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**LİSANSÜSTÜ**  
**EĞİTİM ENSTİTÜSÜ**

**CORPORATE DIGITAL RESPONSIBILITY AND  
SUSTAINABLE BUSINESS STRATEGY: EVIDENCE FROM  
SELECTED EGYPTIAN LISTED COMPANIES**

**MASTER'S THESIS**

**AYAD ABDALLAH HUSSEIN ELSHARA**

**Department of Business Administration**

**Division of Business Administration**

**JANUARY, 2026**



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**23220803117**

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**Thesis advisor: Asst. Prof. Dr. Yasemin DEMİREL**

**JANUARY, 2026**

**ACCEPTANCE AND APPROVAL**

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**YÜKSEK LİSANS TEZ ONAY FORMU**

Enstitümüz İşletme Anabilim Dalı, İşletme (İngilizce) Tezli Yüksek Lisans Programı 23220803117- AYAD ABDALLAH HUSSEIN ELSHARA'ın “**CORPORATE DIGITAL RESPONSIBILITY AND SUSTAINABLE BUSINESS STRATEGY: EVIDENCE FROM SELECTED EGYPTIAN LISTED COMPANIES**” konulu Yüksek Lisans tezi Enstitümüz Yönetim Kurulunun 23/12/2025 tarihli ve 2025/27 sayılı Yönetim Kurulu kararıyla oluşturulan jüri tarafından oybirliği ile 19/01/2026 tarihinde kabul edilmiştir.

	<u>Unvan</u>	<u>Adı Soyadı</u>	<u>Üniversite</u>	<u>İmza</u>
<b>ASIL ÜYELER</b>				
<b>Danışman</b>	Dr. Öğr. Üyesi	Yasemin DEMİREL	İstanbul Topkapı Üniversitesi	
<b>1. Üye</b>	Dr. Öğr. Üyesi	Cem Ufuk BAYTAR	İstanbul Topkapı Üniversitesi	
<b>2. Üye</b>	Dr. Öğr. Üyesi	Ali KILINÇ	Piri Reis Üniversitesi	
<b>YEDEK ÜYELER</b>				
<b>1. Üye</b>	Prof. Dr.	Batuhan KOCAOĞLU	İstanbul Topkapı Üniversitesi	
<b>2. Üye</b>	Prof. Dr.	Metin ZONTUL	Sivas Bilim ve Teknoloji Üniversitesi	

**ONAY**

Doç. Dr. Cevat RAHEBİ  
Enstitü Müdürü

## **ACADEMIC STATEMENT OF INTEGRITY**

I hereby declare and confirm on my honor that this paper titled “**CORPORATE DIGITAL RESPONSIBILITY AND SUSTAINABLE BUSINESS STRATEGY: EVIDENCE FROM SELECTED EGYPTIAN LISTED COMPANIES**”, that I submit as a master’s thesis is the result of my scholarly work created by scientific ethics and traditions, that all materials from the work of others are acknowledged, cited wherever they are used in my work and indicated in the reference list.

19/01/2026

**AYAD ABDALLAH HUSSEIN ELSHARA**

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## TABLE OF CONTENTS

	<u>Page</u>
<b>ACCEPTANCE AND APPROVAL</b> .....	<b>II</b>
<b>ACADEMIC STATEMENT OF INTEGRITY</b> .....	<b>III</b>
<b>ACKNOWLEDGEMENT</b> .....	<b>IV</b>
<b>TABLE OF CONTENTS</b> .....	<b>V</b>
<b>ABBREVIATIONS</b> .....	<b>VIII</b>
<b>LIST OF TABLES</b> .....	<b>IX</b>
<b>LIST OF FIGURES</b> .....	<b>X</b>
<b>ABSTRACT</b> .....	<b>XI</b>
<b>ÖZET</b> .....	<b>XII</b>
<b>CHAPTER 1. INTRODUCTION</b> .....	<b>1</b>
1.1 Background .....	1
1.2 Problem Statement .....	2
1.3 Research Questions .....	3
1.4 Aim of the Study.....	3
1.5 Research Objectives .....	4
1.6 Significance of the Study .....	4
1.7 Thesis Structure .....	5
<b>CHAPTER 2. LITERATURE REVIEW</b> .....	<b>7</b>
2.1 Introduction .....	7
2.2 Corporate Digital Responsibility: Concept and Evolution.....	7
2.3 CDR as an Extension of CSR.....	9
2.4 Main Dimensions of Corporate Digital Responsibility .....	9
2.5 Sustainable Business Strategy and Long-Term Value Creation .....	10
2.6 Digital Transformation, Sustainability, and Responsibility.....	11
2.7 CDR, ESG, and Corporate Performance .....	12
2.8 Disclosure, Stakeholders, and the Visibility of CDR.....	13
2.9 Recent Developments in CDR Research.....	14

2.10 Research Gap .....	15
2.11 Chapter Summary .....	15
<b>CHAPTER 3. THEORETICAL METHODOLOGY .....</b>	<b>17</b>
3.1 Introduction .....	17
3.2 Research Philosophy and Approach .....	17
3.3 Research Design .....	18
3.4 Population and Sample Selection .....	19
3.4.1 Population.....	19
3.4.2 Sample .....	19
3.5 Unit of Analysis.....	20
3.6 Data Sources .....	21
3.7 Data Collection Procedure.....	22
3.8 Analytical Framework .....	22
3.8.1 Conceptual Basis .....	22
3.8.2 Main Dimensions of Analysis .....	23
3.8.3 Scoring Logic .....	24
3.9 Sustainability-Related Strategic Indicators .....	24
3.10 Data Collection.....	25
3.10.1 Sample and Reporting Profile .....	25
3.10.2 CDR Comparative Disclosure Score .....	25
3.10.3 Strategic and Performance-Oriented Comparative Indicators.....	26
3.11 Data Analysis.....	26
3.12 Validity and Reliability.....	27
3.13 Ethical Considerations.....	28
3.14 Methodological Limitations .....	28
3.15 Chapter Summary .....	29
<b>CHAPTER 4. DATA ANALYSIS AND DISCUSSION .....</b>	<b>30</b>

4.1 Introduction .....	30
4.2 Availability of Empirical Materials .....	30
4.3 Comparative CDR Disclosure Assessment .....	33
4.4 Comparative FY2024 Performance Indicators .....	36
4.5 Discussion of Main Findings.....	39
4.6 Chapter Summary .....	40
<b>CHAPTER 5. CONCLUSION .....</b>	<b>41</b>
5.1 Introduction .....	41
5.3 Summary of Main Findings.....	42
5.5 Practical Implications .....	44
5.6 Contributions of the Study .....	45
5.7 Limitations of the Study .....	46
5.8 Recommendations .....	47
5.9 Recommendations for Future Research .....	47
5.10 Final Remarks.....	48
<b>REFERENCES .....</b>	<b>49</b>
<b>CURRICUIUM VITAE .....</b>	<b>52</b>

## **ABBREVIATIONS**

<b>CDR</b>	: Corporate Digital Responsibility
<b>CSR</b>	: Corporate Social Responsibility
<b>ESG</b>	: Environmental, Social and Governance
<b>ICT</b>	: Information and Communication Technology
<b>EGX</b>	: Egyptian Exchange

## LIST OF TABLES

	<u>Page</u>
<b>Table 4.1:</b> Disclosure Coverage of the Selected Egyptian Listed Companies .....	31
<b>Table 4.2:</b> Comparative CDR Disclosure Score of the Selected Companies.....	34
<b>Table 4.3:</b> Selected FY2024 Revenue and Profitability Indicators.....	37

## LIST OF FIGURES

	<u>Page</u>
<b>Figure 4.1:</b> Disclosure Coverage Score Across the Selected Companies.....	33
<b>Figure 4.2:</b> Total CDR Disclosure Score Across the Selected Companies.....	36
<b>Figure 4.3:</b> FY2024 Top-line Metric for larger Firm (EGP bn).....	38
<b>Figure 4.4:</b> FY2024 Top-line Metric for digital-intensive Firms (EGP bn).....	38

## ABSTRACT

### **CORPORATE DIGITAL RESPONSIBILITY AND SUSTAINABLE BUSINESS STRATEGY: EVIDENCE FROM SELECTED EGYPTIAN LISTED COMPANIES**

This thesis examines the place of Corporate Digital Responsibility (CDR) within sustainable business strategy through an empirical comparative study of some listed companies in Egypt. Although CDR is often seen as a theoretical concept, this research strives to transform it into an applied analytical framework based on actual corporate reports. The research focuses on a set of listed companies on the Egyptian Exchange. These companies are: Commercial International Bank (CIB), Telecom Egypt, EFG Holding, e-finance for Digital and Financial Investments, and Fawry for Banking Technology and Electronic Payments.

The research takes a practical approach in terms of methodological perspective. It also takes on a multiple case approach. It has made use of secondary data that is publicly available. It has referred to annual reports, governance reports, investor relations, and financial information related to FY2024. For assessing the visibility of CDR, an evaluative framework has been developed that consists of five domains: digital governance and oversight, data responsibility and cybersecurity awareness, responsible digital services and inclusion, sustainability and ESG integration, and strategic digital positioning.

The findings suggest that Corporate Digital Responsibility (CDR) is empirically verifiable in all five firms to varying levels of maturity and integration. The firm that shows the strongest disclosure of Corporate Digital Responsibility is CIB, while the digital responsibility of the firms' positioning is also strong in the case of e-finance and Fawry due to the nature of their digital business. The findings also suggest that digital responsibility is linked to the strategic maturity and sustainability of the business. The study suggests that Corporate Digital Responsibility is an important strategic driver in modern corporate management and that it is a useful framework for future research in the context of emerging economies.

**Keywords:** *Corporate Digital Responsibility, Sustainable Business Strategy, Digital Governance, ESG, Egyptian Listed Companies.*

## ÖZET

### KURUMSAL DİJİTAL SORUMLULUK VE SÜRDÜRÜLEBİLİR İŞ STRATEJİSİ: SEÇİLMİŞ MISIR'DA BORSAYA KOTE ŞİRKETLERDEN KANITLAR

Bu tez, Kurumsal Dijital Sorumluluğun (Corporate Digital Responsibility - CDR) sürdürülebilir iş stratejisindeki rolünü, seçilmiş Mısır'da borsaya kote şirketler üzerinde yapılan ampirik ve karşılaştırmalı bir analiz aracılığıyla incelemektedir. CDR çoğu zaman teorik bir kavram olarak ele alınsa da, bu çalışma onu gerçek kurumsal açıklamalara dayalı uygulanabilir bir analitik çerçeveye dönüştürmeyi amaçlamaktadır. Araştırma, Mısır Borsası'nda işlem gören beş şirkete odaklanmaktadır: Commercial International Bank (CIB), Telecom Egypt, EFG Holding, e-finance for Digital and Financial Investments ve Fawry for Banking Technology and Electronic Payments

Çalışma, yıllık raporlar, kurumsal yönetim raporları, yatırımcı ilişkileri materyalleri ve 2024 mali yılına ait finansal açıklamalar gibi kamuya açık ikincil verilere dayanan pragmatik bir çoklu durum çalışması tasarımını benimsemektedir. CDR'nin görünürlüğünü değerlendirmek amacıyla beş boyuttan oluşan yapılandırılmış bir çerçeve geliştirilmiştir: dijital yönetim ve gözetim, veri sorumluluğu ve siber güvenlik farkındalığı, sorumlu dijital hizmetler ve kapsayıcılık, sürdürülebilirlik ve ESG entegrasyonu ile stratejik dijital konumlandırma. Bu boyutlar, karşılaştırmalı tabloların ve grafiksel analizlerin oluşturulmasında kullanılmıştır.

Bulgular, Kurumsal Dijital Sorumluluğun beş şirketin tamamında ampirik olarak gözlemlenebilir olduğunu, ancak olgunluk ve bütünleşme düzeylerinin farklılık gösterdiğini ortaya koymaktadır. CIB, genel CDR açıklama düzeyi bakımından en güçlü performansı sergilemiştir; e-finance ve Fawry ise dijital iş modellerinin niteliği nedeniyle dijital sorumluluk açısından güçlü bir konum göstermiştir. Bulgular ayrıca sorumlu dijitalleşmenin, daha geniş stratejik olgunluk ve sürdürülebilir iş yönelimi ile yakından ilişkili olduğunu göstermektedir. Çalışma, CDR'nin çağdaş kurumsal uygulamalarda giderek daha önemli bir stratejik unsur haline geldiği sonucuna ulaşmakta ve gelişmekte olan piyasa bağlamlarında gelecekte yapılacak araştırmalar için yararlı bir çerçeve sunmaktadır.

**Anahtar Kelimeler:** Kurumsal Dijital Sorumluluk, Sürdürülebilir İş Stratejisi, Dijital Yönetişim, ESG, Mısır'da Borsaya Kote Şirketler.

## **CHAPTER 1. INTRODUCTION**

### **1.1 Background**

Digital transformation has now become a strategic, ethical, and sustainability-related issue for modern enterprises. With enterprises becoming increasingly dependent on digital platforms, financial technologies, data-driven decision-making models, artificial intelligence, and automated customer interface systems, there is a heightened need to enhance innovation while managing digital risks responsibly. In this context, Corporate Digital Responsibility (CDR) has now become a new dimension of corporate responsibility that extends into the digital sphere. It includes data governance, privacy, cybersecurity, algorithmic fairness, transparency, responsible innovation, social implications of digital operations, and environmental implications of digital operations. At the same time, sustainable business strategy has now become a broader concept that has extended from environmental compliance to governance quality, stakeholder trust, ethical behavior, and long-term value creation. These developments are indicative of the importance of evaluating whether enterprises are able to embed digital responsibility within their sustainability strategy (Financial Regulatory Authority, 2024; Egyptian Exchange, n.d.).

The Egyptian environment is a pertinent backdrop for such an inquiry. Indeed, the Egyptian market and regulatory environment has been increasingly favorable for sustainability disclosures, with a growing list of requirements for listed companies to make disclosures related to ESG information in their annual reports. At the same time, a group of prominent Egyptian publicly listed companies has started issuing annual materials related to governance, finance, and investor relations, suggesting a trend towards digitization, governance, and technology-driven business models. This is a tangible opportunity to move the discourse on climate-related disclosure (CRD) from a largely abstract, theoretical space to a more tangible, empirical space based on publicly available corporate materials and

performance data (FRA, 2024; Commercial International Bank, [CIB], 2024; Telecom Egypt, 2025; EFG Holding, 2024; e-finance, 2025; Fawry, 2025).

The research undertakes an empirical analysis of five publicly listed firms in Egypt: Commercial International Bank (CIB), Telecom Egypt, EFG Holding, e-finance for digital and financial investments, and Fawry. These firms are used as examples in the research in order to analyze the relationship between digital accountability and a sustainable business approach. The selection of these firms is based on industries in which digitalization, governance, disclosure, and technology-driven stakeholder engagement are of particular interest. Therefore, the research seeks to move from a broad discussion of the concept of digital accountability and a sustainable business approach to an empirical analytical framework based on real corporate disclosures and comparative metrics (Egyptian Exchange [EGX], n.d.; CIB, 2024; Telecom Egypt, 2025; EFG Holding, 2024; e-finance, 2025; Fawry, 2025).

## **1.2 Problem Statement**

Although digital transformation has become more important in Egyptian listed companies, research on the integration of digital responsibility within business sustainability is still limited. There are some instances where companies are disclosing various topics such as governance, financial performance, sustainability, technology, and digitization; however, these are not being analyzed under a broader framework of corporate digital responsibility.

The problem of research to be addressed by the present thesis is the lack of a clear empirical evaluation of the extent to which large Egyptian listed companies are actually integrating digital responsibility into their strategic activities, as opposed to still considering digital transformation as a business/operational issue.

Furthermore, a methodological void has also been identified in the research on digital corporate responsibility (CDR), where the discourse on CDR has been largely conceptual and normative, with relatively little research focused on

operationalizing CDR in a quantifiable form for comparative purposes among firms based on publicly available data. As a result, the current research responds to a recognized practical and academic need by developing an analytical framework for assessing digital responsibility based on firm disclosures and its relationship with sustainable business strategies in Egypt.

### **1.3 Research Questions**

The research is guided by the following main research question:

“How is Corporate Digital Responsibility reflected in the sustainable business strategies of selected Egyptian listed companies?”

The following research sub-questions are formulated from the main research question:

1. What are the major dimensions of Corporate Digital Responsibility that can be traced in the disclosure practices of the selected Egyptian companies?
2. To what extent can differences in terms of digital responsibility disclosure and practice be traced in the selected companies?
3. How can indicators related to CDR be structured into a measurable framework based on actual data?
4. Is there an evident relationship between CDR disclosure and sustainability strategies in the selected companies?
5. What are the potential contributions of the Egyptian listed companies' environment in terms of empirical development in CDR research?

### **1.4 Aim of the Study**

The primary aim and objective of this thesis is to empirically examine the significance of Corporate Digital Responsibility in sustainable business strategies through comparative analysis of some Egyptian listed companies.

## **1.5 Research Objectives**

In the pursuit of the aforementioned objective, the study has the following scholarly objectives:

1. To create a practical analytical understanding of Corporate Digital Responsibility in the context of listed companies.
2. To identify the measurable dimensions of Corporate Digital Responsibility for empirical analysis.
3. To examine and compare the disclosures and reports available for five Egyptian listed companies.
4. To create structured tables based on available data from companies related to Corporate Digital Responsibility and sustainability.
5. To create visual and comparative understandings from the data with the help of graphs and other forms of analysis.
6. To understand the role of digital responsibility in a sustainable business model, corporate governance, and corporate positioning.
7. To contribute empirically to the thesis beyond a theoretical debate.

## **1.6 Significance of the Study**

The significance of this study can be determined on two levels: practical and theoretical. From a theoretical perspective, it contributes to the existing literature since it transforms an essentially theoretical concept into an empirical framework applicable in practical organizations. Furthermore, it assists in filling the existing gap between digital ethics, sustainability, governance, and strategic management, all of which are addressed as related concepts instead of separate ideas.

From a practical perspective, the research provides an approach that can be used in assessing how an organization communicates and operationalizes digital

responsibility. This is significant in terms of managerial, investor, and scholarly interests in assessing if an organization is effectively pursuing digital transformation in an appropriate and sound manner.

The study is significant given that it highlights the importance of the emerging market background of Egypt. In that regard, it provides a regional perspective that is sometimes forgotten in the broader discussion of Corporate Digital Responsibility and how publicly available information from companies can be used for comparative analysis.

### **1.7 Thesis Structure**

This thesis is divided into five chapters:

#### **Chapter One: Introduction**

This chapter describes the background of the study, states the research problem, identifies the research questions, indicates the objectives and goals of the research, highlights its significance, and describes its structure.

#### **Chapter Two: Literature Review**

The second chapter of the research will discuss the pertinent literature regarding Corporate Digital Responsibility, business strategy in sustainability, digital governance, ESG-related disclosure, and the relationship between digital transformation and corporate sustainability.

#### **Chapter Three: Research Methodology**

The chapter outlines the empirical research design, sample selection criteria and process, data sources used, unit of analysis, and methodology used in developing the comparative analytical framework for the five listed companies in Egypt. It also outlines the process used in developing tables and figures from actual disclosed data.

#### **Chapter Four: Data Analysis and Discussion**

In this chapter, the empirical findings of the research are presented through comparative tables, descriptive explanations, and graphical illustrations from actual company disclosures and related materials that show their performance. The findings are interpreted in relation to the research questions posed by the research.

#### **Chapter Five: Conclusion and Recommendations**

The findings of the study are briefly outlined in this chapter, conclusions are drawn, implications are highlighted, and the limitation and recommendations are addressed.

## **CHAPTER 2. LITERATURE REVIEW**

### **2.1 Introduction**

The recent literature also supports the idea that the analysis of sustainable business strategies cannot be performed in isolation from digital transformation, stakeholder accountability, and governance quality. This is mainly because businesses currently create and distribute value based on digital infrastructures, data-driven decision-making, and technology-driven business models, which impact opportunities and risks for long-term performance (Bansal & DesJardine, 2014; Vial, 2019).

Meanwhile, academic studies on sustainability have moved beyond the initial concern with environmental compliance towards a broader perspective that accentuates the importance of long-term value creation, good governance, and the alignment of business practices with broader societal and institutional expectations (Dyllick & Muff, 2016; Eccles et al., 2014).

In this regard, Corporate Digital Responsibility (CDR) has been developed as a new field of research that focuses on the governance of digital technologies, data, and algorithms in a responsible manner instead of focusing merely from a technological and operational point of view (Lobschat et al., 2021; Mueller, 2022).

Thus, the aim of this chapter is to synthesize the major theoretical and empirical works related to Corporate Digital Responsibility, sustainable business strategy, digital transformation, ESG-oriented governance, and disclosure-based accountability, before identifying the research gap that is being filled by the present study (Verhoef et al., 2021; Carl & Hinz, 2024).

### **2.2 Corporate Digital Responsibility: Concept and Evolution**

The most cited foundational article in the field of Corporate Digital Responsibility (CDR) is that of Lobschat et al. (2021). Corporate Digital

Responsibility is described in the article as follows: “CDR is the values and norms that an organization shares regarding its activities related to digital technology and data; thus, it emphasizes responsibility in organizational decision-making rather than focusing on reputation management and compliance” (Lobschat et al., 2021).

Such a preliminary conceptualization is significant, as it highlights that data falling under the realm of Continuous Digital Reasoning is a concern that transcends organizational and strategic dimensions, rather than being a concern that is relegated to a specific section of the privacy policy or the cybersecurity policy (Lobschat et al., 2021; Herden et al., 2021).

Subsequent research has further developed this base by suggesting that Corporate Digital Responsibility (CDR) should be understood in terms of its response to the expansive duties created by digitalization, including the associated risk and opportunities in data utilization, decision-making, digital services, dependency, and social implications (Herden et al., 2021; Mihale-Wilson et al., 2022).

Mueller (2022) develops the idea by proposing a distinction between content-oriented understandings of responsible digital conduct (CDR) based on digital ethics and instrumental or governance-oriented understandings, which focus on the processes by which companies engage in responsible digital conduct (Mueller, 2022).

Recent review literature shows that there is a shift from conceptual definition to operationalization, implementation, and activity-based analysis. This is particularly relevant to thesis work that needs to measure or compare observable CDR practices across actual firms, as opposed to evaluating the concept on a purely abstract level (Carl & Hinz, 2024; Covucci et al., 2024).

### **2.3 CDR as an Extension of CSR**

A major debate in the literature is whether corporate digital responsibility (CDR) is simply a digital dimension of corporate social responsibility or whether it should be treated as a unique construct with its own strategic and governance implications (van der Merwe & Al Achkar, 2022; Mueller, 2022).

The tradition of corporate social responsibility (CSR) is highly pertinent and provides the normative foundation for stakeholder accountability and legitimacy, as well as the social responsibility of the firm, particularly in those contexts in which corporate strategies are socially significant (Bansal & DesJardine, 2014; Dyllick & Muff, 2016).

However, a major body of research suggests that digitalization poses challenges that are not fully captured by existing CSR dimensions such as data extraction, algorithms, surveillance, automated profiling, cybersecurity challenges, and ethical implications of power through digital platforms (Lobschat et al., 2021; van der Merwe & Al Achkar, 2022).

From this perspective, corporate digital responsibility (CDR) could be seen as an extension of corporate social responsibility (CSR), which is also an essential change in the digital economy, where the behavior of responsible firms becomes increasingly dependent on the management of information and technology (Herden et al., 2021; Mihale-Wilson et al., 2022).

### **2.4 Main Dimensions of Corporate Digital Responsibility**

While no measurement model has achieved universal acceptance in the literature, certain dimensions of CDR that recur in the major research efforts can be identified and thus enable the development of an analytical framework (Lobschat et al., 2021; Carl & Hinz, 2024).

The first recurring dimension relates to digital governance and oversight, including senior-level accountability, internal controls, strategic supervision, and

alignment with organizational values and responsibilities (Mueller, 2022; Mihale-Wilson et al., 2022).

The second important dimension relates to data responsibility and cybersecurity, including issues like privacy, transparency, information security, data stewardship, digital trust, and data-driven corporate and customer data use in minimizing harm and promoting legitimacy (Lobschat et al., 2021; van der Merwe & Al Achkar, 2022).

The third-dimension deals with the responsibility of digital products and services, especially in the context in which firms develop digital interfaces, automated systems, AI-enabled services, and platform-based products that impact accessibility, fairness, and welfare in technology-mediated markets (Scarpi & Pantano, 2024; Carl et al., 2024).

The fourth dimension is related to the impact on society and stakeholders, considering the fact that digital technologies have a significant impact on efficiency, social inclusion, and other aspects related to the fourth dimension (Herden et al., 2021; Hartley et al., 2024).

The fifth dimension includes strategic digital positioning, in which companies think about digitalization not only as a short-term tool for efficiency and cost reduction, but also as a long-term strategic axis supported by good governance (Mueller, 2022; Carl & Hinz, 2024).

## **2.5 Sustainable Business Strategy and Long-Term Value Creation**

The existing body of literature on sustainable business strategy provides the wider conceptual framework in which CDR can be conceived, since sustainability-based business strategy emphasizes value creation, strategic resilience, and the integration of social, environmental, and governance issues into the very heart of the business model, and not at the periphery (Bansal & DesJardine, 2014; Dyllick & Muff, 2016).

Bansal & DesJardine (2014) argued that the fundamental feature of sustainability is its temporal orientation, as sustainability requires organizations to consider how present decisions shape future conditions and organizational sustainability, as opposed to being only short-term oriented (Bansal & DesJardine, 2014).

The perspective is furthered by Dyllick & Muff (2016) who identify the differences between business-as-usual approaches, triple bottom line management, and genuine business sustainability, thereby showing that sustainability is actually about businesses adding value to society rather than avoiding reputational and/or regulatory risk (Dyllick & Muff, 2016).

This body of literature is directly relevant to corporate digital responsibility as it is important to note that responsible digitalization is more than just preventing data/technology misuse; it is also about embedding digitalization within a long-term strategic approach that builds trust, resilience, accountability, and value creation (George & Schillebeeckx, 2022; Guandalini, 2022).

## **2.6 Digital Transformation, Sustainability, and Responsibility**

The body of literature on digital transformation provides an understanding of why Corporate Digital Responsibility has emerged as a significant concept in the realm of strategy, considering that digital transformation is a process by which the nature, processes, and interfaces of businesses, as well as the architecture for creating value, are altered (Vial, 2019; Verhoef et al., 2021).

Vial (2019) describes the concept of digital transformation as "a process driven by digital technology that creates disruptions and structural changes within an organization," and Verhoef et al. (2021) distinguish between digitization, digitalization, and digital transformation to show that the strategic implications of digital change go far beyond the adoption of digital technology (Vial, 2019; Verhoef et al., 2021).

The literature on sustainability is increasingly crossing paths with this perspective to show that digital transformation can be used to achieve sustainability goals, but only if these tensions, trade-offs, and governance challenges are well managed in technology-driven operations and data-driven business strategies (George & Schillebeeckx, 2022; Guandalini, 2022).

CDR is strategically important because it provides an important framework for responsibility that allows an organization to link its technology transformation strategy with ethical and stakeholder issues and strategic purpose rather than allowing digital innovation to happen without adequate governance and accountability (Mueller, 2022; Hartley et al., 2024).

## **2.7 CDR, ESG, and Corporate Performance**

Likewise, existing research studies related to ESG and sustainability performance are relevant as they show that responsible corporate behavior is often related to changes in disclosure quality, governance processes, and long-term strategy results, albeit through different channels (Eccles et al., 2014; Fatemi et al., 2018).

The research carried out by Eccles et al. (2014) shows that organizations that are highly oriented towards sustainability are different from those that are less oriented in governance and organizational practices. This indicates that responsible strategies are not just symbolic but may be incorporated into management practices (Eccles et al., 2014).

Fatemi et al. (2018) show the impact of firm value through the strengths and weaknesses of a firm's ESG profile, with the role of disclosure as a moderator. Friede et al. (2015) summarize the substantial empirical literature on the relationship between ESG and financial performance and find the relationship to be nonnegative and often positive (Fatemi et al., 2018; Friede et al., 2015).

Similarly, Xie et al. (2019) also show that ESG-related activities could be consistent with corporate financial performance. Thus, it supports the argument that responsible strategic behavior does not necessarily conflict with competitiveness and firm performance.

While these studies do not directly measure corporate digitally relevant responsibility (CDR), they are useful in providing indirect support for the broader proposition that a responsibility-oriented governance and transparent disclosure strategy can be strategically valuable, thus providing further rationale for the study of digital responsibility as part of a sustainable business strategy (Friede et al., 2015; Xie et al., 2019).

## **2.8 Disclosure, Stakeholders, and the Visibility of CDR**

The main problem with empirical corporate digital responsibility (CDR) research is that many responsible digital practices are not easily observable without the firm's disclosure through annual reports, corporate governance statements, sustainability reports, investor relations materials, and other strategic communication vehicles (Carl et al., 2024; Carl & Hinz, 2024).

Disclosures are an important aspect in this regard because the information that firms publicly disclose with regard to cybersecurity, data governance, digital strategy, stakeholder protection, or digital inclusion may act as an important measure of how firms define and institutionalize responsibility in the context of digital transformation (Fatemi et al., 2018; Xie et al., 2019).

Recent research on corporate digital responsibility (CDR) has provided support for the rationale of disclosure by showing that stakeholders place more emphasis on concrete activities related to CDR than on ethical claims. Additionally, operationalizing CDR involves identifying concrete activities, commitments, and governance structures in a comparable manner (Carl et al., 2024; Hartley et al., 2024).

A disclosure-based comparative approach is thus appropriate for use in conducting thesis research with the goal of exploring how listed companies disclose and position their digital responsibilities in the broader sustainability and strategic discourse (Carl & Hinz, 2024; Covucci et al., 2024).

## **2.9 Recent Developments in CDR Research**

The most recent studies on CDR research suggest that there is an emerging trend towards practical applicability and context sensitivity, moving from foundational conceptual research towards research on implementation, evaluation, and digital ethical trade-offs in business contexts (Carl & Hinz, 2024; Hartley et al., 2024).

Carl et al. (2024) conducted an empirical study on customer data responsibility (CDR) from the consumer's perspective, showing that customers can distinguish between certain CDR practices. This suggests that CDR can be applied and tested in terms of consumer preferences, not purely conceptually (Carl et al., 2024).

Hartley et al. (2024) suggest a calculus of CDR that considers the trade-offs that organizations need to make between digital and ethical growth. This helps to recast responsibility as a managerial problem rather than a normative ideal (Hartley et al., 2024).

The Customer Digital Responsibility framework, as utilized by Scarpi and Pantano (2024), is employed to assess service automation through AI within a retail setting while at the same time establishing that increasingly advanced digital technologies enhance the importance of accountability for managerial legitimacy (Scarpi & Pantano, 2024).

Covucci et al. (2024) propose that "digital sustainability and corporate digital responsibility have in fact often developed as parallel research tracks and should be more explicitly related within a broader framework of corporate digital

sustainability." Such an integration would, in turn, reinforce the importance of the connection between CDR and business sustainability in the present thesis.

### **2.10 Research Gap**

Despite the speed of its expansion, the Corporate Disclosure and Reporting (CDR) literature still presents several significant shortcomings that need to be addressed. First and foremost, the bulk of the literature appears to be conceptual/review-based or normative rather than being founded on comparative firm-level empirical evidence based on actual corporate disclosure and strategic documents (Carl & Hinz, 2024; Covucci et al., 2024).

Second, whereas existing research is available on consumers, AI-enabled retailing, or trade-offs in theory, relatively less research examines how publicly listed organizations disclose, structure, and signal digital responsibility across a well-defined range of measures through accessible documentary evidence (Carl et al., 2024; Scarpi & Pantano, 2024).

Thirdly, relatively little research has focused on listed companies in emerging markets, which are increasingly important contexts for understanding the intersection of digital responsibility and governance, disclosure, and transformation beyond advanced market societies (George & Schillebeeckx, 2022; Covucci et al., 2024).

The aim of this thesis is to address these research gaps through a comparative analysis of selected Egyptian listed companies in relation to Corporate Digital Responsibility using available public disclosures and an analytical framework based on the literature discussed in this chapter (Lobschat et al., 2021; Carl & Hinz, 2024).

### **2.11 Chapter Summary**

The chapter will show that Corporate Digital Responsibility was born from the nexus of research on digital transformation, corporate social responsibility,

governance, sustainability, and data stewardship, and is currently evolving as a more concrete and strategically relevant area of study (Mueller, 2022; Covucci et al., 2024).

The evaluation further revealed that a sustainable business strategy provides the broader theoretical context for understanding the importance of CDR, considering that responsible digitalization plays a crucial role in the value creation process, stakeholder trust, organizational legitimacy, and the strategic governance of digital transformation (Bansal & DesJardine, 2014; George & Schillebeeckx, 2022).

Lastly, a clear empirical gap in comparative studies of corporate debt restructuring (CDR) of listed firms in emerging economies using the disclosure method would be identified in this chapter, thereby providing a theoretical base for the methodological framework employed in the subsequent chapters (Carl & Hinz, 2024; Carl et al., 2024).

## **CHAPTER 3. THEORETICAL METHODOLOGY**

### **3.1 Introduction**

The chapter highlights the methodological framework followed in the present research to study the role of Corporate Digital Responsibility (CDR) in the context of sustainable business strategies of a sample of listed Egyptian companies. Unlike the initial theoretical formulation of the study, the present research follows an empirical approach by depending on publicly available corporate disclosures and financial reporting materials. The chapter highlights the research approach and design, population and sample, data sources and procedures, analytical framework, and procedures followed for developing the comparative tables and graphical illustrations on which the present study is based.

The methodology was developed taking into consideration the context of the Egyptian capital market in which listed firms have disclosure expectations related to ESG factors and in which investor relations documents, annual reports, governance reports, financial reports, and earnings announcements are publicly accessible for a subset of major firms. The chosen sample consists of listed Egyptian firms that have accessible reporting materials and that have been exposed to digital transformation, governance, disclosure, and stakeholder-facing technology. Official Egyptian Exchange (EGX) announcements and corporate investor relations web pages support the listing and reporting of the five chosen firms: Commercial International Bank (CIB), Telecom Egypt, EFG Holding, e-finance for Digital and Financial Investments, and Fawry.

### **3.2 Research Philosophy and Approach**

The research approach that is adopted by this particular thesis is that of pragmatism. The use of pragmatism as a research approach is deemed appropriate since it is observed that the thesis is not merely confined to abstract theoretical interpretations or merely dependent upon a statistical survey approach. Rather, it

attempts to deal with a practical research problem by designing a structured analytical framework that is capable of translating corporate disclosure reductions (CDR) into quantifiable indicators at the company level.

The methodology that is adopted by this thesis is that of a qualitative-dominant research approach that is complemented by descriptive quantitative research. The qualitative research approach is represented by the content-oriented examination and interpretation of corporate disclosures, while quantitative research is represented by a structured approach to scoring, tabulating, comparing, and presenting quantitative indicators. The use of a mixed research approach is deemed necessary to ensure methodological rigor while at the same time being sufficiently realistic in light of the nature of publicly available data.

As a result of this particular approach, it is observed that this thesis is not dependent upon a questionnaire- or interview-based approach to data collection. Rather, it is dependent upon secondary corporate data that is accessible from publicly available sources.

### **3.3 Research Design**

The research design adopted by this thesis is a comparative multiple case study involving documentary research. Each of the selected companies is a single case, while a uniform framework is applied to analyze all five cases. The research design is appropriate for this thesis for three major reasons.

Firstly, Corporate Digital Responsibility (CDR) is an emerging concept, and corporate-level disclosures vary in wording, depth, and modality. A comparative case study approach can accommodate these differences without imposing an oversimplified approach.

Second, the thesis seeks to examine how digital responsibility is manifested in actual corporate strategies and disclosure. This requires that instead of depending on one numerical data base, there is a need to conduct a close reading.

Thirdly, the research aims at developing new tables and figures based on actual disclosed data. A comparative design helps achieve this aim in a clear and academically justifiable manner. Therefore, the research combines:

- Documentary analysis,
- Comparative case study logic,
- Structured scoring of indicators,
- Descriptive analysis,
- Simple cross-company visual comparison.

### **3.4 Population and Sample Selection**

#### **3.4.1 Population**

The larger population from which the sample is drawn includes firms listed on the Egyptian Exchange. This population is considered appropriate for several reasons. First, firms listed on the exchange in Egypt operate in a regime where there is a high degree of regulation in terms of disclosure, and these firms offer readily available documentation. Second, the FRA has mandated the requirement for ESG-related reporting for firms listed on the exchange, thus creating a more appropriate environment for studying the relationship between digital responsibility and sustainability-oriented strategies.

#### **3.4.2 Sample**

A purposive sample of five Egyptian listed companies was selected for the study:

1. Commercial International Bank (CIB)
2. Telecom Egypt
3. EFG Holding

4. e-finance for Digital and Financial Investments

5. Fawry for Banking Technology and Electronic Payments

The sample selection criteria were as follows:

1. The companies are listed on the Egyptian Exchange.

2. The companies are in industries where digitalization is significant.

3. Publicly available materials are easily accessible.

4. The materials are adequate for comparative purposes.

5. The sample represents diversity in the banking sector, telecommunications services, finance, digital payments, and fintech-related infrastructure.

This is an appropriate sampling strategy for several reasons, as the purpose of the thesis is not to conduct any form of statistical generalization of all the firms that are listed with the EGX exchange. Instead, it seeks to conduct analytical generalizations of exemplary cases that are information-rich and have a strong degree of relevance with regard to the concept of Corporate Digital Responsibility, as indicated by official sources of information from the companies and the EGX exchange, which show that they produce annual reports, financial statements, and results releases.

### **3.5 Unit of Analysis**

The unit of analysis that was employed in the present study was the firm. The firm was considered as the unit of analysis without any specific reference to the employees, customers, and management of the firm. Instead, the analysis was conducted on the firm as it is presented in the disclosed reports and documents. This unit of analysis was consistent with the research aims and objectives of the study in the way that Corporate Digital Responsibility (CDR) was considered as a firm-based concept of strategy and governance rather than an individual-based concept.

### **3.6 Data Sources**

The research will use secondary data only. The secondary data will be collected from reliable and publicly accessible sources. The reliable and publicly accessible sources of secondary data include the following:

- Annual reports
- Integrated reports (where available)
- Audited financial statements
- Quarterly and annual earnings releases
- Investor relations presentations
- Corporate governance reports
- Official disclosure announcements
- Pertinent pages on EGX information

The main sources of data are the official investor-relations websites of the selected firms and disclosures from the Egyptian Exchange. Moreover, the framework of regulation of ESG disclosures in Egypt is complemented by official guidelines from the FRA and EGX on sustainability. These sources provide a sufficiently reliable basis for creating a structured comparative dataset.

The analysis mainly draws on information from the 2024 reporting period, as this is the most recent and relatively comprehensive annual disclosures available for the selected companies. In cases where further information is deemed necessary, related earnings releases, governance reports, and/or financial information from the same period are also used.

### **3.7 Data Collection Procedure**

The method of data collection for the study follows a structured and step-by-step approach. To begin with, the researcher locates the official reporting web pages of the selected companies and collects the relevant public documents related to the intended reporting period. Next, the documents are analyzed to locate the relevant information related to corporate digital responsibility and sustainable business strategies. The relevant data are extracted and coded according to a coding sheet prepared for the study. The extracted data are then entered into structured tables according to the same indicators for the selected companies. Finally, the structured tables are converted into visual graphs for descriptive purposes.

The same steps are followed for the data collection process of all the selected companies. The steps are as follows:

- 1- Annual report/integrated report
- 2- Financial statements/annual results
- 3- Governance report
- 4- Investor presentation/earnings presentation
- 5- Public disclosures on digital operations, governance, sustainability, and technology-related practices.

### **3.8 Analytical Framework**

#### **3.8.1 Conceptual Basis**

The analytical framework used in this research is based on the following premise: that Corporate Digital Responsibility (CDR) is identifiable through observable public domain indicators of responsible management of digital transformation within a firm. Since CDR is unlikely to be available as a specific variable in public domain reports or data sources, this research operationalizes it

through a range of observable dimensions derived from digital ethics, governance, transparency, accountability to stakeholders, and sustainable strategic management.

### **3.8.2 Main Dimensions of Analysis**

The assessment of each firm in the following areas:

#### **1. Digital Governance and Oversight**

This dimension seeks to establish whether the firm provides disclosure on governance structures, policies, or strategic commitment related to digital transformation, technology control, cybersecurity, or digital management.

#### **2. Data Responsibility and Cybersecurity Awareness**

This dimension shows whether the organization reveals any reference to data protection, privacy, information security, cybersecurity infrastructure, digital risk management, or trust-related digital safeguards.

#### **3. Responsible Digital Services and Inclusion**

It is a dimension that contains design measures from the aspect of businesses as they frame their digital services/products more around accessibility, inclusion, customer value creation, operational transparency and social benefit aspect.

#### **4. Sustainability and ESG Integration**

This dimension measures the level at which a company integrates sustainability with its digital strategy, governance practices, operational excellence, transparency, creation of shareholder value and sustainability.

## **5. Strategic Digital Positioning**

This dimension captures to what extent the firm perceives digital transformation as a foundational pillar of its strategy and not merely an operational tool.

### **3.8.3 Scoring Logic**

In order to conduct the comparison, the study employs a straightforward disclosure-based scoring approach. Each of the dimensions is structured using a three-point scale:

- 0 – Nothing to be seen
- 1 – General/Limited reference
- 2 – Specific and clear disclosure

The scores across the five dimensions are aggregated, and a combined disclosure score is calculated for each of the companies with respect to Corporate Disclosure Risk (CDR).

This scoring system is not designed to be a measure of digital responsibility in the real world. Instead, it provides only an indication of the relative degree of structured disclosure and strategic engagement with regards to CDR in public corporate documents.

## **3.9 Sustainability-Related Strategic Indicators**

The data also integrates a variety of strategy-oriented and performance-related indicators, when applicable, based on official sources from companies alongside the CDR disclosure score itself. These extra indicators do not mean a complete financial valuation model. Rather, these further comparative signals are to provide guidance on whether greater digital responsibility-oriented disclosure is associated with broad strength in strategy or sustainability.

The indicators could be:

-Revenue growth or a measure of profitability that it prefers, most common are the ESG or sustainability reports, Convenience of governance disclosures, focus on digital services, Signals from investor presentations indicating long-term emphasis,

- And some non-financial metrics pertaining to sustainability.

The time for complexity is over, as disclosures vary in company formats and simplicity is preferred.

### **3.10 Data Collection**

To ensure that the thesis produces empirical data, the research is structured to produce three major tables and three figures.

#### **3.10.1 Sample and Reporting Profile**

The table indicates the essential profile of the selected companies, including:

- Company name
- Sector
- EGX ticker
- Main document types available
- Year of reporting used in the analysis

The data will be used to produce a graphical summary of the sample population.

#### **3.10.2 CDR Comparative Disclosure Score**

The data set provided shows the scores obtained by each firm on the five dimensions identified by the CDR model, namely:

- Digital governance
- Data responsibility
- Responsible digital services
- Sustainability integration
- Strategic digital positioning

The composite scores for each firm will be calculated in the same data table. The data collected will be used to create a figure, in the form of a comparative bar chart, showing the difference in CDR disclosures for the five firms.

### **3.10.3 Strategic and Performance-Oriented Comparative Indicators**

The data provided in this dataset includes a range of selected strategic and performance-related indicators, derived from company reports and other sources such as press releases, and includes:

profitability/growth indicators, governance reports available, ESG/sustainability reports available and visible, focus on digital strategies, and overall focus on strategic sustainability.

These indicators will be used to create a visual representation that links levels of CDR-related disclosure with other forms of strategic positioning.

### **3.11 Data Analysis**

The present research relies on descriptive comparative analysis in place of sophisticated inferential statistics. Such an approach may be justified with regard to the following considerations:

The sample employed in the research is small in nature. It is based on documentary disclosures rather than survey responses. Finally, the research focuses on the development and implementation of an empirical analytical framework

rather than testing a large-scale causal model. Hence, the research analysis process may be outlined as follows:

1. document analysis and coding
2. scoring at the company level
3. construction of tables
4. cross-company analysis
5. visualization of results in graphical form
6. interpretative analysis of results.

This is considered to be sufficient and appropriate at this stage of research because it is directly related to the thesis objective and remains within the scope of available data.

### **3.12 Validity and Reliability**

The methodological quality of the research was further enhanced by taking a few steps.

In fact, the indicator applications within this study's framework followed a logical direction that improved content validity as they aligned with Corporate Digital Responsibility and strategic sustainability orientation from literature.

All five firms share the same coding dimensions and scoring logic, which improves construction process consistency.

The trustworthiness of the content analysis is enhanced through a standardized coding sheet and by cross-validating the source documents of an individual company by different forms of sources (for example, annual report, governance report, earnings announcement).

The rationale for comparative consistency is to have a standard reporting period and to restrict the universe of indicators to those which can be easily found relatively consistently across most selected companies.

While this study makes no claim of statistical reliability in any survey sense, it has reasonable procedural safeguards built in to ensure transparency and consistency.

### **3.13 Ethical Considerations**

The research does not involve human subjects, interviews, or surveys, nor does it have access to sensitive corporate information. All the data used in the research are publicly available and disclosed by the companies or market institutions. Therefore, the research poses minimal ethical risks.

However, the research conforms to the fundamental academic ethics of:

- using official sources, not manipulating the reported statistics, ensuring consistency in scoring,
- and distinguishing between disclosed evidence and researcher interpretation.

### **3.14 Methodological Limitations**

The following are some of the limitations that are associated with this methodology. Firstly, it is clear that the study is based on information that has been disclosed, and therefore, it can be concluded that the analysis measures the visibility of CDR and not the internal reality.

Secondly, there are differences in the manner and degree of disclosure between firms, which may have a bearing on the strength of evidence supporting a particular measure.

Thirdly, the sample of five firms may be considered small in terms of allowing broad statistical generalization.

Fourthly, inasmuch as the research relied on secondary data, it was not possible to measure managerial or stakeholder perceptions.

Despite these limitations, the methodology used in the research is considered suitable in the context of the objective of the thesis because it provides a useful tool to advance the subject from a theoretical discourse towards empirical research.

### **3.15 Chapter Summary**

This chapter presents an outline of the research methodology adopted by this thesis. The research methodology is pragmatic, empirical, comparative, and follows a multiple case approach by utilizing publicly disclosed information from five Egyptian listed companies. The methodological approach is underpinned by a documentary approach that is scored, comparative, descriptive, and graphical. The methodology is deliberately designed to produce new tables and graphs that are derived from actual data while being conceptually consistent with the concepts of Corporate Digital Responsibility and sustainable business strategy.

The chapter that follows outlines the empirical analysis and discussion derived in the context of the framework presented in the methodology chapter.

## **CHAPTER 4. DATA ANALYSIS AND DISCUSSION**

### **4.1 Introduction**

The focus of this chapter is to carry out an empirical analysis on five selected Egyptian listed companies, namely Commercial International Bank (CIB), Telecom Egypt, EFG Holding, E-Finance for Digital and Financial Investments, and Fawry for Banking Technology and Electronic Payments. This chapter is intended to move from the methodological framework presented in Chapter Three to a more structured and comparative analysis based on actual corporate disclosures and official published materials related to the companies' FY2024 financial and investor relations information. This chapter is divided into three sections based on the empirical analysis carried out, namely, the availability and scope of the disclosed materials used in the analysis, a comparative Corporate Disclosure Review (CDR) analysis, and a comparative analysis on some of the FY2024 financial indicators.

The above analysis shows that there is an ample amount of suitable official material available within the Egyptian listed company environment that is suitable for a company-based empirical research investigation into corporate digital responsibility. However, it is found that some firms discuss digital transformation and responsible technology use within a highly structured governance and sustainability approach, while others discuss it within results presentations, strategic updates, press releases, or governance-related disclosures in a more fragmented manner.

### **4.2 Availability of Empirical Materials**

Before moving on to the analytical scores and performance indicators, it is necessary to lay the groundwork for the empirical base of the study. In this regard, the following table (4.1) provides a summary of the available disclosure coverage for each of the companies covered by the sources used in the present thesis. For the

purpose of the following table, a single point is allocated for the following categories when a clear indication of the presence of the respective source is available: FY2024 performance materials, governance materials, sustainability/ESG materials, and digital strategy/technology materials. In essence, the following table will reveal whether the selected companies are able to provide adequate official proof for the purposes of a comparative study from the perspective of climate disclosure.

**Table 4.1:** Disclosure Coverage of the Selected Egyptian Listed Companies

<b>Item</b>	<b>CIB</b>	<b>Telecom Egypt</b>	<b>EFG Holding</b>	<b>e-finance</b>	<b>Fawry</b>
<b>Sector</b>	Banking	Telecommunications	Financial Services	Fintech / Digital Infrastructure	E-payments / Digital Finance
<b>Ticker</b>	COMI	ETEL.CA	HRHO.C A	EFIH.CA	FWRY.C A
<b>FY2024 Performance Material</b>	Yes	Yes	Yes	Yes	Yes
<b>Governance Material</b>	Yes	Yes	Yes	Yes	Yes
<b>Sustainability / ESG Material</b>	Yes	No separate stand-alone ESG report identified in source set	Yes	Yes	No separate stand-alone ESG report identified in source set

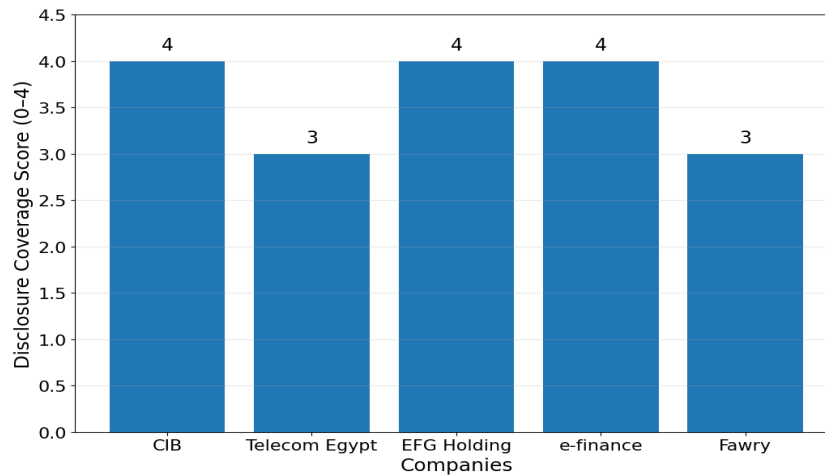
**Table 4.1 (continued):** Disclosure Coverage of the Selected Egyptian Listed Companies

<b>Item</b>	<b>CIB</b>	<b>Telecom Egypt</b>	<b>EFG Holding</b>	<b>e-finance</b>	<b>Fawry</b>
<b>Digital / Technology Material Disclosure Coverage Score (0–4)</b>	Yes  4	Yes  3	Yes  4	Yes  4	Yes  3

**Note:** Created by the researcher

As presented in Table 4.1 above, all five firms provide adequate disclosures to allow for empirical examination. Nevertheless, the quality and depth of the disclosures are not the same. CIB, EFG Holding, and E-Finance all achieve the highest possible disclosure coverage of 4 because the source set includes identifiable disclosures on performance, governance, sustainability/ESG, and digital/technology for all three firms. Telecom Egypt and Fawry equally provide a rich documentary base. However, they lack a separate standalone FY2024 ESG/sustainability report as obvious as the case for CIB and EFG Holding.

Before delving into the actual CDR assessment, it is also useful to change the above table into an easily digestible visual format. Figure 4.1 changes the disclosure coverage score into a type of bar comparison, thus giving an even quicker idea of which firms offer a more expansive documentary base for empirical analysis.



**Figure 4.1:** Disclosure Coverage Score Across the Selected Companies

**Note:** Created by the researcher

It is clear from Figure 4.1 that the sample is empirically manageable. This is an important result, and its implications are significant, as it is clear from the figure that the proposed transformation of the thesis from a purely theoretical piece to an evidence-based comparative analysis is methodologically viable in the Egyptian context. Moreover, it is also clear from the figure that the inter-firm variation is not excessively high to be impractical for comparison, but rather provides a balanced analytical environment in which some firms have more comprehensive reporting architectures, while others have more selective, albeit still manageable, patterns.

### 4.3 Comparative CDR Disclosure Assessment

After confirming whether source materials are available, the next step is to examine how those selected organizations differ in their visible disclosures and strategic positioning with regard to corporate digital responsibility. As shown in Table 4.2, this is an example of how the analytical framework we introduced in Chapter Three is put to use. Organizations are evaluated on five different dimensions: digital governance and oversight, data responsibility and cybersecurity awareness, responsible digital services and inclusion, sustainability and ESG integration—

strategic digital positioning. A score of 0 means no visible evidence; 1 is general or limited reference; and 2, clear and specific disclosure.

**Table 4.2:** Comparative CDR Disclosure Score of the Selected Companies

<b>Dimension</b>	<b>CIB</b>	<b>Telecom Egypt</b>	<b>EFG Holding</b>	<b>e-finance</b>	<b>Fawry</b>
<b>Digital Governance &amp; Oversight (0–2)</b>	2	1	2	2	2
<b>Data Responsibility &amp; Cybersecurity (0–2)</b>	2	2	2	1	2
<b>Responsible Digital Services &amp; Inclusion (0–2)</b>	2	2	1	2	2
<b>Sustainability / ESG Integration (0–2)</b>	2	1	2	2	1
<b>Strategic Digital Positioning (0–2)</b>	2	2	1	2	2
<b>Total Score (0–10)</b>	10	8	8	9	9

**Note:** Created by the researcher.

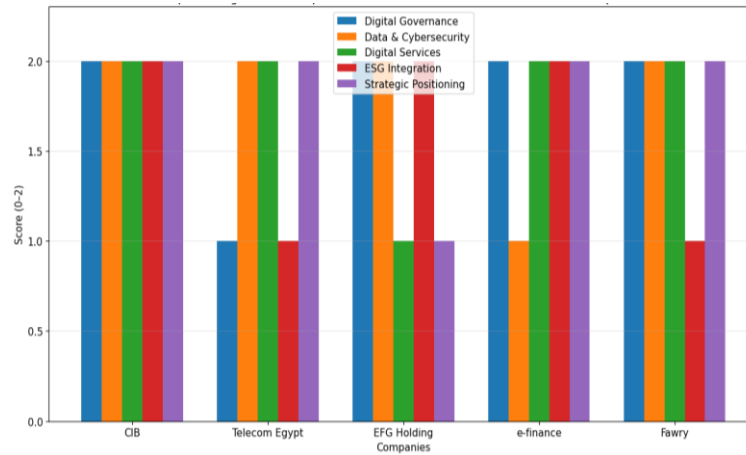
In addition, a strong trend appears in Table 4.2. This is exemplified by the fact that CIB took first place overall, which tracks with how digital responsibility is not only seen as an operational matter but included in governance and sustainability thinking more broadly. Multiple factors including having a framework to govern operations and technology, explicitly addressing security and technology risks in the same, establishing Cybersecurity Operations Center, etc., contribute to its overall high score (it also belongs to the “Data & Digitization” section under ESGDD).

For example, E-Finance and Fawry were ranked within the second tier (with 9 being high scores). This is analytically interesting given that these companies are innately digital business organizations. E-Finance projects itself as a technology-

driven and transformative digital platform that delivers services across G2G, G2C, B2B, and B2C connections, including ESG-related communication and FY2024 governance disclosure. Similarly, Fawry shows high indicators of digital diversification in service delivery, cybersecurity-related certifications, and strategic focus on innovation and expanding access to financial services. However, in both organizations, the integration and articulation of sustainability-related aspects within the broader framework of corporate digital responsibility seem less embedded than in the ESGDD model used by CIB, hence the lower maximum scores.

Telecom Egypt and EFG Holding each scored an eight, though on different grounds. Telecom Egypt has a high strategic orientation towards digital projects and cybersecurity activities; however, the relationship between digital transformation and customer data rights (CDR)/environmental, social, and governance (ESG) is less explicitly shown within the source material. EFG Holding has a high governance and sustainability reporting profile and information security commitment through ISO 27001 certification; however, the overarching group-wide approach to digital responsibility as a strategic theme is less explicitly shown relative to peers such as CIB, e-finance, or Fawry.

Figure 4.2 displays total CDR disclosure score in a comparative visualization format. This type of visualization helps in identifying the relative positions of the five firms without needing to analyze individual dimensions.



**Figure 4.2:** Total CDR Disclosure Score Across the Selected Companies

**Note:** Created by the researcher.

It is worth mentioning that Figure 4.2 illustrates two main observations. First, the disclosures concerning Corporate Digital Responsibility are identified in all five companies. This supports the main thesis of the research, which claims that Corporate Digital Responsibility is empirically detectable in Egyptian listed companies. Second, the level of disclosure intensity differs from company to company. CIB is identified as having the most formalized corporate digital responsibility, while e-finance and Fawry have significant potential for digital responsibility, based on the digital nature of their businesses. On the other hand, Telecom Egypt and EFG Holding have significant potential for corporate digital responsibility, albeit at a lesser level, based on the scope of the data used in the research.

#### 4.4 Comparative FY2024 Performance Indicators

The final empirical step is a comparison of the chosen performance indicators for FY2024 across the five firms. Although the following table is not intended to demonstrate a strict level of industry standard comparability across the firms, as the sample represents a bank, a telecom operator, a diversified financial services firm, a digital infrastructure firm, and an e-payments firm, a pragmatic comparative illustration of firm scale and profitability is presented based on the official

disclosures of the firms' FY2024 top-line and bottom-line metrics. This is a useful exercise to determine whether the presence of strong CDR-related disclosures is a function of the larger firm size or if it is observable across the smaller firms.

**Table 4.3:** Selected FY2024 Revenue and Profitability Indicators

<b>Company</b>	<b>FY2024 Top-line Metric (EGP bn)</b>	<b>FY2024 Bottom-line Metric (EGP bn)</b>	<b>Profit Metric Used</b>
<b>CIB</b>	99.0	55.2	Consolidated net income
<b>Telecom Egypt</b>	82.0	14.31	Normalized net profit
<b>EFG Holding</b>	24.4	4.3	Net profit after tax and minority interest
<b>e-finance</b>	5.21	1.78	Net profit after NCI
<b>Fawry</b>	5.51	1.61	Net profit after NCI

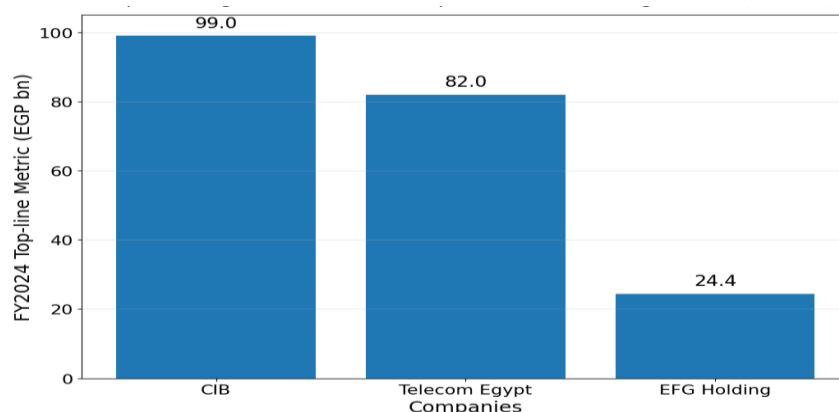
**Note:** Created by the researcher.

As indicated in Table 4.3, the scale of the firms in the sample differs considerably. In absolute top-line terms, CIB and Telecom Egypt far outstrip the remaining three firms. EFG Holding ranks in the middle, while e-finance and Fawry are smaller yet distinct digital-intensive firms. This is analytically advantageous rather than problematic because it allows for the exploration of the disclosure of CDRs across both large incumbents and more specialized digital firms. Put differently, the evidence suggests that digital responsibility is not necessarily linked to any specific firm scale.

The table also shows that a strong level of disclosure related to corporate digital responsibility is compatible with a strong business performance. CIB, which scored highest in the CDR disclosure assessment, also reported the highest bottom-line result among all sample firms. Telecom Egypt reported a strong level of revenue growth along with a high normalized profit amount, while EFG Holding,

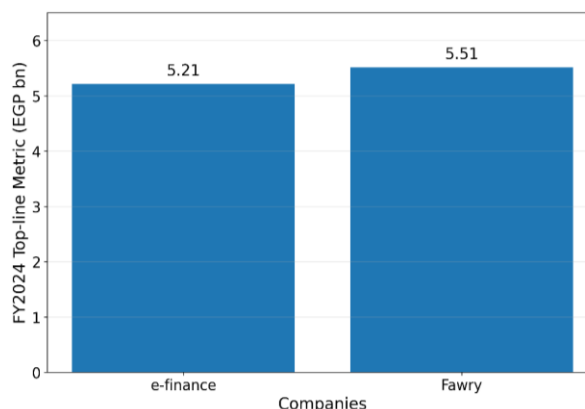
E-Finance, and Fawry reported a healthy profitability level for FY 2024 along with a clear sign of a strategic digitalization effort or expansion of digital services. Although this is circumstantial evidence, it is supportive of the thesis that digital responsibility and a sustainable strategic approach are compatible with business performance.

For clarity, Figure 4.3, Figure 4.4 focuses on the top-line metric for FY2024 instead of trying to show all financial metrics at once. This approach enables comparison between companies while maintaining the figure's readability.



**Figure 4.3:** FY2024 Top-line Metric for larger Firm (EGP bn)

**Note:** Created by the researcher.



**Figure 4.4:** FY2024 Top-line Metric for digital-intensive Firms (EGP bn)

**Note:** Created by the researcher.

Figure 4.3, 4.4 emphasizes the existence of scale asymmetry among the firms. Yet, if the above figure is examined in conjunction with Figure 4.2, it becomes clear that an important observation that stands out is the fact that the higher and second-to-highest levels of disclosure on the CDR disclosure scale are not confined to any specific category of firm size. CIB presents significant scale and a well-structured approach in the context of CDR disclosure. Yet, the higher levels of disclosure of both e-finance and Fawry are achieved despite the fact that they present smaller scale compared to the scale of CIB and Telecom Egypt.

#### **4.5 Discussion of Main Findings**

The results of the empirical analysis that will be presented in this chapter show that Corporate Digital Responsibility is a concept that can be researched through the disclosures of specific companies within the Egyptian listed companies' framework. The companies that will be used for the purpose of this research provide a significant body of data that can be used to take the initial thesis beyond the theoretical level that it was initially proposed. This is important, as it directly addresses the concern that the subject is too abstract and does not lend itself to tables, figures, and data analysis that is necessary for a comparative study. The Egyptian market, especially for banking, telecommunication, financial services, and fintech companies, with their emphasis on electronic payments, is a viable environment for such a study.

A second key finding is that digital corporate responsibility (CDR) takes a diversity of organizational forms. For CIB, it is included in a governance and sustainability system including elements on data and digitization. In e-finance and FAWRY, it has to do with the nature of their business models in which value creation is dependent on digital infrastructure, payment systems, accessibility and reliability. In the case of Telecom Egypt, it includes network digitalization aspirations, digital strategy ambitions and cybersecurity steps taken. In EFG Holding, this is more indirectly represented by information security, sustainability

architecture and digital innovation in group companies (for example in fintech-related operations).

A third observation is that broader CDR-related disclosures generally correlate with more integrated strategic maturity. Firms scoring at the higher end for executives tended to include governance visibility and framing (i.e., digital strategic messaging some form of sustainability/stakeholder-centric framing). Though far from a statistically causal observation, this corroborates the idea that responsible digitalization is best understood not so much as a technical problem but rather as an axis of long-range strategic capability.

#### **4.6 Chapter Summary**

Within the chapter, an empirical assessment of five selected Egyptian publicly traded corporations was performed. It used three tables and their matching visual figures. The results indicated the chosen firms deemed appropriate for public exposure to permit an empirical assessment, variation exists in regard to the observable disclosures pertaining to CDR, and finally that a strong digitized responsible continuation within both the established corporations and platform-based companies is evident. Moreover, the chapter revealed that the thesis can credibly rely on actual Egyptian corporate data instead of a questionnaire-based approach.

The next chapter will summarize the conclusions by highlighting the main findings, drawing the final conclusions, identifying the limitations, and suggesting the future course of action.

## **CHAPTER 5. CONCLUSION**

### **5.1 Introduction**

The chapter of this thesis acts as a concluding part of the entire work. It provides a synthesis of the major findings of the empirical analysis, outlines the broad conclusions of the research work, and finally provides an overview of the implications of the research. It also highlights the major limitations of the research work and provides recommendations. It aims to strengthen the main argument of the research work, that is, providing empirical analysis related to Corporate Digital Responsibility (CDR) based on publicly available corporate disclosures and growing CDR significance as an element of sustainable business strategy in Egypt.

This thesis began with a theoretical exploration around the relationship of Corporate Digital Responsibility with sustainable business strategy. It was restructured as a comparative empirical study based on the financial positions of five Egyptian listed firms, that is Commercial International Bank (CIB), Telecom Egypt, EFG Holding, e-finance for Digital and Financial Investments and Fawry. The restructuring helped move abstract discussion to a more fact-based evaluation based on company reports, governance reports and FY 2024 reporting documents.

### **5.2 Summary of the Study**

This dissertation is based on some comparative studies among some of the listed companies in Egypt where the main focus is about empirical examination of Corporate Digital Responsibility in relation to sustainable business strategy. To reach this goal, structured analytical framework based on five dimensions of Corporate Digital Responsibility including digital governance and oversight; data stewardship and cybersecurity awareness; responsible digital services and inclusion; sustainability and integration of environmental, social, and governance (ESG) principles; as well as strategic (digital) positioning will be created.

The research design adopted for this research is a pragmatic comparative multi-case study research design that is based on publicly available secondary data. The thesis avoided questionnaire or interview methods by relying on official annual reports, governance reports, investor relations reports, financial releases of various firms to prepare tables that could illustrate variations.

The findings are discussed in Chapter Four. The chapter is divided into three main tables and their respective figures. These findings reveal that the chosen companies provided an adequate documentary base for the analysis, that there are identifiable differences in the way they disclose CDR-related information, and that CDR may be analyzed in relation to the overall corporate positioning.

### **5.3 Summary of Main Findings**

The first important research finding of the study is that the environment of listed companies in Egypt provides sufficient material for the official examination of the concept of Corporate Digital Responsibility. This research finding is important because it proves that the concept of Corporate Digital Responsibility is not too abstract for the purpose of empirical analysis. The chosen companies provided sufficient material regarding their governance, strategy, digital activities, and performance.

A second important finding is that Corporate Digital Responsibility (CDR) is discernible across all five firms at different levels of maturity and integration. In some firms, digital responsibility is expressed through various governance structures, risk management practices, sustainability models, and digital strategies. In other firms, it is expressed more through digital business models, customer-facing technologies, platform expansion strategies, and narratives of innovation. The implication is that CDR is not expressed as a single entity but is expressed through various organizational and disclosure configurations.

The third major finding is that CIB had the most complete disclosure related to CDR. The latter result seems related to a more formalized governance structure,

a more integrated approach to incorporating digital responsibility into governance structures, as well as a more obvious connection between digital-related issues and more traditional ESG-related disclosures.

The fourth main result is that e-finance entities and Fawry show strong positioning with regard to Corporate Digital Responsibility, a result that is due to the fundamentally digital nature of their business models. The results suggest that firms with a business model that is characterized by a strong degree of digitality are able to express a concept of CDR through various elements such as service design, digital infrastructures, financial inclusion, cybersecurity awareness, and innovation, even if these elements are not formally articulated as a concept of CDR.

The fifth principal finding is related to the fact that Telecom Egypt and EFG Holding display a rather less integrated form of CDR-related disclosure. In these companies, digital responsibility is definitely a reality, albeit in a manner that is perhaps less aligned with a sustainability framework.

The last finding points out that a stronger form of CDR-related disclosure appears to go hand-in-hand with higher levels of strategic maturity and a firm's performance position. Because these are correlational findings, no causality can be inferred here; nevertheless, they do lend credence to the idea that responsible digitalization cannot be taken for granted as the opposite of business success. In fact, it may even be a subset of longer run strategic competence.

#### **5.4 Conclusions**

The dynamic results on Corporate Digital Responsibility clearly substantiate its significance as a trend and growing aspect of sustainable business strategy in the Egyptian listed companies that have been investigated. No longer theoretical, the idea can now be further developed in a framework oriented toward operationalization using actual corporate disclosures.

The research also argues that corporate digital responsibility (CDR) cannot be seen as a limited technological or regulatory concern. Rather, it is at the nexus of digital change, corporate governance, stakeholder trust, cyber awareness, responsible service provision, and long-term strategic sustainability. In this regard, it is confirmed by the thesis that digital change is more important when it is linked to responsible governance and more complete strategic accountability.

The other conclusion is that organizational size is not a sole determinant of organizational visibility in CDR-related disclosures. While large organizations like CIB and Telecom Egypt have a large capacity for disclosures, other smaller yet technologically advanced organizations like e-finance and Fawry are also able to show robust positioning related to CDR disclosures.

The thesis further argues that the Egyptian setting provides a useful lens for examining the markets for CDR research. Despite the fact that much of the discussion of digital responsibility is set out in broad conceptual terms, or in an advanced market setting, it is argued that the concept can be meaningfully examined in the Egyptian setting by reference to reporting and disclosure practices of listed companies.

### **5.5 Practical Implications**

It has several practical implications for this thesis's results. For managerial practitioners, being a practitioner of inclusiveness whether in the realm of innovation and efficiency, or governance on matters related to trust, accountability and sustainability means that digital transformation must be seen not just as an issue of progress but also one of principles. Failure on the part of organizations to communicate any notable component of digital transformation strategy without equal emphasis on oversight, security and responsibility towards stakeholders may be construed as strategic incompleteness.

From an investor/analyst perspective, this thesis also emphasizes the importance of going beyond conventional financial metric metrics in a digital

transformation context. Mandatory disclosures on governance quality, cybersecurity awareness, digital inclusion as well as ESG demonstrate key pillars of maturity in the firm's strategy.

From the viewpoint of policy makers and regulators, this study aims to demonstrate how it is possible, with a disclosure-based analysis, to encourage more effective handling of the concept of digital responsibility in listed companies reporting. Indeed, as the concept of digital transformation takes a central place in the evolution of business models, it is expected that reporting will benefit from a better articulation of the concept of digital responsibility as a strategic and governance-related concept.

For academic researchers, the thesis serves as a model for how a concept often discussed in a theoretical sense may be operationalized by reference to comparative evidence from firm-level data.

## **5.6 Contributions of the Study**

The present thesis contributes to the literature in the following ways:

It represents a conceptual contribution by integrating the concept of Corporate Digital Responsibility with the field of sustainable business strategies. It highlights the interconnections between corporate governance, accountability, digital transformation, and value creation.

Secondly, it contributes methodologically in the sense that it proves that the study of CDR is possible in an empirical way within a structured and disclosure-based framework.

Third, it provides contextual contributions by focusing on the emerging market context in Egypt and by using listed companies in Egypt as a base for its empirical analysis.

Fourth, it contributes to the field by providing original comparative tables and figures based on actual corporate disclosures, thereby showing that the field lends itself to empirical examination and not merely conceptual discussion.

### **5.7 Limitations of the Study**

However, despite its contributions, the present research carries a number of limitations.

The first and foremost limitation of the present research is based on the fact that it relies on publicly available information. Therefore, the research only captures the publicly available part of the reality of Corporate Digital Responsibility. It may be possible that a firm behaves differently internally compared with what is reflected in public documents.

The second limitation concerns the sample, which is small and only includes five companies. While this provides for a higher level of interpretation, it does not permit broader statistical generalization to all listed companies in the Egypt.

The third limitation is that we utilized a disclosure-based scoring method. While this enables a systematic comparison, it does involve some interpretive judgment.

Fourth, the selected firms operate in different sectors of the economy which would introduce some heterogeneity. This diversity adds strength to the comparative analysis but it also implies that selected indicators are not harmonized in their structure and/or relevance from a business point of view.

The fifth limitation concerns the reporting period, which is limited to fiscal year 2024. If the domain is examined for many years, trends in disclosure of CDR-related information may be apparent, demonstrating whether it constitutes an increasing, plateauing or decreasing phenomenon over time.

## **5.8 Recommendations**

Based on these findings, the thesis makes a number of recommendations.

Digital responsibility should be embedded in the organization's governing and strategic reporting documents rather than peppered across multiple documents. More dialogue on digital oversight, data governance, cybersecurity, customer responsibility and digital services with social benefits would improve strategic transparency even more.

Companies need to adopt a more connected perspective on digital transformation. Rather than presenting digitalization as a force for efficiency or innovation, organizations need to demonstrate how digital practices relate to trust, inclusiveness, responsibility and sustainability.

Regulators and market making institutions could also enable more clear disclosure language on digital responsibility, especially where digital systems, customer data, algorithmic operations, and technology-driven services play an increasingly vital role in corporate strategies.

Firms with established digital business models also need to investigate how they can establish a stronger connection between their digital operations and ESG/sustainability narratives. This will lead to further transparency in public reporting and heighten stakeholder visibility into digital initiatives.

Ultimately, future thesis research in this area should continue to build on empirical and evidence-based approaches, and not simply remain at a conceptual level.

## **5.9 Recommendations for Future Research**

Some potential avenues for further research on the topic are presented in the following paragraphs. First, by using a larger sample of Egyptian listed companies, a wider range of comparative data could be provided. Further research could also

be carried out by comparing Egyptian companies with companies in other Arab and Emerging Markets, in order to identify similarities and differences in CDR disclosure.

Another area that holds promise for future research is a longitudinal study over a number of reporting years to observe the dynamics in the concept of digital responsibility over time. Future researchers may also consider interviewing managers or using surveys to gain a better understanding of how managers perceive the concept of Corporate Digital Responsibility.

Other areas for further research could be the specific manifestation of CDR in a sector such as banking, telecommunication, fintech, healthcare, or e-commerce. Further research could also be conducted on whether robust CDR-related disclosures are statistically linked to performance, reputation, trust, and ESG, provided a larger and more normalized data set is available.

### **5.10 Final Remarks**

The purpose of this thesis was to examine the role of Corporate Digital Responsibility in sustainable business strategies, and it has been shown that the concept is empirically verifiable with a sample of Egyptian listed companies. The research has found evidence that digital responsibility is currently a reality, in different forms, in the strategies and disclosures of the companies examined. At the same time, evidence has also been found that the formalization and integration of CDR is in a state of development.

The present thesis provides substantial support for the assumption that the future path of the concept of sustainable business strategies will not only be dependent on the scale of digitization strategies pursued by firms, but also on the way in which digitization is managed and coordinated with overarching stakeholder and sustainability agendas. In this context, the concept of Corporate Digital Responsibility is not merely seen as an optional add-on, but as a new pillar of strategic corporate responsibility.

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## **CURRICUIUM VITAE**

An accountant and administrative professional with over 20 years of experience in financial management, treasury operations, and project administration within governmental and industrial institutions in Libya. A Bachelor's degree in accounting was obtained from the National Institute of Administration in Misrata in 2004.

Language proficiency includes Arabic as a native language, with a good command of Turkish and English.

In 2023, enrollment in a Master's program (with thesis) in Management Information Systems was undertaken at Istanbul Topkapi University.