Exploring Environmental Sustainability Implementation in the Dutch Fintech Sector: a Managerial Perspective

Laura Trupia

Global Responsibility & Leadership, University of Groningen

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Dr. Josefine Geiger

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Abstract

Sustainability implementation in the corporate world is the new objective companies' top management teams need to leverage in order to become pioneers of environmental, social, and financial business performances. This paper explores the role that top executives play in the context of environmental and financial sustainability implementation in the Dutch Fintech sector. Top management roles and values towards sustainability directly affect the successful implementation of CSR.

By interviewing managers of two of the most influential companies in the Dutch Fintech sector, this study explores how top management can influence the implementation of sustainability across business operations. This research finds that top management's values of benevolence, achievement, and power positively influence CSR implementation. Furthermore, it finds that top management's role is manifested in the creation of long-term, comprehensive business strategies that clearly lead lower management towards financial or environmental goals. These findings are clearly evident in the specific cases of data center use and sustainable investments as two key areas of interest in the sustainability of Fintech companies. The paper shows that top management determines the success of CSR initiatives in these areas and across entire organizational structures.

Keywords: Corporate Social Responsibility, Fintech, sustainability, top management, business strategy.

Contents

Introduction

The issue of climate change is one of extreme relevance and pressing importance nowadays in order to limit and prevent environmental degradation. Governments, citizens and businesses are all somewhat part of the cause for climate change, yet they could also all be the key to start solving the problem. Much attention is given to the role of governments and NGOs in tackling the climate challenges through targeted policies and aid (Georgieva & Adrian, 2022), yet the corporate world's role in tackling climate change is often undervalued. Business and climate usually have a negative connotation in today's society. Mainly society views business as responsible for the climate challenges and to only be driven by financial goals, and businesses see climate-related actions as barriers to their financial growth (Porter, 2020). This negative connotation allows for businesses and climate issues to be in an antagonist relationship, however companies are a unique stakeholder in the climate challenge. In fact, they possess unique resources and capabilities such as access to funds, cooperation with different stakeholders, and direct access to the public through their consumers, that no other actor has in order to tackle specific climate change issues (Porter, 2020). Businesses thus have the capacity to create shared value as the achievement of financial success alongside societal and environmental objectives. This opportunity could be an important competitive advantage for companies to leverage in order to create positive impacts both on their own performance and the environment surrounding them (Porter, 2020). The creation of shared value has recently been developed through the concept of Corporate Social Responsibility (CSR), as the responsibility that business enterprises have on their impacts on the environment and societies, thus holding them accountable for their positive or negative actions against these (European Commission, n.d.). CSR is a concept that has been growing more and more in recent years, and the role of companies' top management is crucial when carrying out CSR organizational goals as executives hold the authority and power to include sustainability at the core of companies' strategies (Wiengarten et al., 2015). Understanding leaders' roles and views on sustainability implementation is the first step to involve the corporate world in the collaboration towards the sustainability transition and exiting this antagonist relationship between business and climate. More specifically, due to the decision-making power that top managers hold in a company, the success of CSR implementation depends on the vision and actions that executives hold towards sustainability (Fatima & Elbanna, 2022). The role that managers play in the implementation of CSR across businesses can be analyzed through their motivations in engaging with sustainability, as profit-seeking or legitimacy-seeking (Schaltegger & Hörisch, 2015). Furthermore, managers' personal values of benevolence, achievement and power, and their temporal perspectives on sustainability are all influential factors in determining their active commitment to CSR implementation (Kutzschbach et al., 2021; Sasse-Werhahn et al., 2018). Top management also plays a crucial role in managing tensions arising from sustainability implementation. Mainly concerning trade-offs between financial and environmental goals of the company, executives are the actors that clearly define which goal the company needs to pursue in cases of misalignment between economic and sustainability performance (Epstein et al., 2010; Haessler, 2020). This role of top managers is also represented in the leadership of other managerial levels of the company, as executives' strategies are executed by middle management[1] and thus have to be cohesive and clear for the rest of the company to successfully implement them (Haessler, 2020). All of these characteristics of top management are crucial in understanding what is the role that executives play in the implementation of CSR across companies' organizational cultures and its success.

Therefore, the purpose of this study is to look into the roles, motives, and attitudes of business executives on the adoption of sustainability in Fintech. This research focuses on the

[1] Middle management: a type of management that falls between upper and lower management. Its members carry out departmental planning, strategy implementation, performance evaluation, and hiring. The primary distinction between middle and top management is the scope of their respective roles: middle management is responsible for putting top management's strategic decisions into action, whereas top management makes the decisions themselves (Sujan, 2024).

Dutch Fintech sector, due to the relevance and importance of this industry in the Dutch economy. In fact, Fintech is one of the Netherlands' leading sectors, with over 850 Fintech businesses, financial institutions, and tech companies (NFIA, 2024). Furthermore, the Netherlands is the European Union's (EU) second-largest Fintech hub and is expected to grow even more rapidly in the coming years (NFIA, 2024). Fintech, standing for financial technologies, is a sector that includes companies that use advanced technologies such as artificial intelligence (AI), blockchain[2] and big data[3] to create new financial products and processes that are more efficient, accessible and user-friendly (McKinsey&Co, 2024). Fintech includes five different markets: digital payments, digital investments, digital capital raising[4], digital assets and neobanking[5] (Statista, 2024). These offer a variety of services, including digital payments and transfers, crowdfunding, cryptocurrency, mobile point-of-sale (POS) payments, and digital banking services (Statista, 2024).

Research on how these quickly evolving Fintech companies are handling CSR administration is necessary given the Fintech sector's progressive rise throughout the Dutch and European economies. As a matter of fact, Fintech businesses are crucial in assisting other industries to achieve more sustainability through the development of digitized environmental finance and allowing companies and individuals to invest in sustainability projects in more accessible ways. Yet, the integration of sustainability within Fintech companies receives relatively little academic attention (Mertzanis, 2023). Academic literature also does not focus much on CSR specifically in the context of the role that top management teams of these companies play in the successful implementation of CSR across their operations (Mertzanis,

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[2] Blockchain: a distributed, unchangeable database that allows for the transparent and unlimited tracking of transactions between business networks (McKinsey&Co, 2022).
[3] Big data: voluminous and complex datasets that can only be managed by advanced data processing softwares that can handle the speed at which the data is received (Tiao, 2024).
[4] Digital capital raising: digital platforms that offer services of crowdfunding, crowdlending, and crowd investing markets (Statista, 2024).
[5] Neobanks: Fintech companies that offer products and services such as mobile apps and softwares to streamline online banking (Walden, 2021).

2023; Zheng and Siddik, 2022; Vergara and Agudo, 2021; Wang et al., 2022). The relevance of CSR in Fintech arises from the sector's challenge in reducing their greenhouse gas (GHG) emissions, particularly due to their reliance on energy-intensive data centers for digital services, and the integral role of sustainable investments[6] in shaping new CSR strategies. This highlights the need for Fintech companies to address both direct and indirect emissions in their operations, in line with the larger corporate environment which is tackling the same issue.

Thus, this study will explore the values and roles of top leaders of this important sector of the Dutch economy related to the topic of sustainability in business addressing the following research question: *What is the role of top management in leading the sustainability transition in the Dutch Fintech sector?*

I will first provide a theoretical background on the concepts of CSR in the context of Fintech companies. I will then provide the theoretical background on the role of top management in the implementation of sustainability strategies, focusing on the opportunities and challenges faced by managers in the process. Furthermore, I will explain my qualitative research methods of semi-structured interviews that will explore the roles and attitudes of managers towards sustainability implementation across some of the most influential Dutch Fintech companies. I will then provide the results of my research and discuss them in the context of the theoretical background. Lastly, I will conclude by providing the overall findings of the research in the context of the literature, the limitations of the study, and managerial implications.

Theoretical Background

CSR and Fintech

Corporate Social Responsibility (CSR) is the responsibility that enterprises have for their impact on society. It is a concept that businesses of all sizes need to implement looking forward

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[6] Sustainable investments: investments in environmental, social, and governance-related projects or companies (CFA, 2024).

through incorporating social, environmental, ethical, and philanthropic concerns in their business models (European Commission, n.d.). The idea of CSR is to have a business world that seeks financial growth in a manner that positively impacts the planet and society, instead of exploiting these. CSR can be divided into four main concepts: environmental, ethical, philanthropic, and economic sustainability (Stobierski, 2021). Environmental sustainability includes the reduction of environmentally harmful practices such as reducing pollution, GHG emissions, resource consumption and waste production, increasing reliance on renewable energy sources and recycled materials, and offsetting environmental impacts by replenishing resources (Stobierski, 2021). Ethical sustainability includes promoting fairness across customers and employees, expanding vendor use, and disclosing these transparently (Stobierski, 2021). Donating to charities, sponsoring events, doing business only with partners who share the same principles, and encouraging employee philanthropy are all examples of philanthropic sustainability. Finally, financial sustainability entails investing funds in more sustainable initiatives, improved product designs, employee training, transparent reporting, and third-party audits (Stobierski, 2021). Although all parts of CSR are equally important, in this study I will focus on environmental and financial sustainability as they apply more specifically to the context of the Fintech sector.

The urgency of implementing CSR is reflected in many different international strategies that can be highlighted by United Nations Sustainable Development Goal 12 “Responsible Consumption and Production” encouraging large[7] international companies to adopt sustainable practices and transparently report on them (Martin, 2023). Furthermore, already from the 2020 EU Green Deal, all large and listed companies of the EU are legally required to report on their impacts on society and the environment, and their risks and opportunities from environmental and social issues (European Commission, n.d.-b). However, the call for action to involve

[7] Large companies possess at least two out of these requirements: net turnover of €40M or more; total assets of at least €20M; 250 or more employees (Netherlands Enterprise Agency, 2024).

businesses in the transition to a more sustainable planet has increased so much more that the Corporate Social Responsibility Directive (CSRD) has entered into force in 2023. This directive requires all listed and non-listed large European companies to report on their sustainability starting in 2024 (European Commission, n.d.-b). By implementing these reporting standards, companies are more obligated to implement environmentally and socially friendly actions in their core businesses and promote transparency not only towards shareholders and investors, but also to all other stakeholders involved. The degree of implementation of these sustainability measures and their success is directly linked to the role of managers in leading sustainability strategies, as top management is responsible for directing company strategy, allocating funds, and having great decision-making power. This study aims to examine the relationship between managerial roles for CSR and the use of strategies for financial sustainability and environmental sustainability, using Dutch Fintech as a case-study.

The progressive growth of the Fintech sector across the Dutch and European economies calls for research into how these rapidly developing companies are addressing sustainability administration. Fintech companies are viewed as key agents of sustainability and responsible investing (Mertzanis, 2023). The digitalization of environmental finance is increasing and Fintech allows individuals to invest in environmental projects in new and more accessible ways. Furthermore, the use of energy-efficient technologies is rapidly expanding and Fintech companies help develop these using blockchain and AI innovations (Liu et al., 2020). This involvement and key role in sustainable investing of Fintech companies is expected to grow with the heightened attention that investors are posing onto sustainability-related causes (Decadt, 2024). Fintech will become one of the key players that other sectors and businesses will be able to utilize in order to make their business more sustainable. Due to the digitization of Fintech's services, the carbon footprint of commercial transactions is significantly reduced and the increase in sustainable investments will boost environmentally-friendly projects and ventures that can disrupt the current corporate environment (Mertzanis, 2023). However, the internal perspective of where the Fintech sector should improve its sustainability performance is often overlooked. The main issues when it comes to the environmental sustainability of Fintech companies are related to their carbon footprints. More specifically their indirect GHG emissions produced by sources that they do not own or control, thus supplier emissions that are part of the companies' value chains (GroupPLC, 2023). Since there is no manufacturing or other environmentally harmful practices involved in Fintech, the sector's main environmental footprint relates to its reliance on energy-intensive data centers (Lessard, 2024). Although Fintech's environmental footprint is related to operations and suppliers, the sustainability strategies aimed to tackle these originate from the company's top management. This involvement from company leaders stems from the recurrent tension arising between the financial and environmental goals of businesses, which needs to be addressed by top management in order to create a cohesive strategy for the entire company to follow. For these reasons, this study aims at exploring the dynamics of decision-making processes behind sustainability implementation and how they relate to concrete sustainable strategies in companies.

Managerial role in leading sustainability implementation

The persistent issue in implementing change towards complex problems like sustainability is agency: who can concretely lead the strategies towards sustainable change in the corporate environment and how?

A company's top management is a group of people that holds authority, resources, and decision-making power regarding changes to the company and defines the overall strategy of the organization, which is why the top management has a crucial role in defining and applying CSR as an integral part of its strategy and operations (Wiengarten et al., 2015). Top management members are in charge of establishing and upholding the company's vision, handling finances, setting and carrying out goals, supervising day-to-day operations, recruiting staff, fostering a positive workplace culture, interacting with stakeholders and shareholders, and planning for expansion (Chase, 2023). Building from the extensive research on managerial roles, the effectiveness of CSR strategies is directly dependent on the vision and values of the top management team which sees sustainability as a strategic opportunity or challenge (Fatima & Elbanna, 2022). Furthermore, top management engagement in sustainability, functional diversity in the top management team composition, and top managers' long-term visions are all crucial factors in creating a genuine and successful implementation of sustainability in a company (Haessler, 2020).

Therefore, it is important in this study to explore what are the motivations, values, and attitudes towards sustainability possessed by top leaders of the Dutch Fintech sector. This allows for a deeper understanding of the degree and success of CSR implementation in their companies as this topic has not been explored in academic research.

Managerial motivations towards sustainability have been confined to two main causes: profit-seeking motivation and legitimacy-seeking motivation (Schaltegger & Hörisch, 2015). Respectively, companies engage in sustainability if it helps increase their economic success based on revenue increases or cost reductions, or as a reaction to institutional pressures[8] and to increase their legitimacy through reputation-building (Schaltegger & Hörisch, 2015). Increased reputation automatically causes increased profits, thus legitimacy- and profit-seeking motivations are highly interconnected (Schaltegger & Hörisch, 2015). Nevertheless, research has shown that legitimacy is the main driver of sustainability implementation across firms (Schaltegger & Hörisch, 2015). If top management's values and visions are the main drivers of organizational goals, and sustainability strategies come from legitimacy-seeking motivations, there is an interconnectedness between top management's values, and motivation towards

[8] Institutional pressures: Implementation from formal institutions like governments of policies and regulations that companies need to follow, in this case regulations related to sustainability performances.

reputation-building. Research has shown that managers' personal and cognitive characteristics, such as values, have a direct impact on strategic and organizational outcomes (Kutzschbach et al., 2021; Wiengarten et al., 2015). Managers' main values that drive CSR implementation are benevolence, achievement, and power (Kutzschbach et al., 2021). Benevolence values relate to company identity, managers show these through caring about employee or environmental welfare. Achievement values relate to having an impact and achieving goals, managers show these through the goal of becoming the pioneers of CSR (Kutzschbach et al., 2021). Power values relate to gaining competitive advantage, differentiation, and reputation-building goals. They show themselves through managers who strive for social status and dominant leadership (Kutzschbach et al., 2021). In relation to the legitimacy-seeking motivation of sustainability implementation, one could argue that top management seeks for sustainability goals to build a better image of the company, which is consistent with many top managers' personal values of power and achievement in creating a good company reputation followed by financial gains.
In the context of this study, it is relevant to grasp which motivations and values are characteristic of top managers as they directly affect their engagement in sustainability strategies. Thus, to explore what the role of managers is, it is crucial to explore what these managers believe in and if their values align with the concept of sustainability.

Furthermore, in order to achieve successful CSR implementation top management team members should have a real interest in sustainability matters, have a balance of benevolence, achievement and power values (Kutzschbach et al., 2021). This allows them to create sustainable business models for the sake of societal and environmental welfare, while boosting the company's reputation and financial performance. It is important that top managers have a background in CSR and a clear understanding of the environmental sustainability issue, as a complex problem that requires a comprehensive view (Larsen, 2022). Additionally, due to the highly uncertain and long-term nature of sustainability, top managers need to think both in short-term and long-term perspectives, and to have a self-transcendent view that includes both society and the environment (Sasse-Werhahn et al., 2018). The ideal sustainability-oriented top management may include all of these characteristics, but this is not always the case because CSR implementation in the corporate sector is still a relatively new topic, and many top management teams may lack this kind of training.

When it comes to sustainability implementation in companies the main tensions arising are between the misalignment of environmental and financial goals. Although most companies are aware of and able to recognize this tension, the inability to resolve it comes from many companies' ineffectiveness in creating tangible steps towards a comprehensive solution (Joseph et al., 2018). Executives leading financially-driven organizations usually see this tension as a win-lose trade-off between sustainability and financial performance, thus resolving it in favor of financial goals (Epstein et al., 2010; Haessler, 2020). Effective management of this tension stems from motivation, thus the values and attitudes of the top managers as strategy leaders. Financially-driven companies see the tension as a barrier, whereas sustainability-successful companies embrace the tension (Joseph et al., 2018). In order to be successful, top managers should believe that long-term sustainability-related benefits are greater than short-term value (Haessler, 2020), thus building upon values of both benevolence and achievement or power. Internal issues in tension management can also arise in the relationship between top management and middle management, where CSR implementation is favored when top managers translate their vision and strategy into tangible key performance indicators (KPIs) with a direct connection to both financials and employees (Haessler, 2020). Effective collaboration between senior and middle management is thus favored by the integration of CSR in the informal systems of the company being organizational culture and leadership, which are carried out by executives (Epstein et al., 2010).

In the context of this research, it is relevant to understand if the top management teams of Dutch Fintech companies perceive sustainability implementation as a barrier or an opportunity to achieve sustainability success. Furthermore, it is relevant to investigate what challenges and resistances executives face internally when carrying out sustainability and how they address these.

Current research

Many studies have focused on Fintech and environmental sustainability, however, they all focus on the impacts that Fintech services have on sustainability causes (Mertzanis, 2023; Zheng and Siddik, 2022; Vergara and Agudo, 2021; Wang et al., 2022). Fintech finance has proven to have a small positive impact on social-environmental performance across 58 countries in the world, proving that sustainable finance can boost the development of sustainable projects (Mertzanis, 2023). Similarly, Fintech has shown a positive impact on sustainable finance, sustainable investing, and environmental performance of companies both on national case studies and business case studies (Zheng and Siddik, 2022; Vergara and Agudo, 2021). Fintech also has proven to have very strong positive implications on the sustainability performances of small, high-tech, and less constrained companies (Wang et al., 2022). Academic research has shown that Fintech has a very strong and successful role in aiding other companies, large and small, to improve their environmental performances. Fintech facilitates these processes by leading sustainable finance and investment initiatives that allow for companies from different sectors and countries to access funds directed at sustainable projects in a more accessible and efficient way, thus Fintech is becoming a fundamental actor in facilitating sustainability transitions.

Yet, academic research does not focus on the environmental sustainability of the Fintech sector within itself. Two cases of Fintech operations which have a larger environmental impact are the use of data centers and their investments in sustainable companies or projects, which I will expand on in the following sections. These are cases that pertain specifically to the implementation of sustainability in this sector, which directly depend on the companies' top management engagement and interest in sustainability. For this reason, data center use and sustainable investment will be used as practical cases in the larger context of managerial strategies towards sustainability implementation.

Data centers

Operations of any digitized service, such as Fintech services, rely exclusively on the use of data centers (Lessard, 2024). These data centers need to process enormous amounts of data at all times of day and night, which makes them extremely reliant on electricity and energy use in order to power servers, storage, and networking equipment (Lessard, 2024). Most data centers have thousands of servers and other hardware that all rely on electricity, making these buildings some of the most energy-intensive in the world (Roundy, 2023). According to the International Energy Agency (IEA), data centers are responsible for 2% of worldwide demand for electricity (220-230 TWh in 2021), a number that has climbed by 50% in only 6 years and is predicted to rise even more due to the digitalization of a growing number of industries (Roundy, 2023). In spite of this increase, data centers' energy efficiency has significantly increased over the years, helping them satisfy growing demand while reducing their negative environmental effects. Nonetheless, data centers continue to be accountable for 1% of global energy-related GHG emissions, which contributes to climate change (Roundy, 2023). The reliance of Fintech companies and other digitized sectors on data centers makes it imperative to effectively reduce the connected GHG emissions from an organizational perspective (Rozite, 2023). The difficulty in tracking and accounting for these GHG emissions comes from the lack of control that Fintech companies have over them, which is why understanding leaders' sustainability motivations helps understand how companies can address value-chain-related GHG emissions.

Sustainable investments

Achieving financial sustainability is largely dependent on sustainable investing. As a matter of fact, the growth of sustainable projects and initiatives has been greatly aided by the surge in sustainable investing in recent years (Decadt, 2024). More precisely, research indicates that the ESG market[9] is predicted to grow to over $40 trillion by 2030, with Europe accounting for the largest portion of this global market at 45% (BI, 2024).

The Fintech sector includes digital banking as one of its markets therefore sustainable investments play a significant role in this context. The indirect GHG emissions from investment portfolios are a hot topic in the context of Fintech digital banking and CSR.

Companies that provide digital banking services address this problem by building more sustainable investment portfolios (Machač, n.d.). This entails abstaining from funding businesses engaged in unethical and environmentally detrimental industries, including mining, weaponry, fossil fuels, dangerous substances, and more (Decadt, 2024). Other businesses invest sustainably in decarbonization initiatives like carbon offsets (Machač, n.d.). Carbon offsetting is a strategy that has gained increasing traction in recent years across a wide range of business sectors. The strategy enables companies to lower their GHG emissions by purchasing credits that represent the extraction of the same amount of CO_2 from the air by other companies as the original company has produced (Decadt, 2024). Generally, decarbonization and carbon markets are cause for concern because they are difficult to regulate and corporations may not be genuinely increasing their CSR performances by offsetting their emissions through other projects (Decadt, 2024). Therefore, merely investing in decarbonization will not lessen a company's footprint because there are no clear and universal rules for accounting for these initiatives and determining their actual effectiveness (Decadt, 2024). Understanding the positions and roles of top management teams in Fintech organizations helps to clarify how CSR

[9] ESG market: ESG markets include all of the investments made into companies that perform highly on the concepts of Environment, Society and Governance (ESG) (Napoletano, 2024).

is implemented in particular cases, such as sustainable investments, which are critical in the Fintech sector.

The research gap I aim to address in this paper is characterized by the lack of studies from an inside perspective of the Fintech sector. I will look at its operations and leadership strategies, instead of what its services can do to help other sectors or societal actors to overcome sustainability-related challenges. The goal of this research is to explore how managerial roles and motivations directly affect the resolution of environmental impacts of the Fintech sector. To do so, I have decided to focus my research on two companies from the Dutch Fintech sector based on the companies' status as the most influential in the industry and their inclusion in the EU CSRD.

Methodology

Participants

Participants were selected based on the two companies I have decided to analyze due to their relevance and high status in the Dutch Fintech sector. The companies are focused on different markets including digital payments and transactions, digital investing, and digital banking services.

The participants included two managers from each of the selected companies: one member of the top management team and one member of the middle management team. Both interviewees were highly involved in sustainability-related initiatives with a deep knowledge of company operations and internal dynamics. Both perspectives were relevant in understanding the role of top management in sustainability implementation, as they allowed me to investigate the topic both from an insider and outsider perspective on the top management teams themselves. Ethics approval was obtained before I started recruiting participants. I have selected possible participants by sending emails to any top manager involved in sustainability strategies across the companies. A total of 20 invitations were sent and each followed by multiple follow-ups, out of which only 2 respondents decided to participate in the study. The low rate of responses was a difficulty encountered in the recruitment process, even though multiple invitations were sent out to the same people. Additionally, I have used my personal network in order to recruit more participants from other companies, yet these attempts also were unsuccessful. This possibly indicates the arduousness of contacting top management of companies in the Dutch Fintech sector. Participants were self-selected and no financial compensation was provided to participate in the study.

Research design

The study was conducted through qualitative research methods, namely in-depth semi-structured interviews. The interviews lasted approximately 45 minutes and followed an interview guide provided beforehand. All participants were interviewed through individual online meetings, they were assured confidentiality, and they provided written informed consent. The interview guide consisted of 10 questions surrounding three main topics: managerial attitudes and roles, company GHG emissions, and company sustainable investments. Table 1 shows all of the questions involved in the interviews divided by topic of interest.

Table 1
Interview questions by topic

Topic	Question
Managerial attitude and roles	How do you define sustainability? What do you think the opportunities and challenges of integrating sustainability in Fintech operations are?
	Is the implementation of environmental sustainability perceived as an economic opportunity or cost at *[company x]*?
	Do you think that its positive economic perception would incentivise sustainability implementation in the company?

	What factors do you take into consideration in your decision-making process when balancing cost-effectiveness and sustainability across your operations? How? Have you encountered resistance in sustainability implementation in your company? How do you address these instances?
Company GHG emissions	What are *[company x's]* scope 3 emissions? How much do data centers contribute to your company's scope 3 emissions? Does *[company x]* rely on data centers that are powered by renewable energy sources? Are all data centers powered by renewable energy? Do you think that relying on renewable energy is/will be cost-effective for *[company x]*? What would hinder the transition to relying on renewable energy? Who is the responsible party at *[company x]* for the transition to renewable energy sources for its operations?
Sustainable investments	What steps does your company take to invest in decarbonisation initiatives? If *[company x]*'s indirect emissions would reduce, would you still continue investing in decarbonization projects?

Note. Table 1 shows all of the questions asked during the interviews according to the respective themes.

Data analysis

The interviews were transcribed and analyzed using thematic analysis. Initial codes were identified using the literature review from the theoretical background of the research. The codes I used are: profit-seeking motivation, legitimacy-seeking motivation, opportunities, challenges, pro-environmental values, short-/long-term view, trade-offs, top/middle management, GHG emissions, and sustainable investments.

Results

Thematic analysis of interview data was conducted to explore top managers' values and perceptions on sustainability implementation in the Dutch Fintech sector. Through deductive coding and theme development, five main themes were identified: company motivations, top management perceptions, top management values, internal tensions, and sustainability initiatives. This section is divided according to the five main themes. I will first provide short introductions of these and subsequently present the results of the interviews for each of the two codes pertaining to each theme. I will end by providing a summary of the general results.

Company motivations

Company motivations are crucial when it comes to sustainability implementation in the overall business strategy. The two main motivations identified are: profit-seeking and legitimacy-seeking. Profit-seeking company motivation is typical of companies that implement sustainability exclusively for financial gains or cost reductions. Legitimacy-seeking company motivation is typical of companies that implement sustainability either as a response to institutional pressures or to build their reputations as sustainability leaders of their sector.

Profit-seeking motivation

Participants highlighted that companies in the Fintech sector are mainly focused on achieving profitability and growth. While established large corporations can focus on optimization, Fintech companies still need to establish themselves financially, thus sustainability implementation is achieved only when it aligns with financial goals. Both interviewees commented: "our focus is profitability right now" and "not all companies are on the same level, because we need to take into account the growth". Furthermore, participants highlighted that companies do not have enough power to encourage others in the sector to become more sustainable until they reach profitability. For example, participant 1 stated: "as long as we are struggling with becoming very profitable, it doesn't force the bigger companies to take other [sustainability] actions".

Legitimacy-seeking motivation

Participants reported that companies need to respond to a growing number of sustainability-related regulations, usually from a compliance perspective. Furthermore, participant 1 expressed the desire of the company to be the forerunner of sustainability to create shared value and long-term shareholder value. The comment "[sustainability] could also create a lot of value for a company, if you are the greatest company out there [...] because people love that you are a front runner on this aspect" clearly illustrates this motivation.

Top management perceptions

Top management perceptions incredibly impact the degree of company commitment towards sustainability implementation. In fact, its success depends on top managers' view of sustainability either as an opportunity to leverage or a barrier.

Opportunities

A common thread among participants was the idea that being sustainable creates many financial opportunities and room for innovation. For example, participants stated "if you're perceived as a green company, it gives you commercial opportunities" and "if you look at it as an opportunity for growth, then you can be more innovative, but it means that you need to invest as well". All participants also highlighted that Fintech being a lower emitting sector makes it easier for these companies to address their environmental impacts as they are less numerous compared to other sectors. For example, interviewee 2 said that "it's an opportunity because [Fintech companies] have a small footprint and [...] it's easy for you to compensate for that".

Challenges

Participants agreed on the challenge of responding to institutional pressures on sustainability and highlighted the difficulty of complying with regulations in a timely manner. For example, participants commented “it's hard to keep up with all the regulations and all the expectations and keep track of everything” and “I think, compliance-wise, it takes a very long time, and they're always pushing the deadlines. It will likely take a long time for this to happen”, further highlighting the struggles faced when responding to institutional pressures. They also expressed the difficulties in having enough resources and workforce to respond to compliance pressures, as interviewee 1 put it: “for us it’s just two people, we do not have the same resources that [larger companies] have”.

Another common thread between participants was the difficulty in being able to show sustainability initiatives for a sector that already has smaller environmental impacts than others. Talking about this issue participant 1 said: “this can be seen as that we are not actively working towards our sustainability goals. But actually, our baseline is already so much better. So that's a challenge”. Participants also revealed the shared challenge of partnering with only suppliers that are active in sustainability and to retrieve accurate reporting information from them. Participant 2 highlighted the incredible challenge of implementing sustainability in companies where the approach is bottom-to-top instead of top-to-bottom, and the urgent need for leader positions that focus their responsibilities on sustainability. When asked about this the interviewee said “we have challenges because it comes from bottom-to-top rather than top-to-bottom” and “the first initial steps are very difficult, because you need to invest, and then we have no trouble” highlighting the internal challenges of these organizations.

Top management values

Top management values are crucial in the successful implementation of sustainability in the company. Individual values of benevolence, achievement, and power are all the foundation for top managers' roles in leading sustainability implementation. Top managers' holistic and long-term views on sustainability also affect successful company engagement.

Pro-environmental values

All participants highlighted their companies' goal of not creating any harm to the environment and making a positive social impact, for example by commenting "for us [sustainability] is a principle of not doing any significant harm" and "I think our top management is eager to get things done that have a positive impact". Participant 2 also highlighted the goal of Fintech companies of helping other businesses become more sustainable through their services, for example saying "we believe that helping [our customers] become more sustainable is a great opportunity".

Short-/long-term view

There is consensus on the lack of long-term effects and implementation of sustainability in companies' strategies. All participants highlighted the urgent need for their leaders to understand the long-term effects of sustainability implementation and to incorporate it at the core of the business strategy. Comments included "how much profit do you have to allocate to those initiatives for the long-term value increase?" and "the top management wants to know exactly how we can mitigate risks and how sustainability initiatives are going to evolve in the future". As participant 2 put it: "if we agree to have a plan to reduce our emissions, we don't know how they're going to grow in the future", thus showing the uncertainty of long-term sustainability implementation.

Internal tensions

Sustainability implementation creates different tensions internal to the company. The main internal tension related to sustainability is the misalignment of the environmental and financial goals of the company, usually, it is seen as a win-lose trade-off between the two. Additionally, sustainability implementation is determined by collaboration between different levels of management, thus misalignment of goals between top and middle management can be a barrier to sustainability implementation.

Trade-offs

Participants agreed on the heightened risk of allocating funds to sustainability initiatives because of the little profitability prospects and the uncertainty of future prospects. They argued that “there aren't a huge amount of profitable ESG investments right now” and “we don't want to make a commitment that we cannot sustain”. Furthermore, the comment “if you want to work a lot on sustainability, sometimes you need to make investments and that can be challenging” illustrates that a company focused on financial growth is very rigid with their spending and allocating funds to sustainability is a very careful task. Interviewees also expressed the challenges faced when creating a strict portfolio of sustainable suppliers, as excluding other suppliers and business partners can be a financial loss. For example, participant 2 stated: “we can always stop working with some companies, but it's not a feasible alternative” clearly referring to the trade-offs between sustainability and financial objectives.

Top/middle management

A common thread among participants is the misalignment between top management strategies and middle management actions. Participant 1 highlighted the internal tensions between sustainability strategies created by top managers that contrast with the treasury department’s financial goals. The comments “our treasury department needs to make money and that’s what they were hired to do” and “now, it's the sustainability department versus treasury. But actually, to be one step higher, it should be the management boards of the company who should define strategy” also highlight the role of higher organizational positions in defining one cohesive strategy to be followed by each department. Interviewee 2 highlighted the internal tensions created by the lack of a C-suite leader[10] responsible for sustainability, thus creating a lack of authority that can execute middle management's ideas on sustainability initiatives. The participant stated that: "having somebody that is responsible for sustainability is a must to make important changes, and it needs to be somebody that sits quite high, and has its own agenda and resources available to make the changes". Interviewees expressed their belief of the role of management boards in creating more comprehensive strategies that include sustainability and allocate the right resources and workforce to those initiatives.

Sustainability initiatives

Sustainability initiatives identified in the research were mainly concerning companies' GHG emissions and their investments in sustainability. More specifically, this theme includes topics such as scope 3 GHG emissions coming from data center use, decarbonization, and investments.

Data centers

Participants all agreed on the use of data centers powered by renewable energy, owned by third-party companies. They all agreed on the importance of relying on CO2-neutral data centers. Participant 1 explained that the choice of renewable energy-powered data centers is easy because there is no financial difference between standard and CO2-neutral data centers. Participants stated that: "our data centers are all powered by renewable energy" and "the CO2-neutral [data center] would be the one you would select, because it has a huge impact on your own score from an emission perspective."

Sustainable investments

All participants agreed that decarbonization efforts are not the ideal strategy due to the difficulty in tracing the final destination of those funds. Comments in support of this included:

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[10] C-suite leader: senior executive, where c- stands for chief. This title is typical of top management executives to show their seniority in the company's organizational structure. In this case the position referred to is Chief Sustainability Officer (Bloomenthal, 2024).

“from an emissions perspective, we don't even consider offsets” and “I personally do not believe in a lot of decarbonization. As a first step for the company, I think you should try to reduce as much as you can”. Furthermore, participant 1 accentuated the efforts in creating sustainable investment portfolios in spite of the high-risk nature of green investments. Participant 1 in fact stated that: “we don’t invest in companies that are involved in fossil fuels” and “unfortunately, the risks on green investments are still higher [as they] are not giving the same return as more traditional investments”. Interviewee 1 also expanded on the necessity for companies that want to promote sustainable investment portfolios to be supported by governmental institutions by saying: “it would be good if the government would step in and take the additional risks [of sustainable investments] off of companies, so that they are more likely to invest in green initiatives”.

Summary of main results

What emerges from the reported results concerning company motivations is that the companies interviewed have a common goal towards profitability and implement sustainability both as an institutional response and to build a positive reputation. Regarding top management perceptions, the companies in question have highlighted the commercial opportunities from sustainability, while addressing numerous challenges. These include lack of sustainability top-down leadership, time and resource constraints to address sustainability regulations, and financial infeasibility of excluding unsustainable suppliers. Top management values have shown that these companies do have a genuine goal of not creating environmental and social harm, but lack a long-term risk assessment and strategy perspective of sustainability. Internal tensions included trade-offs between sustainability and financials regarding investments, and misalignment between top and middle management strategies. Lastly, both companies have highlighted their choices towards CO_2-neutral data centers and their misalignment with decarbonization projects.

Discussion

The outcomes of this research have provided insights into what is the role of top management in CSR implementation across Fintech companies specifically in GHG-emissions-related problems. The study's results have built upon the concepts of company motivations, top management perceptions, top management values, internal tensions, and sustainability initiatives. In this section, I will discuss the results of each theme in relation to the theoretical background of the research question: *What is the role of top management in leading the sustainability transition in the Dutch Fintech sector?* Furthermore, I will discuss limitations and provide recommendations for future research and managerial performance.

Company motivations

For what concerns company motivations, the interviews have indicated that Dutch Fintech companies have strong profit-seeking motivation, due to the fact that they are either start-ups or profitability-driven companies. In line with Schaltegger & Hörisch's (2015) definition of profit-seeking motivation as companies' engagement in sustainability for financial gains or cost reductions, this research has indicated that Dutch Fintech companies engage in sustainability when this is aligned with their financial goals and strategies. Similarly, interview results have also been aligned with Schaltegger & Hörisch's (2015) definition of legitimacy-seeking motivation in companies that engage with sustainability either as a reaction to institutional pressures or to build reputation. In fact, participants expressed their efforts in responding to regulations by complying with the numerous sustainability-related standards and policies. Furthermore, managers addressed the motivation and advantage to be forerunners of sustainability, as it builds reputation and consequent financial gains for the company.
Contrary to the claim that legitimacy-seeking motivation is the predominant driver of CSR engagement in the corporate world (Schaltegger & Hörisch's, 2015), the interview results did not show any predominance between the two motivations. In fact, participants from both companies

expressed a mixture of profit- and legitimacy-seeking motivations. This could be due to the fact that participants expressed how Fintech companies already have a better environmental footprint than other sectors, which might already put them in a position of higher environmental reputation that they do not have to seek for that much.

Top management perceptions

The current study has indicated that top management of Dutch Fintech companies believe that CSR implementation can be a strategic opportunity to leverage. More specifically, interviewees have expressed how one important opportunity for them is to be at the forefront of sustainability, which in turn creates financial benefits for them. This view of sustainability as an opportunity ties in with the literature on legitimacy-seeking motivations of companies that view sustainability implementation as a means to achieve a positive reputation and thus gain a competitive advantage (Schaltegger & Hörisch's, 2015). Contrary to the belief that profit-seeking companies engage with sustainability only for revenue increases, the interviews show that substituting a win-lose trade-off mentality between environment and financials for more opportunity-seeking motivation can lead executives in achieving CSR goals that would indirectly also create financial growth. This is aligned with the idea that top management's view of sustainability as an opportunity can positively influence its implementation (Fatima & Elbanna, 2022).

On the other hand, sustainability implementation is also perceived as a challenge. Interviews have indicated the many barriers that organizations face, including difficulty in responding to institutional regulations in a timely manner and sustainability approaches being bottom-up instead of the opposite. Seeing CSR as a challenge makes companies' response to institutional pressures more of a compliance mechanism instead of an opportunity to truly implement sustainability for a good cause. If companies' top management teams view this only as a compliance matter, they will not allocate the right resources and workforce to create effective and comprehensive sustainability strategies. Additionally, this lack of vision on sustainability implementation can create very large divergences in companies where there is absence of leadership in sustainability matters.

Top management values

Results from the study have indicated that all top management teams show values of interest towards environmental and social welfare, and the wish of not causing harm to these. In line with the literature on managerial values, these perspectives fall under the value of benevolence which is typical of managers that want to make a positive impact on the environment surrounding the company (Kutzschbach et al., 2021). The values of achievement and power (Kutzschbach et al., 2021), also emerge from the participants expressing their companies' legitimacy-seeking motivations in becoming sustainability leaders of the sector. However, it is hard to truly understand how strong these values are to overcome financial trade-offs when implementing CSR, in fact all companies' top management share these values but have very different levels of engagement with sustainability.

Furthermore, the topic of a long-term perspective of sustainability as one of the core elements for successful sustainable performance has come up in the results of the interviews. In fact, all participants have expressed the fundamental need to bridge the gap between sustainability risks and opportunities. From the interviews, it has emerged multiple times that Dutch Fintech companies lack the creation and implementation of long-term sustainability strategies, thus hindering the successful execution of CSR. This confirms managerial theories in which it is argued that to be effective, managers need to believe that long-term benefits of sustainability are greater than short-term value (Sasse-Werhahn et al., 2018; Haessler, 2020). Furthermore, managers who possess this perspective on CSR implementation likely possess the values of benevolence and achievement or power, as they are able to understand the benefits of sustainability for the environment, while also leveraging it as an opportunity for the company.

Internal tensions

For what concerns internal tensions, participants have indicated that there still are many financial risks associated with sustainability implementation. More specifically, trade-offs mentioned in the interviews regarded sustainable investments and funding. Companies have expressed the difficulty in managing these as green investments nowadays are still high-risk and the allocation of funding to sustainability implementation is not established due to a lack of long-term commitment. These results are in line with the profit-seeking motivations of Fintech companies, that simply are not financially established enough and focus on sustainability only if it aligns with their financial growth. In fact, participants confirmed the theory that executives leading financially-driven companies will resolve win-lose trade-offs between sustainability and profit in favor of the latter (Epstein et al., 2010; Haessler, 2020). Furthermore, results from the study further indicate the need for these companies' top management teams to adopt a long-term view on sustainability also in terms of funding and predictions of how these investments would plan out in the future. Perhaps with the introduction of a long-term perspective, executives might be able to successfully overcome these difficulties and demonstrate that embracing the tension allows them to overcome it (Joseph et al., 2018).

The interviews have shown that sustainability implementation can create internal tensions between different actors of organizational structures. The main finding is that there seems to be a misalignment between senior and middle management teams. In fact, participants have expressed the presence of internal disputes on how to solve trade-offs between financial and environmental goals, where profit-focused departments favor the former, while other departments favor the latter. Thus there is a need across companies for the top management team to create a comprehensive and straightforward strategy that includes CSR implementation at its core and guides every department in balancing financial and environmental goals, without leaving these up to individual interpretation. In line with the literature, this can be achieved through the creation of tangible indicators that address both financials and sustainability that top managers can use to guide their employees (Haessler, 2020). Thus, sustainability implementation needs to be part of the informal systems of the company, organizational culture and leadership, which are defined and carried out by top management (Epstein et al., 2010). Furthermore, participants highlighted how this tension is worse in companies that lack a leader whose responsibility is sustainability. These companies show that their employees are engaged in CSR initiatives, whereas their top management teams are not. In these cases sustainability implementation can be difficult to carry out due to the lack of power and resources that only a top manager can have in order to advocate for sustainability initiatives. The study's results indicate the need for executives to include CSR as one of the core competencies and focus areas of executive leadership, otherwise implementation can be very difficult.

Sustainability initiatives

All interviewees have expressed their companies' reliance on CO2-neutral data centers, meaning that their environmental footprint is lower than standard data centers due to their dependence on renewable energy sources. The motivation behind this decision is both to reduce their value chain GHG emissions and because of no cost differences between standard and CO2-neutral. However, participants have expressed that they rely on external partners to manage their data centers' energy supply and other environmental issues related to data centers. Results from the interviews also showed that companies perceive the use of cloud services as less connected to data centers, when in reality cloud services also rely on data centers (Vasconcellos, 2023). This might be due to the fact that by relying on cloud services the distance between the Fintech company and the data center becomes even larger in the value chain.

All interviews have indicated that top management teams of these companies do not believe in decarbonization as the main tool to address their carbon footprint, but rather invest in decarbonization as extra projects related to CSR. The main issue with decarbonization was defined as the difficulty in tracking how the funds will be spent and tracking the amount of CO_2 that is taken out of the environment for each company's emissions. Furthermore, for what concerns digital investing, the interviews have indicated that green investments are still associated with high risk which makes them less attractive for companies to invest in. A curious finding from the research was the expression of one company on the role that national governments have in these investments. Fintech companies would want to see subsidies and financial concessions to be made to businesses that have the intention of funding green investments, instead of larger corporations that fund very unsustainable causes.

The theoretical background and results of the research have provided insights to answer the research question: *What is the role of top management in leading the sustainability transition in the Dutch Fintech sector?*

The results have been aligned with the literature on the roles and motivations of top management teams when engaging in CSR. In fact, top managers of Dutch Fintech companies show both profit-seeking and legitimacy-seeking motivations due to either their quest for financial establishment or reputation-building and institutional response efforts. This study thus has shown that in the context of Dutch Fintech there is no predominance between the two motivations which contradicts the literature on the topic. Furthermore, we can say that the top management of Dutch Fintech companies that successfully implement sustainability, views this as an opportunity to build on either the profit- or legitimacy-seeking motivations. On the other hand, the challenges faced by companies worsen when their top management views sustainability implementation as a barrier to growth and fails to embrace this tension to overcome it.

Top managers' values are at the foundation of companies' motivations, namely benevolence is typical of managers who view sustainability implementation as an opportunity. Achievement and power are the values at the foundation of legitimacy-seeking companies that strive to build their reputation as the forerunners of sustainability in their sector. Top managers' values are also important in solving internal tensions that stem from sustainability, thus managers engaged in sustainability embrace it by having a long-term perspective that values the long-term benefits of sustainability more than possible short-term costs. The interviews have also shown that the creation of a cohesive and straightforward strategy that includes CSR at its core from the top management team allows for the successful implementation of sustainability across all levels of management of the company. For what concerns real cases of sustainability initiatives, top managers have expressed that the choice of CO_2-neutral data centers and sustainable investments depends on their ability to integrate sustainability into the strategy of the company, thus prioritizing environmental benefits.

The current study positively shows that literature on the topic and real-life cases of business are consistent between each other, besides minor differences. This research shows that top management plays a vital role in the implementation of sustainability in the context of Dutch Fintech companies. More specifically, executives' role is to lead their companies by creating long-term and comprehensive strategies for the companies that are inclusive of both financial and environmental goals, while also being easily understandable by lower levels of management and employees.

Limitations and future research

This study has potential limitations. The access to top management leaders of these companies was very limited. Despite numerous attempts to contact top management of these companies through extensive invitations sent over three months, only two people participated in the interviews, highlighting the inaccessibility and difficulty of reaching leaders in this sector. Furthermore, it can be argued that the results of the research might be more useful in companies with top management teams that exert values in support of environmental sustainability. In fact, in companies where top managers do not have a personal interest and engagement in sustainability it is extremely hard to pursue sustainability as perhaps it would be best to substitute the top management team with more sustainability-prone managers or to train the existing team.

This study has focused on exploring the role of top management in sustainability implementation in the Dutch Fintech sector. The findings suggest that top management values and attitudes towards sustainability directly affect the degree of engagement in sustainability initiatives across their companies. The study provides space for future research. One suggestion is to explore the values of top management Fintech companies across more companies of the sector, or conduct the research in a multinational context and explore how cultural differences may affect managerial values and roles. Furthermore, this study has focused on large companies, which leaves space for future research on how managerial roles affect sustainability implementation in medium and small enterprises of the Fintech sector. Finally, future research might perhaps explore the roles and perspectives of middle management, employees and company stakeholders to identify possible tensions between these groups and top management teams' CSR strategies.

Managerial implications

The findings of this research have highlighted the importance of top management's engagement in environmental sustainability to ensure a successful CSR strategy across Dutch Fintech companies. Top management teams of companies focused on profitability should actively include sustainability across their operations in order to create a solid foundation to expand on once they reach their financial targets. Furthermore, the interviews have shown that it is important that top managers do not see CSR only from a compliance perspective. In fact, by achieving sustainability excellence they not only build a positive reputation for their company, but also create a better professional reputation for themselves, thus being an added motivation to include. Top managers should adopt a holistic and long-term view of sustainability, perhaps with training on these topics and the successful creation of tangible targets, as it creates successful implementation strategies for all company departments to follow. Furthermore, the adoption of a long-term view on CSR implementation might even allow top management to reduce the perceived heightened risks of fund allocation as the long-term implications become more clear. Overall, top managers of Dutch Fintech companies should be knowledgeable about CSR implementation and the holistic and long-term aspects of sustainability, which is crucial for its successful implementation.

Conclusion

The urgency for CSR implementation across businesses calls for Dutch Fintech companies to actively implement sustainability in their strategies. This paper has examined the immense role that top managers have in the implementation of CSR across company operations, addressing the research question: *What is the role of top management in leading the sustainability transition in the Dutch Fintech sector?* The study has focused on how top managers' roles and values towards sustainability affect CSR in their companies, as top management teams have the responsibility, resources, and decision-making power to create core business strategies.

By conducting interviews with two of the most influential companies in the Dutch Fintech sector, this study has explored what roles top management teams play in CSR implementation through five different topics: company motivations, top management values, top management perceptions, internal tensions, and sustainability initiatives. Extensive literature has indicated that managers' values of benevolence, achievement, and power are at the foundation of company motivations towards CSR as either profit-seeking or legitimacy-seeking. Furthermore, results from both the academic literature and the interviews have suggested that it is crucial for top executives to have a holistic, long-term view of sustainability. The personal values of managers, profit- and legitimacy-seeking motivations, and long-term view of sustainability are all important elements for the creation of comprehensive sustainability strategies. However, many are the tensions that arise in organizations when implementing sustainability across departments. This study has shown that it is top management's role to create clear targets that reduce internal tensions by addressing win-lose trade-offs between environmental and financial goals. The specific cases of data centers and sustainable investments that contribute to Fintech companies' carbon footprint, have shown that the companies in question are actively addressing these by relying on CO2-neutral data centers and promoting sustainable funding. However, the cases provide real operational examples in which a clear managerial strategy is needed to address the misalignments between financial goals and CSR implementation.

The study has answered the research question by highlighting the necessity for top management to devise clear, strategic, and comprehensive approaches that harmonize financial objectives with environmental goals, ensuring the successful implementation of sustainability across Dutch Fintech companies.

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