principal component obtained through PCA with varimax rotation

Table II:
Summary Statistics for Variables

Variables	Count	Mean	Std. Dev.	Min	Max	Skew.	Kurt.
CGCI	859	90.71	6.659	0	98	-8.884	120.839
NGQI	860	-0.13	0.101	-0.3	0	-0.556	2.225
IDHHI	860	1.544	0.433	-0.3	2.3	-1.999	8.68
CL	860	37.4	3.233	31	41	-0.664	2.283
BOS	833	8.946	2.66	3	20	0.572	3.452
BOI	822	0.473	0.351	0.02	7	16.128	295.273
BGD	835	0.095	0.093	0	0.43	0.691	2.839
SS	710	3693.02	6966.367	68	40426	3.49	15.435
SAGE	860	44.977	21.769	1	99	0.493	2.542
ROA	840	8.53	11.299	-91.2	51.2	-2.125	20.126
LEV	840	-2.667	86.809	-2504.46	92.56	-28.557	823.211

Notes: Variables are operationally defined in Table I.

Table III:
Descriptive Statistics for CGCI

Year	Count	Mean	SD	Median	Min	Max
2010	86	84.36047	16.41012	86	0	94
2011	86	87.61628	3.068506	88	78	94
2012	86	87.87209	2.929752	88	81	94
2013	86	88.15116	2.968531	88	81	94
2014	86	89.55814	3.190444	89	81	97
2015	86	93.51163	2.624519	94	85	97
2016	86	93.84884	2.089286	94	88	97
2017	86	94.04651	1.915307	94	88	97
2018	86	94.15116	1.88191	94	88	98
2019	85	94.02353	2.029406	94	88	98
Total	859	90.71013	6.658575	91	0	98

Notes: Variables are operationally defined in Table I.

Table IV:
Correlation Matrix

Variable	CGCI	IDHHI	NGQI	CL	BOS	BOI	BGD	SS	SAGE	ROA	LEV
CGCI	1.000										
IDHHI	-0.0770*	1.000									
NGQI	0.308***	-0.259***	1.000								
CL	-0.342***	0.116***	-0.331***	1.000							
BOS	0.0137	0.149***	0.00564	0.00129	1.000						
BOI	0.00159	-0.153***	0.0658	0.00149	-0.123***	1.000					
BGD	0.570***	-0.152***	0.466***	-0.397***	-0.185***	0.0387	1.000				
SS	0.0356	0.0534	-0.0208	0.0277	0.196***	-0.047	-0.018	1.000			
SAGE	0.0578	0.211***	0.0834*	-0.0725*	0.138***	-0.0358	0.0197	0.0372	1.000		
ROA	0.0363	0.226***	0.0211	0.0784*	0.138***	-0.0808*	-0.0215	0.292***	0.236***	1.000	
LEV	0.0810*	0.00337	-0.00453	-0.0279	-0.011	0.00713	0.0314	0.00733	0.062	0.0188	1.000

Notes: Variables are operationally defined in Table I.* $p<0.05$, ** $p<0.01$, *** $p<0.001$

Table V:
Regression Results for Aggregate Sample

	(1)	(2)	(3)
VARIABLES	FE	RE	GMM
Lagged CGCI	-	-	0.0567***
			(0.0109)
NGQI	**7.917*** **	**9.406*** **	**9.696*** **
	(1.239)	(1.055)	(1.096)
IDHHI	**3.814*** **	**-0.379**	**1.988** **
	(1.058)	(0.557)	(0.913)
Corruption level	**-0.190*** **	**-0.282*** **	**-0.160*** **
	(0.0233)	(0.0251)	(0.0206)
BOS	0.0932*	0.0873*	0.0647
	(0.0501)	(0.0511)	(0.0584)
BOI	-0.244	-0.0759	-0.0363
	(0.285)	(0.316)	(0.301)
BGD	8.848***	16.38***	17.89***
	(1.185)	(1.158)	(1.300)
SS	7.54e-05**	6.75e-05**	9.24e-05**
	(3.60e-05)	(2.89e-05)	(4.58e-05)
SAGE	0.603***	0.0313***	0.0171
	(0.0420)	(0.0115)	(0.0242)
ROA	-0.000857	-0.0116	-0.00411
	(0.0103)	(0.0111)	(0.0112)
LEV	-0.141**	-0.157**	-0.144**
	(0.0629)	(0.0690)	(0.0684)
Constant	63.53***	99.77***	87.12***
	(3.120)	(1.382)	(2.264)
Observations	691	691	635
R-squared	0.747	-	-
Hausman test (FE)	chi2(9) = 202.19	-	-
	Prob > chi2 = 0.0000		
Sargan Test	-	-	chi2 (43)=367.034
			Prob > chi2 = 0.0000
Number of id	84	84	84

Notes: Variables are operationally defined in Table I.

Table VI:
Panel Quantile Regression Estimations for Aggregate Sample

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
VARIABLES	0.10	0.20	0.30	0.40	0.5	0.60	0.70	0.80	0.90	0.95
NGQI	**11.5013*** **	**10.1561*** **	**11.9133*** **	**11.7857*** **	**10.0397*** **	**14.9290*** **	**13.6065*** **	**10.4942*** **	**8.3669*** **	**11.9139*** **
	(1.5583)	(1.5737)	(1.7352)	(1.5422)	(1.6825)	(1.4312)	(1.3718)	(1.2191)	(2.1191)	(2.2084)
IDHHI	**0.5319**	**0.4212**	**0.3988**	**0.1698**	**-0.0016**	**0.0890**	**0.1005**	**0.0563**	**0.6903**	**1.4826*** **
	(0.4530)	(0.2751)	(0.3662)	(0.3627)	(0.2877)	(0.2658)	(0.2464)	(0.1690)	(0.4608)	(0.2071)
CL	**-0.5105*** **	**-0.5739*** **	**-0.4220*** **	**-0.3937*** **	**-0.3126*** **	**-0.2100*** **	**-0.2302*** **	**-0.2129*** **	**-0.2478*** **	**-0.1492*** **
	(0.0562)	(0.0470)	(0.0434)	(0.0357)	(0.0383)	(0.0422)	(0.0234)	(0.0182)	(0.0557)	(0.0436)
BOS	-0.1256**	-0.0508	0.0278	0.0889	0.1083**	0.0682	0.1454***	0.1430***	0.1371**	0.0587
	(0.0578)	(0.0630)	(0.0658)	(0.0580)	(0.0489)	(0.0531)	(0.0420)	(0.0341)	(0.0650)	(0.1055)
BOI	0.3952	0.2546	0.1395	0.0071	-0.0658	0.2479	0.1136	0.4158	3.9551**	2.2835
	(0.8803)	(2.1503)	(2.5174)	(2.0398)	(0.6808)	(0.6637)	(0.3452)	(1.7250)	(1.6294)	(4.3949)
BGD	11.1832***	10.7846***	12.7765***	14.5201***	14.3301***	11.2018***	12.6577***	11.8912***	14.0941***	10.7112***
	(1.5144)	(1.7862)	(2.0134)	(1.6167)	(1.6236)	(1.4633)	(1.1346)	(0.9786)	(2.4951)	(2.7491)
SS	-0.0000	0.0000	0.0000	0.0000	0.0000	0.0000*	0.0000	0.0000*	0.0001***	0.0000
	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)
SAGE	0.0043	0.0030	0.0006	-0.0035	-0.0024	-0.0014	0.0014	0.0006	-0.0005	-0.0118**
	(0.0060)	(0.0056)	(0.0045)	(0.0050)	(0.0054)	(0.0061)	(0.0043)	(0.0033)	(0.0079)	(0.0057)
ROA	-0.0195	-0.0098	-0.0055	-0.0081	-0.0070	0.0031	0.0026	0.0032	0.0071	0.0006
	(0.0200)	(0.0114)	(0.0102)	(0.0111)	(0.0123)	(0.0092)	(0.0065)	(0.0091)	(0.0197)	(0.0070)
LEV	-0.5295***	-0.2791**	-0.3226***	-0.2066	-0.0414	-0.0711	-0.0863	0.0091	-0.0373	-0.1248
	(0.1109)	(0.1338)	(0.1210)	(0.2497)	(0.1556)	(0.0997)	(0.1114)	(0.0497)	(0.1295)	(0.1783)
Constant	107.6497***	110.1907***	105.1603***	104.4621***	102.0895***	99.9350***	100.2872***	99.7154***	99.1150***	98.2004***
	(2.4515)	(2.0375)	(2.2450)	(1.8827)	(1.4766)	(1.6721)	(1.1422)	(1.3324)	(2.4847)	(2.8679)
Observations	691	691	691	691	691	691	691	691	691	691

Notes: Variables are operationally defined in Table I. Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1.

Table VII:
Regression Results for Disaggregate Sample (Based on Industry Type)

	(1)	(2)	(3)	(4)	(5)	(6)
VARIABLES	FE Manufacturing	RE Manufacturing	GMM Manufacturing	FE Service	RE Service	GMM Service
L1.CGCI	-	-	0.0549***	-	-	0.502***
			(0.0108)			(0.144)
NGQI	**7.487*** **	**8.389*** **	**9.118*** **	**9.709*** **	**17.03*** **	**8.912** **
	(1.396)	(1.138)	(1.179)	(2.721)	(2.887)	(4.319)
IDHHI	**3.838*** **	**-0.473**	**1.563**	**2.150**	**3.434*** **	**4.416**
	(1.207)	(0.587)	(1.044)	(2.317)	(0.799)	(3.287)
CL	**-0.182*** **	**-0.264*** **	**-0.144*** **	**-0.237*** **	**-0.405*** **	**-0.193** **
	(0.0252)	(0.0268)	(0.0212)	(0.0626)	(0.0846)	(0.0859)
BOS	0.0900*	0.0830	0.0407	0.120	0.250*	0.113
	(0.0546)	(0.0543)	(0.0626)	(0.133)	(0.144)	(0.188)
BOI	-0.252	-0.0813	-0.0622	1.953	4.714	6.564
	(0.290)	(0.318)	(0.298)	(3.008)	(3.094)	(4.930)
BGD	9.439***	17.34***	18.00***	6.616**	8.069**	7.612
	(1.323)	(1.248)	(1.359)	(2.791)	(3.291)	(5.722)
SS	8.16e-05*	6.55e-05*	0.000123***	8.80e-05	7.46e-05**	5.69e-05
	(4.34e-05)	(3.35e-05)	(4.60e-05)	(6.75e-05)	(3.35e-05)	(8.03e-05)
SAGE	0.598***	0.0360***	-0.0144	0.582***	0.0534**	-0.0998
	(0.0475)	(0.0125)	(0.0276)	(0.0936)	(0.0267)	(0.106)
LEV	-0.154**	-0.163**	-0.142**	0.678	-0.0949	-0.0578
	(0.0643)	(0.0695)	(0.0681)	(0.503)	(0.586)	(1.650)
ROA	-0.00603	-0.0182	-0.00246	0.0162	-0.00629	0.00910
	(0.0126)	(0.0130)	(0.0139)	(0.0173)	(0.0248)	(0.0254)
Constant	61.12***	98.71***	88.76***	83.58***	98.16***	45.65***
	(3.701)	(1.501)	(2.759)	(4.870)	(4.347)	(14.81)
Observations	609	609	561	82	82	74
R-squared	0.742			0.816		
Number of id	74	74	74	10	10	10
Hausman Test	chi2(9)=152.88 Prob > chi2 = 0.0000	-	-	chi2(9) = 3.03 Prob > chi2 = 0.9631	-	-
Sargan Test	-	-	chi2(43) = 352.5644 Prob > chi2 = 0.0000	-	-	chi2(34) = 29.09797 Prob > chi2 = 0.7067

Notes: Variables are operationally defined in Table I. Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1.

Table VIII:
Panel Quantile Regression Results for Manufacturing Industries

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
VARIABLES	0.10	0.20	0.30	0.40	0.5	0.60	0.70	0.80	0.90	0.95
NGQI	**9.0151*** **	**9.7204*** **	**10.5001*** **	**10.4328*** **	**8.6000*** **	**13.3734*** **	**12.7539*** **	**9.7512*** **	**7.7391*** **	**9.3385*** **
	(1.4223)	(1.7147)	(1.6847)	(1.4752)	(1.6703)	(1.4336)	(1.3986)	(1.4066)	(2.3855)	(3.0572)
IDHHI	**0.4461***	**0.3770**	**0.1537**	**0.0229**	**-0.0899**	**-0.0251**	**-0.0852**	**-0.0889**	**0.4083**	**1.4037** **
	(0.2479)	(0.3536)	(0.4029)	(0.3413)	(0.2780)	(0.1930)	(0.2630)	(0.1548)	(0.7051)	(0.6635)
CL	**-0.4007*** **	**-0.4609*** **	**-0.3780*** **	**-0.3708*** **	**-0.3334*** **	**-0.2060*** **	**-0.1849*** **	**-0.2090*** **	**-0.2173*** **	**-0.1873*** **
	(0.0513)	(0.0479)	(0.0454)	(0.0381)	(0.0422)	(0.0406)	(0.0279)	(0.0155)	(0.0628)	(0.0589)
BOS	-0.1997***	-0.0990	0.0036	0.0564	0.1277**	0.0849*	0.1404***	0.1531***	0.2060***	0.1133
	(0.0556)	(0.0695)	(0.0681)	(0.0538)	(0.0497)	(0.0465)	(0.0442)	(0.0298)	(0.0785)	(0.0888)
BOI	0.5220	0.3123	0.1084	0.0187	-0.0453	0.2623	0.0649	0.7218	3.2868	2.8763
	(4.0969)	(2.3769)	(2.4963)	(1.7088)	(0.6329)	(0.6011)	(0.3533)	(1.3986)	(2.1558)	(5.0715)
BGD	15.5215***	14.4857***	13.8988***	15.5127***	16.1256***	12.9442***	13.5188***	13.9382***	14.8921***	14.5204***
	(1.3942)	(1.8858)	(1.7996)	(1.5953)	(1.1921)	(1.2101)	(1.1896)	(0.7728)	(2.8508)	(3.0559)
SS	-0.0000	-0.0000	-0.0000	-0.0000	0.0000	-0.0000	-0.0000	0.0000	-0.0000	0.0001
	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)
SAGE	0.0152***	0.0069	0.0021	0.0006	0.0008	0.0031	0.0108**	0.0103***	0.0084	-0.0095
	(0.0050)	(0.0060)	(0.0060)	(0.0052)	(0.0060)	(0.0058)	(0.0051)	(0.0027)	(0.0083)	(0.0079)
ROA	-0.0077	-0.0111	-0.0066	-0.0004	0.0015	0.0009	0.0050	0.0124	0.0293	-0.0064
	(0.0183)	(0.0160)	(0.0075)	(0.0083)	(0.0121)	(0.0103)	(0.0032)	(0.0088)	(0.0277)	(0.0230)
LEV	-0.4643***	-0.2933**	-0.3633***	-0.2553	-0.0246	-0.0685	-0.0489	-0.0043	0.0108	-0.0684
	(0.0649)	(0.1374)	(0.1274)	(0.2409)	(0.1537)	(0.0660)	(0.0971)	(0.0905)	(0.2103)	(0.1335)
Constant	102.8835***	105.8500***	103.8732***	103.6330***	102.1536***	99.2125***	98.2133***	98.7287***	97.2708***	97.9834***
	(3.2642)	(2.2658)	(2.2750)	(1.8442)	(1.6270)	(1.5213)	(1.2909)	(1.2469)	(2.7807)	(2.4009)
Observations	609	609	609	609	609	609	609	609	609	609

Notes: Variables are operationally defined in Table I. Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1.

Table IX:
Panel Quantile Regression Results for Service Industries

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
VARIABLES	0.10	0.20	0.30	0.40	0.5	0.60	0.70	0.80	0.90	0.95
NGQI	**13.7631*** **	**11.3337*** **	**12.4988*** **	**15.3159*** **	**16.3696*** **	**17.4248*** **	**16.1220*** **	**14.8647*** **	**21.4699*** **	**18.8834*** **
	(2.8235)	(3.1041)	(3.2143)	(3.6547)	(4.2496)	(4.4769)	(2.9514)	(3.8757)	(4.2405)	(2.3510)
IDHHI	**1.4275**	**0.9655**	**3.6047*** **	**2.9213*** **	**2.8789** **	**2.9819*** **	**3.9031*** **	**3.4610*** **	**4.5237*** **	**4.1096*** **
	(0.9686)	(0.9758)	(0.9796)	(0.9388)	(1.1725)	(0.8253)	(1.2117)	(1.0765)	(0.7624)	(1.3484)
CL	**-0.6801*** **	**-0.6266*** **	**-0.6021*** **	**-0.4606*** **	**-0.3397** **	**-0.2681** **	**-0.2801*** **	**-0.2028** **	**-0.2285** **	**-0.2596*** **
	(0.0628)	(0.1109)	(0.1140)	(0.1071)	(0.1374)	(0.1163)	(0.1022)	(0.0926)	(0.1059)	(0.0543)
BOS	0.2466	0.1346	0.2489	0.2588**	0.2849	0.2455	0.2563	0.1881	0.0763	-0.0435
	(0.1805)	(0.1719)	(0.1747)	(0.1264)	(0.1896)	(0.1738)	(0.1602)	(0.1600)	(0.1930)	(0.1084)
BOI	0.0703	-0.2383	5.9713	5.8075*	7.3529*	6.1692*	4.9680	2.6500	3.6426	3.1259
	(5.5246)	(5.0562)	(3.8861)	(3.4021)	(4.2112)	(3.6307)	(3.4927)	(4.4643)	(4.9147)	(2.7346)
BGD	6.5517	9.7301**	8.5399**	7.7221	10.4032*	12.0983**	10.5397***	10.6169*	5.8685	4.6040*
	(5.3590)	(4.8789)	(3.3491)	(4.6436)	(5.5980)	(5.3680)	(3.7599)	(5.6235)	(5.8775)	(2.6338)
SS	0.0001***	0.0001***	0.0001*	0.0001**	0.0001**	0.0001*	0.0000	0.0001*	0.0000	0.0000
	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0001)	(0.0000)	(0.0000)	(0.0000)	(0.0000)
SAGE	-0.0180	0.0280	0.0556	0.0686**	0.0796**	0.0658**	0.0640	0.0555	0.1380***	0.1486***
	(0.0359)	(0.0519)	(0.0425)	(0.0325)	(0.0394)	(0.0326)	(0.0407)	(0.0579)	(0.0514)	(0.0109)
ROA	0.0295	0.0028	-0.0171	-0.0233	-0.0244	-0.0204	-0.0106	-0.0104	0.0031	0.0065
	(0.0388)	(0.0343)	(0.0373)	(0.0361)	(0.0935)	(0.1074)	(0.0966)	(0.0718)	(0.0418)	(0.0428)
LEV	1.6625*	1.3136**	0.1321	-0.2665	-0.5835	0.0773	-0.7429	-0.6494	-1.1532	-1.4748
	(0.9157)	(0.5321)	(1.1064)	(0.7511)	(0.7324)	(0.6208)	(0.9789)	(0.7278)	(0.6959)	(2.8572)
Constant	110.8885***	109.9167***	102.9540***	99.3844***	94.1892***	92.9276***	93.9645***	93.9561***	94.5869***	97.3790***
	(5.4894)	(5.5577)	(6.7062)	(4.5594)	(5.7992)	(5.0347)	(4.9623)	(5.1353)	(6.5695)	(3.0968)
Observations	82	82	82	82	82	82	82	82	82	82

Notes: Variables are operationally defined in Table I. Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1.

Table X:
Regression Results for Disaggregate Sample (Based on country of origin)

	(1)	(2)	(3)	(4)	(5)	(6)
VARIABLES	FE Developed	RE Developed	GMM Developed	FE Developing	RE Developing	GMM Developing
L1.CGCI	-	-	0.0513***	-	-	0.416***
			(0.0109)			(0.115)
NGQI	**7.825*** **	**8.086*** **	**8.665*** **	**7.500** **	**15.28*** **	**5.003**
	(1.382)	(1.277)	(1.275)	(3.384)	(3.241)	(3.792)
IDHHI	**3.837*** **	**-1.071**	**0.643**	**1.618**	**0.547**	**-1.119**
	(1.210)	(0.862)	(1.089)	(2.493)	(0.728)	(1.480)
CL	**-0.180*** **	**-0.262*** **	**-0.140*** **	**-0.245*** **	**-0.413*** **	**-0.153***
	(0.0248)	(0.0266)	(0.0209)	(0.0685)	(0.0883)	(0.0810)
BOS	0.0851	0.0872	0.0216	0.149	0.323**	0.522**
	(0.0557)	(0.0560)	(0.0638)	(0.166)	(0.150)	(0.228)
BOI	0.215	1.214	0.555	-0.375	0.137	-0.232
	(1.169)	(1.222)	(1.312)	(0.269)	(0.365)	(0.368)
BGD	9.501***	17.13***	18.16***	6.567**	10.12***	12.21***
	(1.320)	(1.253)	(1.364)	(2.776)	(3.119)	(4.703)
SS	7.63e-05**	6.71e-05**	0.000105**	-0.000411	0.000557	0.000782
	(3.67e-05)	(2.93e-05)	(4.55e-05)	(0.000714)	(0.000342)	(0.000532)
SAGE	0.587***	0.0260**	-0.0189	0.704***	0.0519*	-0.0327
	(0.0473)	(0.0124)	(0.0244)	(0.101)	(0.0290)	(0.0749)
LEV	-0.125	-0.214**	0.00518	-0.0869	-0.0198	-0.0805
	(0.0919)	(0.0970)	(0.105)	(0.0867)	(0.115)	(0.111)
ROA	-0.0145	-0.0219*	-0.0139	0.0585***	0.0293	0.0388
	(0.0119)	(0.0127)	(0.0123)	(0.0206)	(0.0254)	(0.0279)
Constant	61.84***	99.76***	90.65***	82.28***	102.4***	55.47***
	(3.804)	(1.860)	(2.750)	(4.339)	(3.936)	(12.48)
Observations	619	619	569	72	72	66
R-squared	0.741			0.844		
Number of id	75	75	75	9	9	9
Hausman Test	chi2(9) =154.03 Prob > chi2 = 0.0000	-	-	chi2() = 47.71 Prob > chi2 = 0.0000	-	-
Sargan Test	-	-	chi2(43) = 339.2136 Prob > chi2 = 0.0000	-	-	chi2(32) = 37.09151 Prob > chi2 = 0.2458

Notes: Variables are operationally defined in Table I. Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1.