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Sustainable finance down-to-earth? Insights from the German regional economy

Lisa Knoll [a], Ulrich Klüh [b], Ilias Naji [b] and Felix Rossmann [a]

ABSTRACT

The standard sustainable finance agenda portrays the investment world as a change agent for the green transformation of the economy. It does so by demanding more transparency and information for a globally conceived macro-financial sphere. We contrast this agenda with a more local alternative, a 'landing' of green capital in the world of German public sector savings banks and manufacturing firms. These actors are characterised by their rootedness and involvement in regional networks. We apply Bruno Latour's (2018) analysis of a local-global division in the new Climate Regime to study the European sustainable finance agenda on these regional grounds. Our main conclusions are twofold: On the one hand, we see a deepening of Latour's local-global conflict line through the current agenda's focus on documentation and due diligence. On the other hand, a collaborative culture in the regional economy acts as a translator of the current agenda into more locally grounded ('down-to-earth') rationale of transformation. This, however, would require taking the importance of these translation processes into account on a structural basis and to understand the importance of local actor and network constellations for a 'down-to-earth' sustainable finance strategy.

KEYWORDS

Political economy; regional networks; geography of finance; SMEs; climate finance; Germany

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1. INTRODUCTION

Carbon, climate and sustainable finance are global themes, mainly discussed in transnational spheres. In Europe, particularly, these themes are essentially understood as a type of financial sector reform that took off in the aftermath of the Paris Agreement in 2015. In 2018, the European Sustainable Finance Action Plan (SFAP) was launched, as a key element of the European Green Deal (EGD). It consists of diverse regulatory blocks such as the European Green Bonds Standard (EUGBS), the European Taxonomy for Sustainable Economic Activities, the Corporate Sustainability Reporting Directive (CSRD), the European Corporate Sustainability Due Diligence Directive (CSDDD) and several new guidelines of the European Banking Authority (EBA), including for the first time, sustainability-related risks in the lending process. These diverse building blocks create a constellation in which banks and financial investors are asked

CONTACT Lisa Knoll lisa.knoll@upb.de
[a] Institute of Human Sciences, Faculty of Arts and Humanities, University of Paderborn, Paderborn, Germany
[b] Department of Economics, Center for Sustainable Economic and Corporate Policy, University of Applied Sciences Darmstadt, Darmstadt, Germany

to account for the sustainability of their investments, for example in the form of a 'green asset ratio' for banks. The asserted aim is to use 'transparency' to redirect private capital into the green (and social) transformation of the economy.

This transparency-oriented regulatory regime does not only address large corporations, but also small- and medium-sized companies (SMEs), which are mainly affected due to their role in their financiers' or customers' value chains. Even though they were exempt from many of the new regulatory requirements, many SMEs are asked to provide sustainability-related data and reporting from banks or clients. The European Commission explicitly aims at providing a voluntary SME reporting standard (VSME), which will give these companies guidance and orientation. Currently, this agenda is under reform, particularly as a reaction to complaints about an 'overload of bureaucracy' associated with the European Green Deal agenda. In reaction to these complaints, the Commission announced a so-called Omnibus Directive, promising to simplify and standardise the disclosure landscape. Currently, the European agenda for sustainability and climate protection has turned into a political battlefield, raising the risk that the Commission may lose track of its ambitious climate goals.

In this article, we aim to make sense of these developments by studying the agenda's implementation in Germany's regional economy. We use Bruno Latour's framework of the New Climatic Regime (Latour, 2018) to shed light on the current societal conflicts and anti-European sentiments surrounding the poltical field of sustainability. We see the EGD trapped between the need for an ambitious 'man on the moon' moment (Von der Leyen, 2019) to do justice to the transformative challenge climate change poses and a deepening societal division fuelled by anti-European sentiments. The challenge of political dynamics around sustainability and climate change, according to Bruno Latour, is that we live within a painful antagonism between 'the Local-to-be-modernized' and 'the Global-of-modernization' (Latour, 2018, p. 29). According to Latour, the challenge lies in (re)connecting the two in a global-local network-space he calls 'terrestrial' (Latour, 2018, p. 95).

We use this Latourian lens to illuminate the dynamics in the German regional economy with respect to the implementation of the European sustainable finance regime. In doing so, we contribute to an analytic debate that highlights the importance of regional proximity between banks and SMEs, as well as the significance of local network structures and a collaborative culture (Bezzon et al., 2024; Braczyk et al., 2004; Flögel & Hejnová, 2024). The German political economy is known for its bank-based model (Vitols, 2004), and a network-based economy specialised in providing flexible customer solutions (Heidenreich et al., 2017), sometimes coined as 'diversified quality production' (Streeck, 1991; see also Sabel, 2000). We argue that the particular form of the EGD as a (complex) financial disclosure regime is in danger of losing ground in the region, thus deepening the divide between the local-to-be-modernised and the modern global in a Latourian sense. We see the potential and necessity of regional networks and collaborative structures translating the current sustainability agenda into concrete 'down-to-earth' pathways of transformation.

We employ empirical findings from two interrelated sustainable finance projects (one on savings banks, the other on manufacturing SMEs): First, we discuss the current trend of feeding and deepening the societal division alongside the Latourian global-local conflict line. In particular, our interview data reveals a complex set of anti-European sentiments and talking points. Second, we observe attempts at translation and motivation to adapt the new sustainability agenda. Local actors, using their regional proximity and network structures, try to conceive pragmatic 'down-to-earth' pathways. The difficulties encountered in the context of this endeavour highlight the importance to develop a more regional understanding of climate finance. They are deepened by a European approach that mainly focuses on documentation and due diligence detached from regional constellations. Despite globalisation, regional networks are still key to the German 'political economy', and we see new hopes and attempts to reinvent and reactivate this model under a – rather abstract and depoliticised – sustainable finance agenda. Specifically, the seemingly outdated relationship banking model might be reinforced in new ways.

The article is structured as follows: Section 2 discusses Latour's (2018) concept of the new climate regime. We will relate the more general insights of this analysis to the social science literature on sustainable finance, financialisation and the German political economy. In Section 3, we present our empirical data from two interrelated research projects running from 2022–2025. Section four then presents our two main findings, a deepening of the terrestrial conflict described by Bruno Latour (Section 4.1) and an emergent new, more 'terrestrial', dynamic (Section 4.2), in the form of a productive actor-network process on the ground, involving the diverse material regional realities of a potentially sustainable agenda. Section 5 concludes that such an agenda is held together through processes of translation, adaptation and re-interpretation.

2. SUSTAINABLE FINANCE AND THE CHALLENGE OF BECOMING TERRESTRIAL

Latour (2018) argues that the dynamics of the new climatic regime require a replacement of the globalist anchors of societal development by a 'terrestrial' attractor. This attractor combines understanding the limited planet as an actor with the need to re-politicise ecology. His book 'Down to Earth: Politics in the New Climatic Regime' ends with Europe's (potential) role in the divided political atmosphere of Western societies: It should not reduce itself to a 'soulless bureaucratic mechanism', which Latour depicts as globalist and detached from terrestrial realities. It should, instead, become a 'concrete', 'vibrant', 'ambiguous', and 'colorful' place (Latour, 2018, p. 104). The challenge of existing political dynamics around sustainability and climate change is that we live with a painful antagonism between 'the Local-to-be-modernized and the Global-of-modernization as two poles of attraction' that 'distinguish … between what is ahead and what is behind' (Latour, 2018, p. 29). For Latour, the actual 'pairing of Global and Local obviously leaves out all the other ways of being local and global that have been revealed to us by anthropology but that remain invisible to the Moderns and thus do not belong to the schema' (Latour, 2018, p. 29). 'Terrestrial', for Latour is a denominator for becoming local, without becoming backward-looking and regressive, nationalist, or territorial. And it is a common divisor of becoming global in the sense of understanding wide-spanning networks of human-natural (and socio-technical) constellations.

The problem with the global, according to Latour, is that it is tied to a particular scientific form stemming from the natural sciences, and an economic science that reduces the complexities of climate change to a limited notion of 'information', ignoring the complex coordination problems attached to them (see e.g. Favereau, 2001 on the limiting role of 'information' in economic theory). Latour argues: 'We have to be materialist and rational, but we have to shift these qualities onto the right grounds' (Latour, 2018, p. 65). According to Latour, we need to take back notions such as 'effectiveness', 'realistic', 'objective' and restore their complex and 'down-to-earth' meaning, which they lost in the actual (economic) science-led discourse. He asks:

> How could we speak of 'effectiveness' with respect to technological systems that have not managed to integrate into their design a way to last more than a few decades? How could we call 'rationalist' an ideal of civilization guilty of a forecasting error so massive that it prevents parents from leaving an inhabited world to their children? […] To restore a positive meaning to the words 'realistic,' 'objective,' 'efficient,' or 'rational,' we have to turn them away from the Global, where they have so clearly failed, and toward the Terrestrial. (Latour, 2018, p. 66)

We refer to the Latourian 'down-to-earth' – concept as a type of scientific pragmatism that distances itself from traditional, abstract theories of finance and financial globalisation. The concept emphasises the importance of practical work related to sustainable transformation in SMEs and savings banks and their wider (regional) networks. We try to replace the standard understanding of finance as a global network of information flows through an understanding of finance as interactions and practices between located, contextualised people and grounded matters, procedures and material flows, thus referring to the 'earth' in its literal *and* its metaphoric sense. Our empirical approach addresses interactions of people and things trying to find adequate sustainable practices related to the task of sustainability data processing that is required in the current transparency-led agenda.

In our empirical study on the landing of climate finance within Germany's regional, network-based political economy, we observe conflicts along the line of a division between a 'soulless bureaucratic mechanism' – EU regulations that are first and foremost interested in disclosure, due diligence and documentation – and regional industrial practices. These practices evolve around technical components, tight competition in world markets, energy and heat systems, and assembly lines in an industrial regime of 'diversified quality production' (Streeck, 1991). This regime is backed by local and regional networks and a close collaboration between customers, industry associations, innovation networks, and regional banks (Braczyk et al., 2004). Transformation, innovation and change, are not alien to this world. They are deeply enshrined into the everyday practices of SMEs and local banks. But in the lifeworld of the latter, transformation does not come about through mechanisms of documentation, disclosure and reporting, but through 'hands-on' flexible modes of cooperation, exchange and collaboration. We identify two modes and ways of doing things, which collide in the current sustainable agenda. They are difficult to be brought together. We argue it is possible to do so, only, if we understand that transformation does not necessarily and quasi-automatically come from information, alone, and may well also stand in its way, if thought of as an end in itself.

Our study reveals that sustainable finance has embarked on a path, which might deepen the local-global conflict line that Latour describes (Section 2.1). We see the necessity and the potential of down-to-earth-practices and collaborations in reestablishing the meaning of words such as 'realistic', 'objective', 'efficient' or 'rational' when it comes to sustainable practices and solutions within regional network constellations (Section 2.2).

2.1. Sustainable finance leaning towards the global attractor

The modus of reform and transformation that leans towards the global attractor stems from a mathematised financialised culture. The sustainable finance agenda of the EU is built upon this culture: The European Commission Technical Expert Group on Sustainable Finance assists in setting regulatory frameworks such as the taxonomy and the EU Green Bond Standard. More than half of the members are actors from large global banks, investment funds or financial platforms. About a fifth are from non-governmental organisations (NGOs) and professional associations (EU TEG, 2020, pp. 64–66). Social scientists have analysed 'the democratic dangers' (Coombs, 2024) of this agenda, as well as its technocratic and expertocratic character (Van't Klooster, 2021). This strand of literature emphasises the highly technical forms of banking and financial risk regulation that were implemented in the aftermath of the financial crisis of 2008/09, with its highly mathematised character (Baud & Chiapello, 2017; Coombs & van der Heide, 2020). This type of regulation nurtures hopes that climate risks can be accurately calculated as financial risks and then integrated into the allegedly transparent structures of banking regulation.[1] Complex forms of 'knowledge' and coordination intensive processes of knowledge creation are stripped off their character as 'wicked-problems' (Sediri et al., 2020). Wicked-problems are reduced to a book-keeping form of 'information' (Favereau, 2001) and turned into (alienated) 'ticking the box'-practices.

One of the pitfalls of sustainable finance data management is its opaque character. Even though the sustainable finance agenda is up for transparency, real-world green investment products' data structures are often ambiguous, opening up ways for regulatory arbitrage. Chiapello and Engels (2021) look at compensation units, certified emission reductions or units of ecosystem services, and they diagnose an 'intangibilization' of environmental assets. These become sellable and disposable financial products and instruments of value creation and book-keeping, and thus open to detachment (Chiapello & Engels, 2021, p. 518):

> 'These intangibles are created in order to fix actual problems of pollution or destruction, with the hope of having a real effect at the physical level. But to win this capacity to deal with physical problems, the adopted strategy consists in separating the impact on biophysical nature from the biophysical relations themselves and to trade the abstracted element separately. This paradox makes environmental intangibles unstable, subject to tensions and controversies, torn between the environmental questions they are supposed to address, heterogeneous economic interests that seek flexibility and cost reduction, and the efforts of states to manufacture environmental policies' (Chiapello & Engels, 2021, pp. 523–524).

As a consequence, the emerging world of sustainable finance standards tends to increase opaqueness in the name of transparency. This also has to do with the existence of diverse, manifold, fragmented, non-standardised ESG-commensuration tools (Clark & Dixon, 2024). It is an open question, whether and how far the current Omnibus reform process and standard setters such as the International Sustainability Standards Board (ISSB) will be able to solve this problem (Bassen et al., 2023). The Taxonomy already was the European answer to the fragmented and opaque world of sustainability standards. However, this process of consolidation is far from finished, and under ongoing construction and reform.[2]

Furthermore, sustainable finance in the German SME sector is rarely based on typical market-based sustainable finance products. Bond and equity issuance play a minor role in SME financing. Instead, it mostly exists in the form of internal finance, subsidies, or bank loans (Greitens et al., 2023; KfW, 2023). This evokes the question, in how far the current sustainable finance agenda is consistent with the transformation requirements of regional economies at all. Potentially, the term 'sustainable finance' needs to be understood differently, as a collaborative, locally grounded practice among different actors knowing their particular situations and transformative challenges. Put differently, there are doubts raised that the German regional economic model can transform under the current transparency-led sustainable finance agenda (see also Flögel et al., 2024).

2.2. Sustainable finance leaning towards to local attractor

This 'global' and financial market-based agenda (or modus of reform) lands in a lifeworld in which it is provoking resistance. This resistance takes the form of an anti-European 'local' critique, which leans towards the local attractor of the Latourian description of the New Climatic Regime (Latour, 2018). Interestingly, though, the industrial lifeworld in which this global agenda lands is not 'local' per se. The German (mercantilist) export-oriented model of production (Baccaro & Benassi, 2017) is highly integrated into world trade and international price-competition. It is backed by a dense network of public sector banks and a landscape of public sector subsidies (see, e.g., German Federal Office of Economics and Export Control). This mercantilist and export-led growth model has experienced severe problems in the aftermath of the war in Ukraine, which marked the end of cheap fossil energy from Russia. It is also challenged by developments related to Europe's economic relations with China, Russia and the US. Against this backdrop, the German growth model, which is strongly dependent on globalised markets and backed by very specific regional and national features is under pressure.

Despite its high level of globalisation, the German political economy remains rooted in local and regional contexts. The public sector and regional banking infrastructures provide financial aid for what is known as 'diversified quality production' (Streeck, 1991). Germany stands out in Europe with a particularly strong industrial base, largely composed of SMEs, and a bank-based financial system (Vitols, 2004; Ziegler et al., 1985). The type of 'managed capitalism' related to these financial structures has been under considerable strain in recent decades, as pressures to become a more 'market-based' financial system mounted (Lütz, 2000). Companies became more independent from this market-based system in subsequent years (Braun & Deeg, 2019). Indeed, financialisation took hold in the German public savings banks sector as well, indicative by a strong reliance on compliance, risk controlling, quantification, and a more timid but noticeable capital market orientation. Despite these pressures, the German system is still frequently portrayed as an antithesis to the globalised and marketised structures of financialised capitalism (Keller, 2019; Klüh et al., 2022, p. 423). Financialisation, here, has been analysed to be 'partial and selective' (Faust & Kädtler, 2022, p. 343). To some extent, regional banks stick to smaller margin lending with a focus on regional SME credit-based finance.

The manufacturing industry, in particular, is less financialised than in other countries. Among manufacturing SMEs, the vast majority are family-owned, with two or at most three families holding at least half of the shares (Faust et al., 2017). Their climate investments are mainly financed from their own funds (51%), traditional bank loans (32%) and subsidies (14%) (KfW, 2023, p. 27; see also Greitens et al., 2023), which partly reveals the 'strong firms, weak banks'-argument posed by Braun and Deeg (2019). Capital market financing hardly plays a role for green SME financing. In terms of external finance, conventional bank lending remains most significant. The current European sustainable finance agenda thus encounters a situation in which industrial firms are not capital market intensive but are still expected to abide by and gain from a transparency-led regime. What lands in the regional economy in terms of sustainable finance are requirements for data management and documentation. These requirements, however, do not provide a perceptible financial advantage, as their capital market logic does not correspond to the non-financialised financing structures of SMEs.

Still, there are debates on how far the German regional banking system, with its public sector and cooperative banks, may spearhead green finance in its own way and logic. With respect to the potential of green finance in the German political economy model, Flögel et al. (2024, p. 120) argue that the regional proximity between banks and industry might help to 'gain climate-relevant (soft) information, appropriately assess climate impacts, and support local clients in their transition to climate neutrality'. In this way, it might help to translate German regionalism into more 'down-to-earth' initiatives of the socio-ecological transformation. Sceptical voices challenge this view. Klüh et al. (2022, p. 423), for example, critically review hopes that elements of democratic control in the public savings banks' governance structure could serve as a pre-condition for an effective socio-ecological transformation. Not only do savings banks and their stakeholders as well as the EU oppose a stronger democratic embedding of public regional banks (Gabor, 2023, p. 446), they are also seen as laggards of taking ecological lending criteria into account. Flögel et al. (2024) argue that their banking model insulates them from market pressures for more greening, that they are mostly confronted with clients who do not face direct pressures to disclose sustainability-related information, and that their relationship to SMEs makes them more lenient with borrowers who oppose a green transformation.

All in all, we see a constellation that makes local actors attune to leaning towards the local attractor within the New Climatic Regime. The German political economy is in many ways distant from and alien to the market-based and financialised regime (Braun et al., 2018) through which sustainability is currently governed. It is a challenge to overcome this local-global divide and to lift the sustainable transformative potential of the German regional economy. This article investigates how far the current sustainable finance agenda helps to do so, and how it is in danger of deepening political conflict lines. We will now analyse the 'landing' of the climate finance agenda between the local and a global attractor in the German political economy. We will also discuss in what ways a more terrestrial or 'down-to-earth' alignment can be expected.

3. METHODS AND DATA

Public sector banks and the SME industry play an important role in the German political economy but are marginalised in the current sustainable finance agenda. To analyse what happens in the political economy of climate and sustainable finance in Germany, we pool the data of two interrelated research projects. One focuses on the role of German public savings banks, the other on SMEs in the manufacturing industry. The empirical results stem from 26 qualitative interviews conducted between 2023 and 2025. They were led in German and quotations were translated into English. Geographically the SME-related data mainly originate from the rural industrial region of Eastern Westphalia-Lippe. We thus look at a region that is in many ways a representation of ‘old’ industrial regions (Birch et al., 2010). To a large extent, it is based on steel, chemical and energy-intensive industries, and woven into competitive global value chains, which form an integral part of the German export-led growth model (Baccaro & Benassi, 2017). The savings banks-related data was mainly gathered on a federal level as well as with regional actors from the Rhine-Main area (Table 1).

Additionally, we attended regional and national events and webinars on climate finance, savings banks and SMEs. The semi-structured interviews are interpreted according to the viewpoints and orientations towards a potential ecological transformation taking place through the means of the current sustainable finance agenda. We follow a conflict-oriented approach, aiming at understanding the antagonisms, dynamics and the obstacles of the current (financialised) sustainable finance agenda in a less financialised context.

4. SUSTAINABLE FINANCE IN THE REGIONAL ECONOMY – VOICES FROM SMEs, BANKS AND INTERMEDIARIES

Our analysis portrays the difficulties of sustainable finance in the world of globally active but regionally rooted actors. By doing so, we highlight the importance of alternative ways of thinking about sustainable finance, especially those rooted in regional actor constellations. We identify the ‘down-to-earth’ dynamics happening in the German political economy on the ground, provoked through the ‘landing’ of the current European sustainable finance regime. First, we problematise the focus on reporting, transparency and standards as a rather globalist and detached format, producing anti-European sentiments, in line with the argument of Latour. Second, we observe the importance of regional networks, and the importance of translators and translation, and a possible re-invention of sustainability-related relationship banking (particularly realised by what we call intermediary organisations, so called ’translators’ between banks and firms).

4.1. Climate finance as a ‘soulless bureaucratic mechanism’ and anti-European sentiments

From our interview material, we detect that SMEs and savings banks tend to view themselves as a German (‘local’) antipode to the European agenda of sustainable finance. We observe a deepening of the local-global divide acknowledged by Latour. The following interview sequence with a federal level public savings bank manager indicates such a ‘we vs. them’-type of framing, in which banks and SMEs appear as a homogenous block against the European level. Mentioning that the way things are in Germany is simply not known or understood by ‘the others’ responsible for the present regulatory approach.

> There is currently a rollback against the EU. At least against the Commission and against the previous legislative proposals. This is now rolling in quite massively, because medium-sized businesses have now realised what they are confronted with. […] Well, we always have a lot of trouble explaining that

Table 1. Interview database stemming from two research projects, 'Climate finance and the manufacturing industry' and 'Public banks and central banks in climate finance', 2022–2025.

Abbreviation	Sector – Position (– Level)	Interview date
Small and medium-sized enterprises (SMEs)		
Int. SME 1, 1	Mechanical engineering – Managing owner	December 2023
Int. SME 1, 2	Mechanical engineering – Commercial manager	February 2024
Int. SME 2	Tool manufacturing – Managing owner	February 2024
Int. SME 3	Mechanical engineering – Managing owner	February 2024
Int. SME 4	Polymer processing – Managing owner	March 2024 February 2025
Int. SME 5	Building construction – Managing owner	September 2024
Int. SME 6	Mechanical engineering – Managing owner	February 2025
Int. Large SME 1	Mechanical engineering – Sustainability manager	March 2024
Int. Large SME 2	Electrical engineering – Vice president corporate sustainability/Product engineer	March 2024
Intermediary organisations (translators between banks and firms)		
Int. Intermediary 1	Industry association – Policy advisor	November 2023
Int. Intermediary 2	Public sector agency – Project manager/Head of financing	April 2024
Int. Intermediary 3	Standard setter – Policy advisor	April 2024
Int. Intermediary 4	Credit agency – Head of sustainability	September 2024
Int. Intermediary 5	Research institution – Economics and environment	May 2023
Int. Intermediary 6	Consultancy – Sustainability implementation	September 2023
Financial institutions		
Int. Finance 1	Finance and leasing company – Corporate customer sales	January 2024
Int. Finance 2	Savings bank – Corporate customer sales – Regional level	January 2024
Int. Finance 3	Savings bank – Corporate customer sales and subsidy consultant – Regional level	August 2024
Int. Finance 4	Savings bank – Sustainability – Regional level	April 2023
Int. Finance 5	Savings bank – Knowledge management – Federal level	April 2023
Int. Finance 6	Savings bank – Employee – Regional level	June 2023
Int. Finance 7	Savings bank – Knowledge management – Federal level	January 2024
Int. Finance 8	Savings bank – Regulatory issues – Federal level	September 2023
Int. Finance 9	Savings bank – Sustainability of financial products – Federal level	September 2023
Int. Finance 10	Central bank – Sustainability policies	December 2023

> in Germany we have hundreds of savings banks and hundreds of cooperative banks that grant small-scale loans. They don't know that. They come from France, where the big banks dominate, come from Spain, where the big banks dominate. They studied at Harvard or the London School of Economics. There are no small savings banks in England. They simply don't know such structures. (Interview Finance 5)

Another quotation from a savings banks manager resembles this view and reveals the close alliance between savings banks and industry. Saving banks reject a role in which they become the change agents associated with more sustainable practices, which are perceived as counterproductive and burdensome:

> And I believe that we are so close to the companies that we can also see very clearly that excessive regulation and bureaucracy and restrictions on the freedom of entrepreneurs can of course do a lot to the economy or perhaps even destroy companies or industries, politically driven, so these risks and these thoughts are of course already there. So, anyone who has been in the corporate customer business for 30 years naturally knows the concerns of entrepreneurs, and of course we recognise that too. If our customers are not doing well, then we are not doing well either, so of course we also see risks somewhere, that this topic, as important as it is, does not have to be implemented with a crowbar or against all resistance and at a pace that is affordable, and that there are of course fears. (Interview Finance 3)

The current sustainable finance approach is viewed as a strategy that increases administrative burden with an unclear effect. The following quotation from an SME managing owner refers to an experienced accelleration of the necessity to report, and reports are in his view, mostly not read. This indicates an interpretation of reports seen as superflous and additional, detached from the practical level.

> I have the opinion that you have to do it in such a way that the burden doesn't get higher and higher. As I said, competitiveness is in danger in Germany. We are already the most expensive country in terms of energy and jobs. How are we supposed to do all this? And we have to report, and to report. We'll soon be doing nothing but reporting. If we get a publicly funded project somewhere, we also have to report and report and report and report, and most of the time nobody looks at it. (Interview SME 1.1)

Another impression is that European regulations and standards contradict each other. Even though the importance of the topic is acknowledged, the fact that standards are not streamlined causes frustration:

> Confusion comes from regulations that contradict each other, that means, for example, I also hear from electronics companies, we also have a lot of initiative in the electronics industry here in the region, and someone told me that he somehow determines CO_2 values for the sustainability report, but then has to determine them again the other way round for this CBAM regulation, and then the third I have – well, he really told me five examples where he somehow always has to calculate differently in order to fulfil some other law. So, there's CSRD, CBAM and also supply chain law. It doesn't really dovetail very well and I think that simply causes a lot of problems at the operational level, and then the companies have to dig very deeply into it. (Interview Intermediary 2)

Furthermore, we observe framings that deny the reliability of reports and emphasise their potential for 'greenwashing'. The following quotation rejects the truthfulness and realism of sustainability reports being published by other companies the interviewee interacts with. As stated by the interviewee, writing and publishing glossy portraits should not be the companies' main purpose. According to the interviewee, reports are designed to 'earn money' and therefore cannot be trusted.

> The German Sustainability Code, all good, is very, very exciting, because you can also read it from companies, it's published, and I'm always amazed about what they say. Well, some marketing agency filled it out, so I'm really surprised, and I believe that these are just empty words again. This drivel I see there. The purpose of the company, for me it is: Earn money, full stop! Anyone who says otherwise who writes anything else is lying! (Interview SME 2)

Another owner manager of an SME mentions a 'patronizing' character of the current legislation, which he associates with the green party in Germany.

> Those greens particularily, they think they can patronise us like little children and tell us how to do things. We know that ourselves. But we are in competition, we still have to be able to afford all this, and that's where the problem starts. We need to be able to afford all this. If we do offers, and can only survive only just, then I need to think about if I want to do all this, at all!. (Interview SME 1.1)

All in all, in our interview data, we observe strong anti-European, and in the last interviews also anti-Green, sentiments coming accross as a 'we vs. they' framing, and the feeling of not beeing seen and understood by 'them'. SME and savings bank protagonists see themselves to be on the same (regional) side, critizing a detached regulatory system creating consequences not beeing recognized by those they claim to be responsible. Interestingly though, the rationales of a free-market economy and ideas of entrepreneurial freedom are set against a perceived state intervention, which ironically represents itself as a 'market-based system', too. What they miss is a regulation that defines clear-cut rules and treasholds, a decifness they associate with ordo-liberal market regulation, which takes economic and entrepreneurial freedom serious, but at the same time creates clarity, planning security and demand for sustainable products and business models. The current system leaves too much room for maneuvre, allows greenwashing, but is still viewed as paternalistic and invasive, and detached from local realities.

However, the dichotomising local-global world views that we see intensifying under the current regime are complemented by another, partly opposing tendency. More specifically, our interviews reveal the potential emergence of new network ties and initiatives of translation around issues of sustainability, a tendency which we make sense of in the following section.

4.2. Climate finance 'down-to-earth' and the importance of network ties and translation

Where as the previous section shows frustration and a conflict dimension of the landing of climate finance in the region, we do also observe tendencies of a constructive and collaborative dynamic at the regional level. The industry region of Eastern Westphalia-Lippe is known for its industry networks and a dense structure of collaborative initiatives and knowledge exchange between firms. The sustainability data architecture thus lands in a collaborative culture, and companies know whom to ask in case of uncertainty. Even though the data-driven sustainability architechture is accompanied by critical voices, as demonstrated above, we observe attempts to do something 'meaningful' (not only documentary and detached) with the current sustainability agenda. The actors we talk to express a desire to restore terminologies such as sustainability, and to give it back its 'down-to-earth' meaning (which is seen to become endangered under a mere reporting rationale):

> So, it's more like this idea, we for the region, to implement this and not just to say, this is now a requirement, you have to implement it. But rather to say, how can we support you, whether we can already offer everything that is really needed? We don't know that yet either. So we are certainly still in the process of developing this further and seeing what else we can add. (Interview Finance 2)

Our research shows the importance of ’intermediaries’ that work on connecting and translating between banks and SMEs with respect to the sustainability topic. We observed the emergence of a new event format of regional savings banks and cooperative banks together with a public sector funded energy efficiency agency (‘Beraternetzwerktreffen OWL’) and regional initiatives helping companies to transform in an ecological and climate-friendly direction. These organisations and initiatives were there before the data-driven sustainability agenda took form, and are now stepping in to organize a regional translation process, helping banks and SMEs to communicate and to define strategies and new pathways within this new sustainability-data driven regulatory world. They act as network nodds bringing different actors together on the subject of sustainability: tax advisors, banks, energy consultants, as they put it in the following quotation. This constructive network culture helps to form a positive and constructive atmosphere, where also smaller companies gain from the knowledge and experiences accross these diverse professional realms.

> As an agency supporting SME sustainable transition, we don’t just maintain contact with companies, we take a holistic view and maintain very close contact with banks. And banks know what we do. Banks know us – they know the regional offices in the regions, they know us in particular as a financing group and that’s how we get in touch with a lot of companies, because we are now all required to dedicate ourselves to this topic. […] Other actors in the field, energy consultants, banks, tax advisors bring companies to us because they all know what is currently on the agenda and what the needs of the market are. (Interview Intermediary 2)

Ties within professional networks help translating the current transparency-led sustainability agenda into concrete solutions for SMEs, and support local banks to develop the technical and practical understanding of sustainable business transformations. Regional proximity and the possibility to ‘call’ people on short notice and to meet them on a regular basis (online and offline), is of vital importance. In the following quotation, the SME owner-manager highlights the value of these regional networks to understand the current regulatory landscape, which he cannot fully grasp on his own.

> Well, for me it starts with trying to understand a large part of the regulation, what the actual intention is and what the framework conditions are. I understand 60 percent of what it says. Then I look in my network to see whether the topic has already been raised to such an extent that there are always events on it, and somehow I only ever look for events online, because I don’t have time to drive around, I look for events that are at different altitudes, depending on what stage I am, whether I still need to understand the text or whether I already need ideas on how to apply it to our constellation. (Interview SME 4)

The above quoted SME manager, for example, invested in new polymer components with a reduced product carbon footprint. He struggles with documenting this innovation in the right way given the diverse options for CO_2 calculation across the value chain he operates in.

Also for banks, regional network partners are of high importance. Within regional actor networks, local banks view themselves as careful activators. They are aware of the reluctance of most SMEs to seriously change their business model, and they do not want to risk being perceived as too pushy. However, they see it as their role to convince SMEs that the pressure to act is increasing. They are aware that they do not possess all the required knowledge to become a fully-fledged ‘transformation companion’, but they take courage from the fact that they have a track record in accompanying companies in previous cases of large-scale structural transformations, and they have local network partners to built upon that help them gather expertise in the sustainability field:

> And that is, in principle, what savings banks have always done. Structural change has always existed, and the approaches of saying, okay, we have certain qualifications that we provide ourselves, and if there are

> things that we can't do, we have network partners. The ones that cover that are, in my view, not really new. The aim is, of course, to build up expertise in a subject area that perhaps not everyone is yet able to speak about in terms of these future requirements that their own customers will have. (Interview Finance 4)

On the basis of this traditional task, they start to work closely with other actors that are experienced in supporting SME's sustainable transitions, such as consultants for energy efficiency. They thus build on and extend existing infrastructures of knowledge. More and more, the related activities move away from mere project finance to strategic counselling, as the following quotation shows.

> Well, we have been building up a great deal of expertise for many years, especially in project financing and in the renewable energies segment, and that remains extremely important. That is one thing, but it creates the starting point for building up the infrastructure. And the other thing is to support customers in their transformation when new investment decisions are made and when customers develop their own strategies. How can these strategies be incorporated into financing structures? How can they be leveraged? Simply advice in this direction. (Interview Finance 9)

At the core of these activities is the aim of preserving and strengthening a rather traditional type of relationship banking:

> We look at transformation financing, so to speak, through the lens of the fact that we, as a company, have a very long-standing good customer relationship, which for us is truly a great value. These are customer relationships across a wide range of players in the real economy, which we have been closely supporting for many years and which we also want to support in this transformation … we have expanded our range of financing products with this objective in mind and have also expanded the range of advisory services that we offer customers in order to be able to competently support and advise them on the path to transformation. And that was the focus we set. (Interview Finance 9)

Forms of 'relationship banking' were limited and restricted under a risk-based (and financialised) regulatory regime of banking supervision (Emunds et al., 2022). Indeed, there is a hope that the sustainability transformation will enable savings banks to re-engage with more traditional banking models, allowing them to partner-up with their clients and support them through risky sustainable transformations (Int. Finance 7 and 8).

The current transparency-led agenda has two major consequences for sustainable finance in the region: On the one hand, it increases the importance of the topic. SMEs that have not yet settled on a plan of action are asked to do so, and might find encouragement in their regional network structures. On the other hand, it also makes the lives of those actors more difficult that have been working on a sustainable transformation of businesses for years already (such as the public sector agency supporting SME sustainable transition). These actors are convinced about the need to transform and are experienced in helping companies to become greener and more sustainable. But they became associated with a burdensome and detached top-down regulatory regime, which sometimes also makes their work more difficult, not easier. In the following quotation they state that they sometimes have to invest a lot work to (re)establish trust and commitment for sustainability, now associated with an abstract and detached regulatory agenda. They work hard in (re)establishing a more concrete and 'down-to-earth' meaning of sustainability in order to get started working on concrete sustainable problems and solutions at the firm level. The employee of the public sector agency explains it like this:

> This [the current sustainability regulation] actually makes our work extremely complex and difficult, because in this translation function, we are also sometimes misinterpreted a little as policy implementers.

> Of course, that's sometimes really ungrateful, and I always find it a shame that a lot of time is wasted in my appointments in terms of capacity, somehow for this discussion. I always try to say, okay, let's all shake ourselves up and take another concrete look at what we're going to do with the case at hand. (Interview Intermediary 2)

The essence of the green transformation, for those we talk to, lies in collaborative relationships between customers and clients, on concrete questions about how to build a product or machine, that helps increase efficiency, or saves materials used, lasts longer or can be recycled, for example. Becoming sustainable as a company means to (re-)establish relationships and a continuous dialogue with other actors, networks, municipalities, associations and clients. These relationships are necessary in order to be able to continuously integrate greener but sometimes less convenient and more expensive components into a production cycle. The current transparency-led agenda increases the necessity to work in this direction. However, it also discourages and frustrates the process through complex documentation requirements and unclear standards. In this way, it erodes the meaning of sustainable transformation as mere due diligence and documentation work. It is a challenge to restore its 'down-to-earth'-meaning. It is the regional network actors and ties that accomplish this task and their importance cannot be underestimated for a making sustainability a concrete and tangible task under the current transparancy-led regime.

5. CONCLUSION

EU institutions have produced numerous regulations that aim at classifying activities of companies into those that can be considered sustainable, and those that cannot. For local public banks and SMEs, this 'top-down' integration of sustainability often misses their realities and experiences. For these actors, sustainable investments and green transition are related to product and process innovations and business models. The world of standards is experienced as a detached bureaucracy, which is difficult to adapt to with their concrete challenges and transformation pathways. As a consequence, SMEs and local public banks formulate criticism against regulations perceived as ill-adapted and dangerous for their local contexts. At the same time, local proximity and a collaborative culture in the region help to identify what is meaningful and how it can be translated to find and decipher transformative endeavours within the current transparency-centred agenda.

This article has shown how local German public banks and SMEs are currently approache socio-ecological transformation within the current sustainable finance agenda. We analyse how the current regime lands in the largely non-financialised regional economy of Germany, where bank-based sustainable finance takes place in the form of public sector subsidies and grants, merely. These are channelled through local banks to their SME customers (Greitens et al., 2023). Investments into the greening of products and processes, when they happen, are mainly funded via internal own funds and typically not documented and data managed. As a consequence, the current transparency-based approach is merely perceived as superflous and ill-adapted 'bureaucracy', and not as an opportunity to financially gain from a transformation towards more sustainable practices. At the level of industrial SMEs, the current regime comes across as a vast documentation and due diligence task with unclear consequences and impacts, and it, till today, lacks standardisation regarding the required measures and categories (Bassen et al., 2023). Partly as a consequence, the European Commission strives to simplify and to harmonise different sustainability reporting standards (Omnibus Directive), in order to react towards the criticism on 'disproportionate bureaucratic burden', and to tame anti-European sentiments associated with it.

We analyse the landing of the European climate and sustainable finance agenda in terms of its potential for deepening the political divide between a global modern and a local regressive agenda, as put forward by Latour (2018) in his analysis of the New Climatic Regime. Latour wrote this text under the aegis of Donald Trump's first election, after which the US left the international climate agreements. He analyses the dangers of a climate policy being trapped between an abstract 'soulless bureaucratic mechanism' and anti-globalist/anti-climate sentiments. Instead, he argues, we need to find more 'down-to-earth' and 'terrestrial' ways to tackle the challenge of climate change. This would mean to take the planetary challenge of climate change seriously, but to work from local constellations in their global and planetary connectedness. We use this highly abstract Latourian language as a heuristic to make sense of the dynamics we observe during the landing of the current sustainable finance agenda within Germany's regional economy by talking to industrial SMEs, local bank representatives and people working in intermediary organisations, in order to make this agenda concrete.

Our results are twofold: First, we observe a worrying deepening of the local-global divide Latour describes. In our qualitative interviews with SME manager owners and local bank managers, we see how the current agenda provokes a dichotomising 'we vs. them' framing. We also observe how actors that are actively engaged in the sustainability transformation of SMEs become associated with a 'soulless bureaucratic mechanism', a policy that is perceived as a highly abstract and detached form of reporting, documentation and data management. Secondly, we document the importance of regional proximity, local network ties and personal trust to help companies to cut through the information overload of sustainability regulations and to build meaningful 'down-to-earth' attempts for a green transformation (such as the installation of a recycling system, the production and use of carbon reduced polymer materials, electrification and energy efficiency measures). For the manufacturing industry, sustainability is a question of new techniques, processes and materials, in the first place, much less of reporting. Our study reveals the importance to think of sustainability from its complex 'down-to-earth'-constellations, and taking into account the importance of down-to-earth actors, which are mostly overseen in a debate focused on key performance indicators, standards and documentation.

Regional network ties help to find meaningful and tangible strategies within the current reporting and information-centred political regime. In the current regulatory debates, these preconditions of translation are not accounted for, let alone considered systematically. For a productive landing of the current regulatory regime, they would need to be strengthened substantially. One of the key messages of our study is that the current information-based and transparency-led sustainability agenda requires preconditions it tends to either ignore or even jeopardise. Our study is a call to rethink sustainability transformations from the down-to-earth constellations enabling them. In particular, these transformations require a collaborative culture between diverse actors, from SMEs to municipal waste, water and energy management companies, to banks, consultants and associations. This culture, in turn, requires a reconsideration of forms of information and classification that are socio-ecologically meaningful and locally adaptable, in order to close the divide between the local and the global attractor.

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ETHICS STATEMENT

The authors confirm that informed consent was provided by the research subjects. The consent was given in written form and after providing extensive information on the use of interview data, which was given both in written and verbal form, and included information on data protection and anonymisation. It also included information on the research project. No study participants are identifiable.

NOTES

1. See for instance Bolton et al. (2020, p. 65) and their programmatic outlook for central banking in the age of climate change, emphasising the importance for financial regulation of 'scenario-based analysis and forward-looking approaches' that allow the 'repricing of climate-related risks'.
2. There is a tendency that market-led transparency-regimes lead to a growing level of bureaucracy and opaqueness that run counter to the abstract ideas of 'innovation', 'efficiency' and 'flexibility' associated with them (see Knoll, 2015 for the case of carbon markets, but also Crouch, 2015 on the financialisation of public life).

ORCID

Lisa Knoll http://orcid.org/0000-0002-8212-5493
Ulrich Klüh http://orcid.org/0009-0000-1679-4632
Ilias Naji http://orcid.org/0009-0004-1527-9961
Felix Rossmann http://orcid.org/0009-0005-6957-9609

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