GREEN, ALTERNATIVE OR BUSINESS AS USUAL? CRITICAL GEOGRAPHIES OF SUSTAINABLE FINANCE

ABSTRACT

In recent years, a growing number of contributions on green finance have emerged, not only within economic geography but also increasingly from disciplines beyond it. With this Special Issue, we aim to engage with the ongoing debate around green and sustainable finance and its challenges, including concerns over greenwashing. Our extended editorial provides structure to this complex discussion by identifying four primary strands of literature that frame the field. Two of these strands adopt a more critical stance, combining analytical approaches and rigorous assessments that question the impact and 'authenticity' of green and sustainable finance schemes, approaches and policies. Most of the contributions and empirical case studies featured here align with these critical perspectives, which are introduced in greater depth in the second part of this editorial.

Key words: critique; Impact; transformation; sustainable finance; materiality; regional geographies

QUO VADIS?

The financial industry has long celebrated itself as the key intermediary in unlocking sustainability potential, presenting itself as the solution to society's need for investment in sustainable development. This includes adapting to and mitigating the increasingly evident consequences of global warming (Ostrom 2009; Brand 2012). However, the sector is also eager to generate demand, particularly against the backdrop of the current greening hype within the financial industry (cf. Castree & Christophers 2015). Despite powerful critical interventions (Bebbington *et al.* 2020; Christiansen 2021), this hype is largely driven by business and economic scholars, their concepts, and methods; in short, by a 'tyranny of metrics' (Eyre *et al.* 2024). Normative accounting standards such as GAAP and IFRS, for example, fail to capture fully the true representation of (financial) companies' assets and liabilities (Wunder *et al.* 2020; Flammer 2021; Bhutta *et al.* 2022; Lehner *et al.* 2024). Hence, despite finance's stated aim of steering unsustainable economic practices towards (greater) sustainability, patterns of greenwashing and incentivised practices that perpetuate global inequality continue to emerge. These issues often arise with new sustainable finance tools, which suffer from weak accountability, short-term focus, complex structures, and excessive reliance on metrics and ratings, to name but a few factors. Scholars from economic geography and cognate disciplines have critically assessed the various drivers and articulations of what is generally termed 'sustainable finance'. This Special Issue deepens this engagement by focusing on the impacts of sustainable financing projects, related, for example, to preserving ecological dimensions on land ('green finance') and water ('blue finance').

As geographers, we feel the discipline is uniquely situated to identify transformational challenges at the physical–human geography interfaces within global transformations. For this Special Issue, we have gathered voices from various (sub-)disciplines and methodological and geographical backgrounds to unpack facets of this dynamically evolving field where finance and real economies overlap, materialise and create impact. These impacts are not just transforming material economic geographies but also reshape financial institutions and

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investment practices themselves. Contributors to this Special Issue delve into analytical problems that occur – and are diligently analysed – at micro-, meso- and macro-scales. The key denominator of the presented set of papers is their engagement with sustainable finance and contextualised challenges, impacts and benchmark stories in a variety of industrial sectors. Many research papers present results from emerging agendas and serve as important appetisers on the journey towards a better comprehension of global transformational processes – with particular attention to the tangible interfaces and manifold roles of the multiple financial industries with financing net-zero projects across the globe.

This Special Issue is the outcome of a longer process. Building on discussions during various workshops and conference meetings, earlier versions of the contributions were presented at the 'Green Economies Research Network' workshop in Luxembourg in May 2022. This workshop, supported by the Swedish Riksbank, focused on examining the financial sectors' commitment to various industries and infrastructural projects by addressing the double-edged sword topic of *financing the green economy or greening the finance industry*. Further draft papers and research findings were presented at the 6th Global Conference of Economic Geography in Dublin in June 2022, with panel sessions revolving around the broader yet equally critical and topical theme: *Green, Alternative, or Business as Usual? Critical Geographies of Sustainable Finance*. Both events were co-convened by the guest editors of this Special Issue, who saw, motivated by the spirit, empirical findings, and intriguing mix of materialising perspectives, the Special Issue grow over time.

Yet, the debate about green or sustainable finance is much more detailed than our introductory paragraph may initially suggest. A review of the recently proliferating literature on sustainable finance (Knox-Hayes *et al.* 2020; Rodriguez-Rojas *et al.* 2022) reveals at least four strands of debates outlined here below. These debates display partial overlaps and traditionally address different audiences. They reveal a siloed discussion with often-reinforced outcomes and arguments, yet with limited engagement with 'the other sides'. Sustainable finance is not merely a method to fund sustainable economic activities that advance the transition to greener objectives; it also signifies a broader effort to transform the financial industry and enhance its own resilience to climate risks. In this regard, it is assumed that financial institutions and insurance houses will have a growing interest in transforming and reducing their exposure to climate and transition risks, if not for the rising costs but for colossal emission reductions in the (near) future. From this perspective of 'double materiality' – both the impact of the financial sector on the physical environment and the impact of climate change on financial institutions' balance sheets – sustainable finance involves investing in companies and projects that benefit society and the environment, while avoiding those with negative impacts, including their broader supply chains.

Sustainable finance encompasses a range of financial products and services, such as green bonds and equity- or fixed-income investment funds, which emphasise sustainable lending practices. For the financial community, this approach is fundamentally about reducing risk in financial institutions' balance sheets by mitigating exposure to climate change risks, and thereby controlling associated costs through appropriate policies, investments and financing decisions (Dörry *et al.* 2023). Based on these foundations, we have identified four broad strands of debate in the literature, summarised as follows:

(i) A vivid and proliferating discussion within the finance industry itself, including major consultancy firms, around taxonomies, certificates, and the metrics used to categorise and ultimately provide credibility for the 'green-ness' of finance products.
(ii) A science-led debate on the performance of green investment products and the creation of new green markets, aligned with the principles of ecological modernisation.
(iii) A critical assessment of the actual greenness of alleged sustainable finance activities, including socio-ecological impact studies and a deconstruction of greenwashing attempts and approaches.
(iv) An interest in exploring alternative practices that deviate from established products, markets and business models, such as social and value-based banking,

local credit unions and other non-profit-oriented operations.

Admittedly, any typology must remain somewhat simplistic due to the vast number of scientific contributions to this popular topic. Nevertheless, despite our rough categorization, we aim to make a more granular claim about the shortcomings in this extensive literature that contributors to this Special Issue seek to address and the gaps they aim to fill. The research papers identified within the first two strands of debate primarily focus on the design and performance of financial products and sectors, including the shapeshifting economic-financial 'consultocracy' within the financial and advanced producer services complex (for a critical review, see Bassens *et al.* 2024), underpinned by scholarship from economics, business administration, accounting, and entrepreneurship. In contrast, research characterising groups (iii) and (iv) takes a more critical stance anchored in the social sciences at large. They employ more heterodox approaches, in-depth case study research, but also forensic anthropological methods. Topical research aligned with the characteristics typical for groups (i) and (ii) has developed a strong agency in defending the status quo of financial markets, the performance of financial instruments and investments, and the generated profits as a core variable that can be enhanced with green elements over time. In contrast, research directed towards the traits defining groups (iii) and (iv) takes a more critical stance regarding the actual transformative potential of sustainable finance endeavours and often aligns – at least in part – with various forms of activism and activist research.

We disentangle this complexity by carving out the multiple geographies that are often indirectly buried yet highly relevant in this vast literature dominated by economic and business scholars on the one hand, and political economists on the other. These scholars often approach these issues from a national-centred perspective that misses impact, action, and agency on regional, local or even project levels. While we acknowledge the need and importance of positive quantitative research to allow for recognition of trends and patterns, our interest lies in unpacking the manifold enabling or disabling mechanisms towards net-zero projects where they 'touch down' in reality; be they private or public investments, top-down or bottom-up, and often mixed in a certain way. We invite the reader to follow us in a brief introduction to the research, identifying the characteristics and key research interests allocated to our identified strands of research before positioning the six contributions to this Special Issue on this basis.

Scholarship representing research in group (i) largely mirrors the dynamics of a rapidly growing market driven by the political economies of decarbonisation needs and dynamics, and triggered by formal, institutional factors. These include taxonomies and ratings designed to guide the industry, such as ESG ratings, CSR standards, the EU taxonomy and changing socio-political contexts that have redirected investment strategies, including fossil fuel divestments and sustainable investments. Rather than focusing solely on mitigation, the political and scientific discourse has shifted recently towards the urgent need for adaptation measures and respective funding, for example, via a range of national and supra-national policy toolboxes and programs (United Nations 2005; UNEP 2017; European Commission 2019, 2021; UNEP FI 2023). For many financing banks and non-bank financial institutions, the pressure to adapt has led to competing claims for leadership in designing new financial products, establishing industry standards, and creating (often superficial) quality labels primarily serving marketing purposes (Miller 2017; ESMA 2023; Lagoarde-Ségot 2024). These efforts respond to growing demand and increasing client sensitivity towards sustainability pressures but at the same time to preserve financial value for the investors. Large and increasingly vocal climate activist movements are a significant part of this context, with the highest courts urging governments to act more decisively to protect future generations from the consequences of a boiling planet. Yet, for numerous reasons, the transformation of many financial industries is slow and fraught with setbacks in this industry-centred debate (for roadmaps and guidelines released by international organisations, business associations, and public promotion agencies, see Lemmet & Ducret 2017; WAIFC 2020).

A second strand of more scientifically grounded literature, identified here as group (ii), focuses on monitoring sustainable finance market dynamics and assessing the performance of new sustainable business models. This includes comparisons between early movers and latecomers, as well as between specific financial product classes, such as new green versus conventional bonds. However, the threshold of sustainability in the financial industry has often become an opaque, complex (and thus costly) box-ticking exercise, which is not well grounded in real-world materialism. Consequently, critical observers often perceive that these scientific studies aim to refine their box-ticking models rather than enhancing understanding of the actual impacts of financial activities 'on the ground'. In other words, much research in this category is considered sustainable in theory but lacks genuine contributions to more sustainable economic practices where financial activities directly impact concrete projects (Zetzsche *et al.* 2022), with rating agencies and other newly acclaimed sustainable finance experts helping to translate science and politics into financial business.

Contributions classified in group (iii) often challenge the underlying assumptions of what makes investments and funding genuinely sustainable, as outlined in group (ii). To understand this critical perspective, a brief discussion of the European Green Deal and its ideological foundations is relevant. The European Green Deal (European Commission 2019) is an ambitious initiative aimed at combating climate change and environmental degradation while promoting economic growth and social cohesion within the EU. Essentially, it represents a political strategy aimed at advancing a greener capitalist model by leveraging the principles of ecological modernisation to address the climate crisis in an *economically viable* way (Mol & Spaargaren 2000; Lawhon & Murphy 2012; Liefferink & Wurzel 2017; Dörry & Schulz 2018; Medeiros 2021). It encompasses various medium-term objectives, policies and industry plans, with sustainable finance playing a pivotal role. Against this backdrop, research in group (iii) is driven by scepticism towards prevailing 'business-as-usual' approaches, such as those promoted by the Green Deal. This research seeks to unpack and decode the underlying motivations, accountable objectives and (non-)transformational aspirations where finance and investment materialise on the ground. Contributions range from critical evaluations of the social and ecological impacts of sustainable finance products (Schwegler *et al.* 2021) to questioning standards and taxonomies for investment funds, including the 'best-in-class' principles. Such research also examines the creation of knowledge and skills required for this transformation – though there are concerns about whether true expertise or mere skill-washing (Schumacher 2022) guides this process – in an increasingly uncertain and risky business environment for financial institutions and investors. Additionally, it includes in-depth research on financial leverage for transitional practices (Flögel *et al.* 2023), SDG-oriented transitional policies (Mazzucato 2023), and identified funding gaps (Hafner *et al.* 2020), among other topics.

Last, but by no means least, scholarship categorised in group (iv) focuses on understanding trajectories towards a more profound transformation of the financial sector itself. This research seeks to decode and recode the practices and mechanisms that stabilise or renew established patterns and motives. Scholars have examined traditional financing institutions, such as credit unions, cooperatives, and social banks, as well as the evolution of new financing practices, including crowdfunding, non-monetary exchange schemes, and rotating savings and credit associations. They also explore how these new forms of financing and investing differ from profit-oriented incumbents (Benedikter 2011; Remer 2014; Hossein & Christabell 2022). This debate often embraces the concept of 'finance as a commons' (Ostrom *et al.* 1994; Périlleux & Nyssens 2017; Mazzucato 2024a), viewing finance as a means to support the common good of society rather than merely serving the wealth accumulation of an exclusive few (Safri & Madra 2020; Mazzucato 2024a, 2024b). This perspective emphasises the importance of collective action and governance in integrating social and environmental responsibility, aligning investment practices with broader societal goals such as sustainability, equity, and community well-being. The scholarship in this group underscores the need for financial institutions to be accountable to the public and to ensure that their actions are aligned with the common good (e.g., Schoenmaker 2017).

Among the approaches and ideas on which (not always so) green finance has thrived, the contributions gathered in this volume embody the core traits of scholarship categorised in groups (iii) and (iv). Mainstream economic work on green finance, as briefly introduced above, often reflects a shockingly inadequate understanding of what finance and investment actually do – and can do – in the material world. In this context, financial instruments, as well as practices of financial inclusion and exclusion, may be weaponised to forge and enforce, rather than mitigate, inequalities (Guermond *et al.* 2024). Economic textbooks still predominantly convey the optimistic message that lending funds, managing investments, and circulating money and capital allocate resources to drive social, economic and environmental change – transforming ideas into new technologies, industries, and jobs, and promoting well-being for all (Allen & Yago 2010). While this may have been somewhat accurate during the booming post-WWII era of capitalism, today's financial capitalism – largely characterised by arbitrage, rent-seeking and speculation – has exposed this narrative as a mere fairy tale. It grossly misjudges the situation by overlooking the often overlapping and amplifying impacts of global financial industries on societies (Dörry 2022); many of these dynamics being subsumed under the term financialisation (for an insightful overview, though with a limited focus on finance, see Mader *et al.* 2020). More importantly, these approaches reveal a fundamental misunderstanding of the creeping transformation of global finance into a self-serving industry. The consequences of these shifts have introduced an array of unsustainable financial practices that often hinder rather than enable the promoted rapid decarbonisation of our economies and societies in, as the European Green Deal promises, a just and fair manner.

The materiality of financial activity is now under scrutiny, particularly the interfaces between socio-ecological and financial realms, as well as between financing community-based economies and the global export of financial services through global financial economies in financial centres. Making visible the multiple materialities and critically examining the impacts of financial and finance-related agency and power through the application of financial instruments and sustainability-oriented policies – oscillating between welfare and neoliberal perspectives – forms the core thread linking the research papers in this volume. Context matters greatly, and contingency is an inherent part of this transformation process. Nevertheless, patterns emerge in the impacts of mobilised financial metrics and instruments across industries and various contexts where our contributors have conducted their case studies.

PAPER CONTRIBUTIONS

Intriguingly, the contributors to this Special Issue – who come from backgrounds in sociology, anthropology, geography and cultural studies – mobilise a range of methods and methodologies to study finance-related phenomena at micro-, meso- and macro-scales, exploring their interrelationships. They not only apply established theories concerned with change; some contributors also empirically identify the limitations of these theories and propose new approaches for studying phenomena undergoing change (Dörry & Schulz 2024; Eyre *et al.* 2024). They narrate the financing of new national infrastructure (Walker & Klagge 2024) or new 'blue' economies in structurally weak regions (Albrecht 2024), as well as sustainable old-industrial economies (Dörry & Schulz 2024), primarily through top-down government approaches and *public* investments. A particularly intriguing example is Dal Maso's (2024) discussion of the emerging Thai green finance framework, which aims to transition investments from brown to green assets by upgrading existing infrastructures to enhance renewable energy production, thereby supporting both state legitimacy and the government's industrial policy. Others discuss bottom-up initiatives in search for *private* funding, with British communities as one example (Magli *et al.* 2024) and the design of green bonds to invest in public transportation for emission reduction in Brazil as another (Eyre *et al.* 2024). These comprise the range of examples and constellations found in the assembled research of this Special Issue.

The first paper, titled *'Beyond the 'tyranny of metrics'? Morality, measurement, and indicator literacy in sustainable finance'*, is authored by **Ben Eyre** (University of East Anglia, UK), **Oiara Bonilla** (Universidade Federal Fluminense, Brazil), **Marc Brightman** and **Stefan Voicu** (both from the University of Bologna, Italy). They critically examine the role of metrical indicators and their performativity in evaluating and marketing various types of sustainable bonds. Their case studies compellingly demonstrate that, despite methodological rigour, the metrics used to label sustainable finance activities often overlook significant effects and related evaluation criteria, especially when viewed from spatial and multi-scalar perspectives. The authors make a strong case for the necessity of metrics and indicator literacy to 'critically analyse metrics used to describe complex social, spatial, and scalar phenomena' (2024, p. 13).

Elena Magli, Micaela Mazzei, Olga Biosca, and **Neil McHugh** (2024), all from the Yunus Centre for Social Business and Health at Glasgow Caledonian University, UK, explore 'alternatives' in the UK consumer credit market. The focus in their paper on *'Exploring 'Alternatives' in the Consumer Credit Market: Community Development Finance Institutions in the United Kingdom'* is on practices through which local communities have established financial institutions, specifically Community Development Finance Institutions, which provide small-scale, short-term loans (microcredits). These loans are intended to assist individuals and families in need. Unlike conventional consumer credits, which often aim to increase consumption or are extractive and detrimental to debtors, such as commercial sub-prime lending, these alternatives are designed to be supportive and non-exploitative.

Giulia Dal Maso (2024), from the University of Venice Ca' Foscari & National University of Singapore, in her paper *'Exploiting time in green visions for Thailand: How green finance leverages past infrastructures for future returns'*, reveals how past geopolitical and military infrastructures have become the subject of future-oriented investments. She shows in particular how Cold War-era infrastructure in Thailand's northeast province is being repurposed for renewable energy projects, transforming them into green assets that serve both economic and political goals. By exploring the intersection of infrastructure, finance, and politics, Dal Maso demonstrates how these 'green upgrades' help the military junta address political crises, while promoting financial capital accumulation and political legitimacy. Such green finance opportunities can thus be qualified as a re-articulation of extractive and speculative practices, perpetuating modes of international capital accumulation – now framed as green.

Moritz Albrecht (2024) from the University of Eastern Finland investigates the emerging role of seaweed farming in the so-called 'blue' bio-economy, which is expected to become a billion-dollar industry. Using an assemblage perspective, his paper on *'A Billion-Euro Industry? (De-)territorialisation Processes of Norway's Seaweed Farming Assemblage'* examines how this sector is being ambitiously promoted by Norway's' government to boost regional development of the future and evaluates its potential as a transformative 'locus for sustainable finance and investment' (p. 4). Similarly, **Benedikt Walker** and **Britta Klagge** (2024) from the University of Bonn, Germany, explore another potentially transformative sector: green hydrogen projects organised in a decentralised way. In their article on *'Infrastructure Bottlenecks as Opportunities for Local Development'*, they analyse how the design of green hydrogen markets in Germany interacts with spatially decentralised renewable energy production patterns and their discontinuous temporalities. They highlight how the lack of interregional infrastructure for renewable energy transport creates opportunities for local and regional production and demand, including investment opportunities that sometimes conflict with national and EU strategies for large-scale infrastructure funding.

Finally, **Sabine Dörry** and **Christian Schulz** (2024), based in Luxembourg, in their paper '*Creating Low-Carbon Economies: Probing Transition Dynamics through the Lens of Field Theory*', use Strategic Action Fields to examine the role of public development banks in regional transitions of old-industrial, structurally weak regions of France and Germany. They argue that meeting the European Green Deal's decarbonisation targets within regional restructuring processes in Hauts-de-France and Saxony requires key challengers and incumbents to engage in complex adaptation processes. The authors highlight the transformative yet ambiguous potential of public development initiatives at regional, national, and European levels. Given these regions' reliance on the state and the urgent need for sustainable re-industrialisation, the state and public funding emerge as vital for supporting these ambitious strategies, revealing both similarities and differences between the two regions.

Green, Alternative or Business as Usual? This triad of options signals the need for a critical analysis of different approaches within the vast – and growing – field of sustainable finance. We hope this framework sparks curiosity and fosters discussions about whether current practices are genuinely sustainable – or at least green and ecologically viable –, or if they represent merely superficial changes to traditional motivations, models, and methods. The collection of research contributions assembled in this Special Issue provides a nuanced and critical debate on the ongoing greening dynamics and offers in-depth analyses to understanding the spatial and geographical dimensions of sustainable finance. We also hope that this array of inspirational research will gain momentum and stimulate further scholarship from diverse fields. Our aim is to challenge prevailing business-as-usual approaches, identify pathways to overcome barriers and limitations, adhere to core principles of sustainability, and encourage more rapid and just progress towards genuinely sustainable finance, both in local communities and global financial centres.

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