

Twin transition as a just transition? Exploring the environmental-digital-social nexus

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Europe is facing a double challenge of decarbonizing energy and accelerating digital transformation. The green-digital (G&D) transition promises to adopt and implement climate mitigation measures, providing a more sustainable and equitable future. “Leaving no one behind” is the core idea that lies behind the concept of just transition, born in the USA in the 1990s, to recognize and mitigate the perverse social effects on workers of environmental protection policies and the reduction of severe ecological risks (Stavis and Felli 2015). In the European context, this same concept has been adopted to indicate the interrelated ambition of the European Union of achieving a socially just and ecological transition, as mentioned in the European Green Deal Communication (Commission 2019). However, from an academic as well as European policy-making perspective the understanding of “just transition” in relation to the twin environmental and digital transition is vague, and the potential societal and economic impacts of implementing the G&D transition are unknown. Social dimensions of the G&D growth remain undeveloped, and concerns that the changes may result in new inequalities or exacerbate the existing ones are increasing. A robust EU-just G&D transition framework should reinforce the way public sector and policymakers use strategic foresight, anticipate and manage the social risks and adverse effects (Akguc, Arabadjieva, and Galgoczi, 2022), while ensuring stakeholders and citizen participation, awareness, and public engagement. Several initiatives, such as the Just Transition Mechanism, the Just Transition Platform, and the Just Transition Funds, launched by the EC, are ambitious. Still, their effectiveness is questioned, and their social impact is unpredictable. The paper faces the challenge of better defining a comprehensive G&D Transition Framework to create a more comprehensive approach that also encompasses the social dimension towards the achievement of a twin and just transition.

Notwithstanding increasing policy and academic debate around the ‘twin’ G&D transitions, ‘there is no systematic assessment of their linkages, potential synergies and trade-offs and the full extent of the challenges that their interaction poses for the prospects of a ‘just transition’ are not fully understood’ (Verdolini 2023:7). Concerns have started to circulate about the potentially adverse social effects of the pervasive diffusion of technologies in the green transition, including the risks of rising unemployment (Brynjolfsson and Mitchell 2017; Mitchell and Brynjolfsson 2017), growing inequality, and discrimination (Carter 2018). The academic literature has recently begun to deal with the G&D transition and its social challenges: some have

explored the link between G&D transformations in the European regions (Bianchini, Damioli, and Ghisetti 2022), some others have analysed the changes in industrial ecosystems induced by the G&D transition (Komninou 2022). In the last two years, the debate on the inclusive nature of the European G&D transition has flourished, with academic publications and European policy making initiatives catalysed by issues relating to the labour market (Verdolini, 2023) and opportunities, challenges, and threats that G&D changes may pose for workers who are forced out of the market or left out of the expected policy benefits. However, the negative effects may be more far-reaching and affect European citizens in many ways (Abram et al. 2022; Clarke and Lipsig-Mummé 2020; Langthaler, McGrath, & Ramsarup 2021; Pianta and Lucchese 2020).

This paper argues that an exclusively labour-based approach can preclude a deep understanding of how G&D policies and solutions affect society more broadly while contributing to mitigating existing inequalities and preventing new ones (Mandelli, 2022). It is thus necessary to investigate and understand whether the need for just transition can range from the request for the creation of new and decent jobs to push towards other fundamental needs, not automatically satisfied by having a job. Moreover, the pursuit of preventing climate change through digitalising many activities, such as production and services, risks losing sight of the ultimate beneficiaries of these measures, i.e., citizens and the most vulnerable who are often not proficient in digital skills and literacy. The paper will explore the existing literature on the topic of just twin transition as a multidimensional framework and examine the multiple streams of inequalities and vulnerabilities that can affect individuals when involved in G&D transition policies or tools. In addition to the analysis of the labour market, the paper will investigate inequality and fragility in other policy sectors.