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SUSTAINABILITY DISCLOSURE IN THE TRANSPORT SECTOR

**GOVERNANCE AS THE STRATEGIC BRAIN
OF THE ECONOMY'S BACKBONE**





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The journey is essential to the dream

TABLE OF CONTENTS

9	<i>Preface</i>
15	<i>Introduction</i>
19	Chapter I Sustainability in Transport: Evolution, Impacts, Initiatives, and Communication 1.1. The historical evolution of transport systems, 19 – 1.2. The impacts of the transport system and the transition toward sustainable mobility, 24 – 1.3. Policies and initiatives for sustainable mobility and the role of sustainability disclosure, 33 – 1.4. Conclusions, 41
45	Chapter II Sustainability Disclosure in the Transport Industry: A Current Snapshot and Research Agenda 2.1. Introduction, 45 – 2.2. Research methodology, 48 – 2.3. Descriptive analysis, 51 – 2.3.1. <i>Time frame</i> , 51 – 2.3.2. <i>Country of authors</i> , 52 – 2.3.3. <i>Journals</i> , 55 – 2.3.4. <i>Citation analysis</i> , 57 – 2.3.5. <i>Most impactful papers</i> , 59 – 2.3.6. <i>Transport type</i> , 61 – 2.4. Results, 62 – 2.4.1. <i>Air transport</i> , 63 – 2.4.2. <i>Maritime transport</i> , 70 – 2.4.3. <i>Other transport</i> , 75 – 2.5. Discussion and Research Agenda, 83 – 2.6. Conclusions, 86

91 Chapter III

The Role of Governance in Shaping Sustainability Disclosure in the Airport Sector

3.1. Introduction, 91 – 3.2. Literature review, 94 – 3.3. Theoretical background and hypotheses development, 96 – 3.4. Research design, 102 – 3.4.1. *Sample*, 102 – 3.4.2. *Dependent variable*, 102 – 3.4.3. *Independent and control variables*, 106 – 3.4.4. *Model specification*, 107 – 3.5. Results and discussion, 107 – 3.5.1. *Descriptive statistics, variance inflation factor (VIF) analysis and correlation analysis*, 107 – 3.5.2. *Regression analysis*, 109 – 3.6. Conclusions, 112

115 Chapter IV

The Role of Governance in Shaping Sustainability Disclosure in the Port Sector

4.1. Introduction, 115 – 4.2. Literature review, 118 – 4.3. Theoretical background and hypotheses development, 120 – 4.4. Research design, 124 – 4.4.1. *Sample*, 124 – 4.4.2. *Dependent variable*, 125 – 4.4.3. *Independent and control variables*, 129 – 4.4.4. *Model specification*, 130 – 4.5. Results and discussion, 130 – 4.5.1. *Descriptive statistics, VIF analysis and correlation analysis*, 130 – 4.5.2. *Regression analysis*, 133 – 4.6. Conclusions, 135

139 Conclusions

145 References

PREFACE

The contemporary transport sector occupies a central position within the discourse on sustainable development, representing a fundamental pillar of economic progress and social cohesion on a global scale. Nevertheless, its prevailing operational and strategic configurations continue to raise profound challenges regarding resource efficiency, environmental preservation, and long-term systemic resilience. The central task for policymakers, scholars, and practitioners alike lies in designing and implementing transport systems that can satisfy present mobility needs without eroding the mobility capital of future generations. It is within this pressing and intellectually fertile context that Vitiana L'Abate's volume finds its most meaningful resonance.

The book *Sustainability Disclosure in the Transport Sector: Governance as the Strategic Brain of the Economy's Backbone* offers a rigorous and conceptually grounded reflection on the role of sustainability communication within the transport industry. It interprets sustainability disclosure not merely as a reporting requirement but as a strategic and governance-oriented mechanism through which organisations articulate their economic, social, and environmental accountability, thereby consolidating legitimacy and strategic coherence in a global context increasingly shaped by sustainability imperatives.

This work provides a substantial and multidimensional contribution to the academic debate, distinguished by four principal strengths: it

elucidates the evolutionary trajectory of corporate disclosure; it establishes a theoretically robust connection between governance mechanisms and disclosure practices; it presents a systematic and comprehensive review of the scientific literature; and it formulates a set of theoretically informed and empirically grounded managerial implications for sustainability management and reporting.

Regarding the first dimension – the evolution of corporate reporting – this volume demonstrates that the transition toward integrated and strategically oriented disclosure reflects both the growing centrality of sustainability management as a determinant of corporate success and the increasing strategic relevance of voluntary disclosure systems. This transformation stems from deep structural changes in the global socio-economic environment, which may be analytically classified into primary and secondary drivers. Primary drivers – such as globalization, heightened ecological awareness, and financial scandals – have compelled organizations to expand their focus beyond the narrow boundaries of economic and financial performance. Secondary drivers – most notably the proliferation of regulatory innovations and self-regulatory standards – have emerged as anticipatory responses to these macro-level transformations. Within this evolving landscape, organizations are progressively moving beyond traditional shareholder-centric paradigms toward holistic management approaches in which social and environmental objectives are structurally embedded within strategic and operational processes. The sustainability of long-term performance increasingly depends on cultivating competitive advantage through the quality of stakeholder relationships, which generate essential non-financial value. Consequently, voluntary disclosure has evolved into a strategic instrument for enhancing transparency, strengthening corporate credibility, and securing legitimacy within the socio-institutional environment – often surpassing the requirements of legal compliance. Yet, the effectiveness of this communicative practice hinges on the qualitative depth and coherence of the information disclosed, which must capture the complexity and multidimensionality of performance beyond traditional financial metrics.

With reference to the second dimension – the interplay between governance and disclosure – the volume underscores the pivotal role

of governance as the overarching framework through which disclosure processes are directed, monitored, and legitimized. The quality of an organization's governance structure fundamentally determines both the strategic direction and the substantive integrity of its reporting practices, positioning governance as a higher-order determinant of disclosure credibility. Effective governance ensures that sustainability objectives are not merely appended to business practices but are deeply integrated within the organizational fabric. Through this lens, disclosure transcends its technical or procedural nature to become a manifestation of ethical accountability and responsible governance. This organizational control provides the necessary legitimacy and internal checks to prevent informational asymmetries and ensure that reported social and environmental data are both reliable and a true reflection of the strategic orientation of the organization. This volume thus delineates a clear and causal relationship between governance quality, credible sustainability communication, and the reinforcement of stakeholder trust and legitimacy.

The third dimension – the systematic review of the literature – constitutes one of the most intellectually rigorous aspects of the work. The author offers a critical and comprehensive synthesis of existing research while articulating a coherent, forward-looking research agenda for future scholarly inquiry into sustainability disclosure within the transport sector. The analysis highlights the need to expand the focus of academic investigation beyond generic reporting toward more integrated and thematically articulated perspectives, encompassing areas such as climate change communication, the diffusion of circular economy principles, and alignment with the Sustainable Development Goals. Moreover, this volume identifies an asymmetry in existing research, which remains disproportionately concentrated on air and maritime transport, and calls for greater attention to public and rail transport systems, equally crucial to advancing sustainable mobility. From a methodological standpoint, the field must progress beyond descriptive content analyses toward more pluralistic and analytically robust designs. This evolution entails the adoption of qualitative methodologies – such as in-depth case studies – to explore organizational motivations, alongside the application of quantitative methods – such as

econometric modelling – to rigorously test the determinants, dynamics, and outcomes of disclosure. Future research should also move from measuring the extent of disclosure to assessing its substantive quality, in accordance with international standards, and should examine the transformative potential of digital and social media as vehicles for interactive and dialogic stakeholder engagement. Collectively, this agenda provides a rigorous and actionable framework for the future advancement of academic knowledge and institutional practice.

The fourth dimension – the identification of managerial implications – reveals the practical and policy-oriented value of the volume. Its empirical analysis focuses on two strategic components of the global transport infrastructure: airports and ports. This volume demonstrates that these critical nodes must enhance their commitment to sustainability disclosure, not as a perfunctory compliance exercise but as a strategic priority for consolidating legitimacy and reinforcing stakeholder confidence. Both airports and ports are encouraged to broaden the scope and depth of their disclosure and to position their official websites as central platforms of transparency and accountability, given their accessibility and communicative efficiency. Furthermore, the findings underscore the importance of governance reform. Extensive sustainability disclosure is positively influenced by board structures characterized by larger size, higher gender diversity, and, in the case of airports, a greater proportion of independent members. These results affirm the strategic relevance of board diversity – particularly gender diversity – in strengthening monitoring functions, improving oversight quality, and embedding sustainability into strategic decision-making. The observed positive association between the presence of female Chief Executive Officers and disclosure practices further reinforces the pivotal role of inclusive leadership in enhancing both the substance and credibility of sustainability communication. These insights collectively outline a coherent and evidence-based set of recommendations for advancing transparency, accountability, and responsible governance in the transport sector.

This volume stands as a benchmark for contemporary scholarship on sustainability disclosure and governance in the transport sector. It unites theoretical sophistication, methodological rigor, and managerial

relevance within a coherent and intellectually mature framework. By integrating perspectives from governance, sustainability management, and strategic communication, this work contributes decisively to the refinement of academic understanding and the evolution of managerial practice in the pursuit of a more transparent, accountable, and sustainable transport system.

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INTRODUCTION

Transport has always been more than a system of vehicles and infrastructure: it represents the lifeblood of societies, the connective tissue that allows economies to flourish, cultures to interact, and communities to thrive. From ancient trade routes to the sophisticated global networks of today, transport has consistently acted as the backbone of human development. Its ability to connect distant places and facilitate exchanges has shaped history and continues to define the rhythms of globalization. Yet this same centrality makes the sector particularly exposed to the challenges of our time. Environmental degradation, climate change, social inequalities, and the rapid pace of digital transformation all converge in transport, placing it under the constant scrutiny of governments, investors, citizens, and international organizations.

Within this scenario, sustainability disclosure acquires a strategic role. It is not merely a technical tool or a compliance requirement, but a way for transport organizations to narrate their identity and responsibilities. Communicating how they address environmental, social, and governance (ESG) challenges means affirming their legitimacy and demonstrating their willingness to operate transparently in front of a wide and diverse set of stakeholders. For organizations operating in such a visible and sensitive sector, disclosure becomes a means of building trust, mitigating reputational risks, and aligning business practices with societal expectations. At the same time, it allows external

audiences – regulators, policymakers, investors, and communities – to assess whether the promises of sustainability are being translated into concrete actions.

Over the years, the pressure to improve corporate transparency has intensified. Public opinion increasingly demands credible commitments, while international policies and regulatory frameworks set ever more ambitious targets for the reduction of emissions, the adoption of green technologies, and the pursuit of social responsibility. Transport organizations have therefore been called not only to adapt their operational models, but also to explain clearly how these transformations are being managed. What was once left to voluntary initiatives has progressively become an essential component of corporate strategy, evolving from fragmented and isolated reports into more structured and coordinated forms of disclosure. This evolution highlights how sustainability disclosure is not simply about publishing data, but about articulating a coherent narrative that links strategy, performance, and long-term vision.

At the heart of this process lies governance, which can be seen as the strategic brain of transport organizations. Corporate governance defines the structures and mechanisms through which decisions are made, responsibilities are distributed, and accountability is ensured. In relation to sustainability disclosure, it represents the safeguard against opportunistic behavior and the guarantee that information is not only produced but also reliable, balanced, and meaningful. Governance plays a fundamental role in ensuring that the communication of sustainability is not reduced to a marketing exercise but instead reflects genuine strategies and commitments. Through governance, quality of disclosure practices can be enhanced, information asymmetries can be reduced, and stakeholder confidence in the sector can be strengthened.

This book is dedicated to exploring the rise and consolidation of sustainability disclosure in the transport sector, with particular attention to the role of governance. The analysis unfolds through a progressive path that begins with a reflection on the socio-economic and environmental relevance of transport and its transformation under the lens of sustainability. It then moves on to examine the academic debate, which has grown significantly in the past two decades and has produced a

variety of perspectives, approaches, and criticisms. The literature reveals both the richness and the fragmentation of studies on sustainability reporting in transport, highlighting the need for greater systematization and for further research focused on the relationship between governance and disclosure levels. The empirical part of the work concentrates on two strategic infrastructures of the transport system, airports and ports, to investigate how board characteristics and leadership attributes influence sustainability disclosure practices. These analyses provide evidence of the ways in which governance can shape the transparency and credibility of sustainability communication in contexts that are highly relevant for global trade and mobility.

The chapters of this book are thus linked by a coherent thread. The initial part sets the context by underlining the importance of transport and the urgency of sustainable transformation. The central part reviews and organizes the contributions of the academic debate, identifying gaps that require further exploration. The empirical investigation offers tangible evidence of how governance characteristics influence sustainability communication. Together, these elements contribute to a more comprehensive understanding of the role of sustainability disclosure in the transport sector and of the conditions that can improve its effectiveness.

This research has been enriched and shaped by many people who have provided guidance, suggestions, and encouragement. I am grateful to mentors and colleagues who have contributed with their insights during academic discussions and international conferences. I am also deeply indebted to my family, whose unwavering support has been essential to the completion of this work. To them, and to all those who have believed in the value of this journey, I dedicate these pages with sincere gratitude.

CHAPTER 1

SUSTAINABILITY IN TRANSPORT: EVOLUTION, IMPACTS, INITIATIVES, AND COMMUNICATION

1.1. The historical evolution of transport systems

Mobility represents an essential and structuring component for the functioning of contemporary societies, serving not only as an individual and collective need but also as an enabling factor for economic, social, and spatial development (Cardinale, 2004; Giuntini & Pavese, 2004). Transport provides the necessary conditions for fulfilling a wide spectrum of societal needs, including daily commuting, industrial production, energy supply, commercial distribution, and access to essential services (Lucarno, 2005; Rodrigue, 2024).

Since pre-classical civilizations, transport has played a strategic role in fostering economic and cultural relations among communities and territories (De Andreis, 2025). Transport infrastructures – such as the canals of ancient Egypt or the caravan routes of Mesopotamia – served as fundamental instruments to ensure provisioning and territorial cohesion (Musso, 2024). In this context, waterways emerged as the most efficient means for moving heavy goods, thanks to the navigability of rivers and the relative simplicity of coastal routes, whereas land routes were hindered by the absence of mechanical means and

by the difficulty of maintaining durable infrastructure (Algaze, 2008; Morley, 2011).

During the Roman Empire, the construction of an extensive road network (over 80,000 kilometers) represented one of the earliest examples of integrated transport planning, designed to support military control, trade, and territorial administration (Bonora et al., 2000). This network, which connected the most remote provinces to the capital, enabled a greater circulation of people, goods, and information, laying the groundwork for a strategic conception of transport as an infrastructure of imperial power (Musso, 2024).

In the following centuries, with the decline of the great imperial networks and the slowdown of internal trade, the systemic role of transport diminished, reverting to a more local and fragmented dimension (Musso, 2024). It was only in the late Middle Ages that interregional exchanges revived, driven by the renewed development of artificial canals, merchant ports, and overland routes that sustained the commercial awakening of European cities (Greci, 2000).

A radical transformation occurred with the Industrial Revolution, beginning in the late 18th century (Teignier, 2018; Cascetta et al., 2021). The introduction of the steam engine, initially applied to river navigation and later to land transport, profoundly altered the parameters of mobility: speed increased, costs decreased, and dependence on animal power was progressively overcome (Musso, 2024). The construction of the first commercial railway lines – such as the Stockton–Darlington in 1825 and the Liverpool–Manchester in 1830 – marked the beginning of a new era in which transport became systemic, industrialized, and integrated into the dynamics of market and state planning (Gourou, 1952; Schivelbusch, 1986; Kirby, 2002).

Within a few decades, railways expanded across Europe and North America, with Germany providing a striking example: between 1840 and 1900, its railway network grew from fewer than 500 to more than 50,000 kilometers of track (Schivelbusch, 2014). This development profoundly reshaped the economic geography of industrialized countries, promoting productive specialization, the growth of urban centers, and the circulation of the labor force (De Andreis, 2025). Moreover, the introduction of coordinated timetables and standardized fares