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Revisiting Corporate Governance in the Digital Age: The Influence of IT-Enabled Services on Decision Quality

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Abstract

This study examines the relationship between expenditure on IT-enabled services (ITES) and the quality of decision-making within corporate governance frameworks. In doing so, it uses financial performance indicators—specifically Return on Assets (ROA) and Return on Investment (ROI)—as proxies to assess decision quality. The objective is to better understand whether increased investment in technology meaningfully enhances governance outcomes at the organizational level.

With firms allocating growing financial resources to digital infrastructure and IT services, it becomes important to evaluate whether such investments translate into more effective decision-making, particularly at the board level. To explore this, the study adopts a quantitative, empirical approach using firm-level data drawn from IT companies in India. The dataset has been compiled from the ProwessIQ database, ensuring reliability and consistency in financial reporting.

The analysis employs multiple regression techniques to examine the impact of ITES expenditure—measured as capital expenditure relative to total assets—on ROA and ROI. The findings indicate that ITES spending does not have a statistically significant effect on these performance indicators. The results show weak relationships, accompanied by low explanatory power, suggesting that higher levels of ITES investment do not necessarily lead to improved decision quality as reflected in financial outcomes.

These findings question the commonly held assumption that greater technology expenditure automatically enhances governance effectiveness. Instead, they point towards a more complex and context-dependent relationship, where factors such as organizational culture, the expertise of board members, and the strategic alignment of technology investments may play a critical role.

The study underscores the need for a more nuanced understanding of how ITES investments are embedded within governance processes. It also opens up directions for future research, including the use of non-financial measures of decision quality, cross-industry comparisons,

and the examination of emerging technologies such as artificial intelligence and blockchain in shaping governance practices.

Keywords: Decision Quality, Corporate Governance, IT-Enabled Services, Financial Performance, Empirical Analysis

1. Introduction

In the present era marked by rapid technological advancements, the role of IT-enabled services (ITES) in corporate governance has emerged as a topic of considerable interest among scholars and practitioners like **Brynjolfsson & Hitt 1996** and **Carr 2003**. **Barua et al. 2004** believes the increasing reliance on technology within organizational decision-making processes has led to a re-evaluation of traditional governance structures. It is within this context that the present study seeks to explore the impact of ITES expenditure on decision quality, specifically through the lens of financial performance metrics such as Return on Assets (ROA) and Return on Investment (ROI).

Kohli et al. 2012 provides a rationale for focusing on ITES expenditure stems from the recognition that technology investments are no longer merely operational tools but have become strategic assets that can significantly influence the efficacy of corporate boards. **Bowen et al. 2007** aims to contribute to the on-going discourse by providing empirical evidence that links technology expenditure with decision quality, offering insights that could inform both corporate governance practices and policy-making.

Lunardi et al. 2014 emphasis on allocation of financial resources towards ITES is seen not merely as an operational necessity but as a strategic move with potential long-term benefits. However, the true value of these expenditures is often scrutinized, with questions arising about their impact on the quality of decisions made within the corporate governance framework. It is within this context that financial performance metrics such as Return on Assets (ROA) and Return on Investment (ROI) come into focus, serving as indicators of the effectiveness of these decisions.

Turel & Bart 2014 says that the intricate relationship between technology expenditure and decision quality in corporate governance has intrigued both academics and industry leaders. Despite the widespread belief that technology can enhance decision-making, the empirical evidence supporting this claim remains varied. This research endeavours to explore this relationship further, using financial performance metrics to assess whether investments in ITES genuinely contribute to improved decision quality at the board level. Through this

analysis, a deeper understanding of how technology shapes corporate governance in the modern era will be sought.

2. Literature Review

Brynjolfsson and Hitt 1996 conducted a foundational study examining the role of technology investments in improving operational outcomes. Their research highlighted how technology was primarily seen as a tool for enhancing productivity, resource allocation, and process efficiency during the early stages of digital transformation. However, they noted that the focus at that time was mainly on improving operational processes rather than addressing the broader implications of these investments for decision-making within corporate governance.

Building on the understanding of the impact of technology, **Bharadwaj 2000** explored how IT investments could enhance organizational capabilities. Bharadwaj's work suggested that IT infrastructure plays a critical role in shaping an organization's ability to make more informed and effective decisions. This research laid the groundwork for further exploring the strategic importance of technology in corporate governance.

Dehning and Stratopoulos 2003 investigated the relationship between IT investments and financial performance metrics, specifically Return on Assets (ROA) and Return on Investment (ROI). Their findings demonstrated a positive correlation between IT investments and improved financial outcomes, implying that such investments may indeed contribute to better decision-making quality, reflected in financial performance.

Carr 2003 offered a contrasting perspective by questioning the assumption that more ITES expenditure automatically leads to better decision-making. Instead, Carr argued that the key to improved decision quality lies in how effectively IT is integrated into an organization's strategic objectives, rather than the amount spent on technology. This view highlighted the importance of aligning IT investments with governance goals to achieve the desired outcomes.

Schmidt et al. 2004 provided insights into how real-time data and advanced analytics—facilitated by ITES—can contribute to better decision-making quality. Their study emphasized the role of technology in enabling more accurate forecasting, risk assessment, and strategic planning, ultimately improving governance processes. Additionally, they argued that ITES could foster better collaboration and communication among board members.

Wang et al. 2008 noted that despite the growing literature on ITES, the specific relationship between ITES expenditure and decision quality, particularly measured through financial

performance metrics, remains underexplored. Their work called attention to this gap in empirical research, suggesting that a more rigorous investigation is needed to understand this relationship fully.

Tsai et al. 2015 examined how technology implementation within corporate boards could enhance decision-making quality. They argued that the use of technology provides boards with more accurate and timely information, improving the quality of their decisions. This study reinforced the strategic importance of technology within governance structures.

Lee and Choi 2017 extended this discourse by emphasizing the importance of organizational culture, board expertise, and technology implementation in determining whether ITES investments truly enhance decision quality. Their research suggested that factors such as digital literacy within the board play a crucial role in ensuring that technology investments are effectively leveraged for better governance outcomes.

Table 1: Literature Review of IT-Enabled Services and Technology Investments in Relation to Decision Quality and Organizational Performance

Authors	**Period of Study**	**Dependent Variable**	**Independent Variable**
Brynjolfsson and Hitt	1996	Operational outcomes	Technology investments
Bharadwaj	2000	Organizational capabilities	IT investments
Dehning and Stratopoulos	2003	Financial performance metrics (ROA, ROI)	IT investments
Carr	2003	Decision-making quality	ITES integration into strategic objectives
Schmidt et al.	2004	Decision-making quality	Real-time data, advanced analytics (ITES)
Wang et al.	2008	Decision quality (measured through financial performance metrics)	ITES expenditure
Tsai et al.	2015	Decision-making quality	Technology implementation in corporate boards
Lee and Choi	2017	Decision quality	Organizational culture, board expertise, technology implementation

This collection of literature highlights the evolving perspectives on the role of ITES in corporate governance, from operational efficiency to strategic decision-making. It points out that while technology investments have the potential to improve decision quality, the effectiveness of these investments often depends on how well they are aligned with governance objectives and integrated into organizational processes. The gaps identified in

some of these studies, particularly regarding the empirical links between ITES expenditure and decision quality, underscore the need for further research in this area.

3. Conceptual Framework

In the intricate world of corporate governance, the influence of technology on decision-making processes is increasingly recognized. As organizations allocate increasing amounts of resources towards IT-enabled services (ITES), the question arises: *How do these expenditures influence the quality of decisions made within corporate governance structures?* The conceptual framework for this research aims to explore this relationship by focusing on the impact of technology expenditure on decision quality, using financial performance metrics as indicators.

At the heart of this framework lies the independent variable, ITES expenditure, which is measured by the financial resources allocated by companies towards technology. **Joshi et al. (2022)** emphasize that the growing role of technology in decision-making processes within corporate governance is undeniable. In this research, the conceptual framework aims to explore how IT-enabled services (ITES) expenditure influences decision quality, with financial performance metrics like ROA and ROI serving as indicators. **Menshawy et al. (2022)** suggest that ITES expenditure, encompassing investments in technology infrastructure and services, enhances the tools available to decision-makers, resulting in more informed and effective choices at the board level. **Chugh, N. (2025)** elaborates here is that greater investment in ITES leads to more informed and effective decisions at the board level.

On the other side of this relationship is the dependent variable, decision quality, which is operationalized through financial performance metrics such as Return on Assets (ROA) and Return on Investment (ROI). **Dehning and Stratopoulos (2003)** highlight that decision quality can be measured through financial performance, operationalized as ROA and ROI. These metrics assess how efficiently a company leverages its assets and equity to generate profits, thereby reflecting decision effectiveness. **Huang et al. (2006)** argue that ITES expenditure facilitates decision-making through improved data accessibility and sophisticated analytical tools, which contribute to better financial outcomes. Additionally, **Ilmudeen (2021)** underscores the moderating role of external factors, such as market conditions and regulations, that may influence the relationship between ITES expenditure and decision quality.

By situating the analysis within this broader context, the study seeks to offer a more comprehensive understanding of the complexities involved in corporate governance in the digital age.

4. Research Methodology

The research design was framed as a quantitative and empirical analysis, grounded in secondary data collection. The data was meticulously gathered from the ProwessIQ database, ensuring that only relevant and accurate information was used. The key variables in this study were clearly defined: ITES expenditure was selected as the independent variable, while decision quality, a crucial aspect of corporate governance, was the dependent variable. This decision quality was measured through financial performance metrics, specifically Return on Assets (ROA) and Return on Investment (ROI).

A sample size of 27 IT companies was utilized for this study, allowing for a focused examination of the relationship between ITES expenditure and decision quality. Multiple regression analysis was selected as the primary analytical tool due to its ability to quantify the impact of independent variables (ITES expenditure) on dependent variables (decision quality, measured through ROA and ROI). The analysis was conducted with careful attention to ethical considerations, ensuring that the data was handled with the utmost integrity and confidentiality, upholding the standards required for a robust and credible analysis.

This methodological approach not only provided a clear and systematic path for analyzing the impact of ITES expenditure but also contributed to the broader understanding of how technology investments influence decision quality in corporate governance.

5. Analysis, Interpretation, and Findings

In exploring the impact of IT-enabled services (ITES) expenditure on decision quality within corporate governance, this study aimed to assess how capital expenditure (Capex) relative to total assets influences key financial performance metrics, specifically Return on Assets (ROA) and Return on Investment (ROI). These metrics were selected as proxies to gauge the effectiveness of decision-making processes in corporate governance, underpinned by the allocation of ITES resources.

5.1.Combined Analysis of ROA and ROI as Dependent Variables

The regression analyses conducted with ROA and ROI as dependent variables revealed that Capex relative to total assets had minimal explanatory power in both models. The combined model summaries are presented in Table 2.

5.2.Model Summary:

- The R-squared value for ROA was 0.016, indicating that only 1.6% of the variance in ROA could be explained by Capex/Total Assets. Similarly, the R-squared value for ROI was 0.009, signifying that only 0.9% of the variance in ROI was explained by the same independent variable. These values highlight the low explanatory power of the models, suggesting that Capex/Total Assets plays a negligible role in influencing these financial performance metrics.
- The adjusted R-squared values were negative for both ROA (-0.024) and ROI (-0.031), which further indicated poor model fit and suggested that adding more variables might reduce the models' predictive capabilities.
- The standard error of the estimate was 9.24 for ROA and 1425.24 for ROI, reflecting considerable variability around the regression lines, especially in the case of ROI.

5.3.ANOVA Results:

- The ANOVA tables for both models showed that neither model was statistically significant. The F-statistic for ROA was 0.401 with a p-value of 0.533, while for ROI, the F-statistic was 0.230 with a p-value of 0.636. These p-values, both greater than 0.05, indicated that Capex/Total Assets did not significantly predict either ROA or ROI.

5.4.Coefficients:

- The intercept for the ROA model was 5.447, suggesting that when Capex/Total Assets is zero, ROA would be approximately 5.45%. For the ROI model, the intercept was 414.685, implying that ROI would be around 414.69% when Capex/Total Assets is zero.
- The coefficients for Capex/Total Assets were negative in both models, with a value of -0.002 for ROA and -0.180 for ROI. These results indicated a slight negative relationship between Capex/Total Assets and the dependent variables. However, the relationships were not statistically significant, with p-values of 0.533 for ROA and 0.636 for ROI.

5.5.Correlation Analysis:

- The correlation coefficients were also weakly negative, with a value of -0.126 for the ROA model and -0.096 for the ROI model. These correlations, while aligning with the

negative coefficients, were not statistically significant, as reflected by p-values of 0.266 for ROA and 0.318 for ROI.

6. Interpretation and General Findings

The combined analysis of ROA and ROI revealed that Capex as a percentage of total assets did not significantly impact the financial performance metrics in the sample analyzed. The low R-squared values, non-significant coefficients, and weak negative correlations suggested that changes in Capex relative to total assets did not meaningfully influence either ROA or ROI.

The findings indicate that other factors beyond Capex/Total Assets might play a more critical role in determining financial performance. This observation aligns with the notion that IT-enabled services expenditure, as measured by Capex/Total Assets, may not be a decisive factor in improving decision quality within corporate governance, as assessed through financial performance metrics.

The results of this empirical analysis thus suggest that future research should consider a broader range of variables or alternative approaches to better understand the complex dynamics between ITES expenditure, decision quality, and corporate financial performance. Moreover, the findings underscore the importance of considering the multifaceted nature of corporate governance, where decision-making quality may be influenced by a confluence of factors beyond mere capital allocation towards IT-enabled services.

Table 2: Combined Model Summary, ANOVA, Coefficients and Correlation for ROA and ROI

Parameters	**ROA**	**ROI**
Model Summary		
R-Squared	0.016	0.009
Adjusted R-Squared	-0.024	-0.031
Std. Error of Estimate	9.24	1425.24
ANOVA		
F-Statistic	0.401	0.23
Significance (p-value)	0.533	0.636
Coefficients		
Intercept (Constant)	5.447	414.685

Capex/Total Assets Coefficient	-0.002	-0.18
Significance of Coefficient (p)	0.533	0.636
Correlation		
Correlation Coefficient	-0.126	-0.096
Significance of Correlation (p)	0.266	0.318

7. Future Scope of Study

The present study provides a foundation for understanding the relationship between IT-enabled services (ITES) expenditure and decision quality in corporate governance, yet it opens the door to several avenues for future research. As technology continues to evolve, the need to delve deeper into how specific types of ITES investments, beyond mere capital expenditure, impact decision-making at the board level becomes increasingly pertinent. Future studies could explore the effects of different categories of IT investments, such as cyber security, data analytics, and artificial intelligence, on the quality of corporate governance decisions.

Moreover, as this research primarily focused on financial performance metrics such as Return on Assets (ROA) and Return on Investment (ROI), future research could expand the scope to include non-financial metrics that reflect decision quality, such as innovation performance, customer satisfaction, and employee engagement. These additional variables could provide a more holistic view of how ITES expenditure influences overall organizational outcomes.

Furthermore, the study was confined to a specific sample of IT companies. Future research could benefit from examining a more diverse range of industries to determine whether the observed relationships hold across different sectors. Additionally, longitudinal studies that track changes in ITES expenditure and decision quality over time could offer insights into the long-term effects of technology investments on corporate governance.

As the digital landscape continues to transform, understanding the role of emerging technologies such as blockchain, machine learning, and the Internet of Things (IoT) in corporate governance will be critical. Future research could investigate how these technologies influence decision-making processes and whether they further enhance or complicate the relationship between ITES expenditure and decision quality. By exploring these areas, future studies can contribute to a more nuanced understanding of the role of technology in shaping the future of corporate governance.

8. Limitations of the Study

While this study offers valuable insights, it is not without limitations that must be acknowledged. One of the primary limitations is the reliance on secondary data from the ProwessIQ database, which may have constrained the variables available for analysis. The absence of certain variables, such as those related to innovation performance or organizational culture, may have limited the study's ability to capture the full spectrum of factors influencing decision quality in corporate governance.

Another limitation stems from the focus on a specific subset of companies within the IT sector. This industry-specific concentration may limit the generalizability of the findings to other sectors. Companies in different industries may exhibit varying relationships between ITES expenditure and decision quality due to differing technological needs, governance structures, and market dynamics.

Additionally, the study's reliance on financial performance metrics such as ROA and ROI as proxies for decision quality presents a narrow perspective. While these metrics are valuable indicators of financial success, they may not fully capture the complexities of decision quality, which can be influenced by a wide range of factors beyond financial performance alone.

The use of multiple regression analysis, while appropriate for this study, also has its limitations. The models employed had low explanatory power, as indicated by the R-squared values, which suggests that other unaccounted variables may play a significant role in influencing decision quality. The potential for omitted variable bias cannot be entirely ruled out, which may have impacted the robustness of the findings.

Lastly, the study was cross-sectional in nature, capturing a snapshot in time rather than longitudinal trends. As a result, the findings may not fully reflect the dynamic nature of ITES expenditure and its evolving impact on decision quality. Future research that adopts a longitudinal approach could provide more comprehensive insights into the temporal effects of technology investments on corporate governance.

9. Conclusion

In conclusion, this study sought to explore the impact of IT-enabled services (ITES) expenditure on decision quality within the context of corporate governance, using financial performance metrics such as Return on Assets (ROA) and Return on Investment (ROI) as indicators. The findings revealed that ITES expenditure, as measured by capital expenditure relative to total assets, had a minimal and statistically insignificant impact on these financial metrics. This outcome suggests that while technology investments are often viewed as

strategic assets, their influence on decision quality, as reflected in financial performance, may be more complex and context-dependent than initially anticipated.

The analysis highlighted that Capex as a percentage of total assets did not significantly predict either ROA or ROI, and the weak negative correlations observed further underscored the limited explanatory power of the models used. These results point to the possibility that factors beyond ITES expenditure, such as organizational culture, board expertise, and the specific nature of technology investments, may play a more critical role in shaping decision quality within corporate governance frameworks.

The study's findings contribute to the ongoing discourse on the role of technology in corporate governance by providing empirical evidence that challenges the assumption that increased ITES expenditure automatically leads to improved decision quality. Instead, the research suggests that a more nuanced understanding of how technology investments are integrated into governance processes is needed.

As organizations continue to navigate the complexities of the digital age, the importance of aligning technology investments with broader corporate governance goals becomes increasingly evident. The study underscores the need for future research to explore a wider range of variables and to adopt alternative methodologies that can capture the multifaceted nature of decision quality in corporate governance. By doing so, future studies can build upon the insights gained from this research, contributing to a deeper and more comprehensive understanding of the relationship between ITES expenditure and decision quality in the evolving landscape of corporate governance.

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Appendix

S.No.	Company Names
1.	Capgemini Technology Services India Ltd.
2.	Ctrl S Datacenters Ltd.
3.	D L F Cyber City Developers Ltd.
4.	Designtech Systems Pvt. Ltd.
5.	Electronics Corpn. Of Tamil Nadu Ltd.
6.	Estancia It Park Pvt. Ltd.
7.	G P Realtors Pvt. Ltd.
8.	Ganesh Housing Corpn. Ltd.

9.	Genpact India Pvt. Ltd.
10.	Golden Tower Infratech Pvt. Ltd.
11.	Google India Pvt. Ltd.
12.	Infosys Ltd.
13.	Karnataka State Electronics Devp. Corpn. Ltd.
14.	Madhya Pradesh State Electronics Devp. Corpn. Ltd.
15.	Microsoft Corporation (India) Pvt. Ltd.
16.	N T T Global Data Centers & Cloud Infrastructure India Pvt. Ltd.
17.	Netmagic Solutions Pvt. Ltd.
18.	Nxtra Data Ltd.
19.	Phoenix Infocity Pvt. Ltd.
20.	Prestige Estates Projects Ltd.
21.	Rolling Construction Pvt. Ltd.
22.	S T T Global Data Centres India Pvt. Ltd.
23.	Sify Technologies Ltd.
24.	Tamilnadu Industrial Devp. Corpn. Ltd.
25.	Tata Consultancy Services Ltd.
26.	Tidel Park Ltd.
27.	Web Werks India Pvt. Ltd.