

Living Labs as Instruments of Policy Co-Creation in Regional Labour Market Transitions

Despoina Kanteler* ¹, Lefteris Topaloglou², Maria Adamakou³, Nikos Kapitsinis ⁴

¹ Department of Chemical Engineering, University of Western Macedonia, ZEP P.C. 50100, Kozani, Greece; drdcbs00001@uowm.gr

² Department of Chemical Engineering, University of Western Macedonia, ZEP P.C. 50100, Kozani, Greece; etopaloglou@uowm.gr

³ Department of Planning and Regional Development, University of Thessaly, Pedion Areos, P.C. 38334, Volos, Greece; madamakou@uth.gr

⁴ Department of Geosciences and Natural Resource Management, University of Copenhagen, Øster Voldgade 10, København K, Denmark; nka@ign.ku.dk

* Correspondence: drdcbs00001@uowm.gr

Keywords: Living Labs, policy co-creation, regional labour markets, just transition, place-based policy

Abstract

The green and digital transitions are reshaping regional labour markets across Europe, generating simultaneous processes of job creation and destruction and creating significant territorial disparities. These dynamics challenge traditional policy design approaches, which often rely on top-down planning and limited stakeholder engagement. In response, participatory and place-based approaches are increasingly recognized as essential for designing effective and socially inclusive transition policies. This paper presents a methodological and analytical framework for understanding Living Labs as instruments of policy co-creation in regions undergoing labour market restructuring. Living Labs are conceptualized as open innovation ecosystems in which policymakers, firms, workers, educational institutions, and civil society collaboratively identify challenges, design solutions, and test interventions in real-life settings. The paper argues that such environments improve the relevance, feasibility, and legitimacy of policy measures by incorporating diverse forms of knowledge, including local experience, institutional expertise, and labour market intelligence. The analysis draws on evidence from the ISABEL project, which establishes Living Labs in multiple European regions to address job creation and destruction and skills transitions in the context of the green and digital transformations. The proposed framework highlights three key mechanisms through which Living Labs contribute to policy design: structured stakeholder engagement, iterative experimentation and feedback loops, and the integration of qualitative and quantitative evidence. These mechanisms enable the identification of region-specific labour market challenges and the co-development of context-sensitive policy responses. The findings suggest that Living Labs can serve not only as research environments but also as governance instruments that strengthen multi-level coordination and support place-based policy innovation. By bridging the gap between policy formulation and implementation, Living Labs provide a structured pathway for translating territorial knowledge into actionable strategies, contributing to more resilient and inclusive regional labour markets.

1. Introduction

Regional labour markets throughout Europe are being transformed by the impact of green and digital transitions as both employment growth and loss are happening at the same time (job creation and destruction or JCD). Decarbonisation policies, automation/ digitalisation, and industrial restructuring, are working to create new jobs in renewable energy, advanced manufacturing, and knowledge-based services while also speeding up the decline of fossil fuel/ carbon-intensive sectors and routine-based sectors. The changes happening in different regions are not equal throughout Europe, which will lead to greater differences in how people are employed, what sorts of skills people will have, and what sort of public institutions will be in place to provide economic support for individuals and families (European Commission, 2020; Iammarino et al., 2019). There will be greater adjustment pressures for regions that have historically relied on coal or heavy manufacturing to find ways to deal with job loss through structural employment (coal mining areas, industrial areas that are located on the outskirts of cities, and mono-specialised areas), while they are simultaneously trying to find new ways to create jobs.

To address the inequities associated with decarbonising the economy, the concept of “just transition” has been put forward to ensure that taking action on climate change does not create greater social inequality (Newell and Mulvaney, 2013; European Commission, 2020), but achieving just transitions requires governance mechanisms that support the integration of economic restructuring, social protection systems, skills policy, and regional development. Traditional labour market and regional development policies often rely on top-down planning, sectoral forecasting, and standardised training instruments. While important, such approaches may fail to capture place-specific institutional configurations, tacit knowledge, and stakeholder perspectives (Barca et al., 2012; Rodríguez-Pose and Wilkie, 2017). In this context, participatory and place-based approaches have gained prominence as mechanisms for designing territorially sensitive policies (Barca et al., 2012; McCann and Ortega-Argilés, 2015). This paper conceptualises Living Labs (LLs) as governance instruments for policy co-creation in regional labour market transitions, building on the methodological framework developed in the ISABEL project’s Living Lab deliverable, the paper argues that LLs function not merely as innovation environments but as structured arenas for collaborative policy experimentation. Through stakeholder engagement, iterative co-design, and real-life testing, LLs can enhance the relevance, legitimacy, and adaptability of labour market interventions.

2. Living Labs and Participatory Governance

Living Labs are commonly defined as user-centred, open innovation ecosystems integrating research and innovation processes in real-life settings (Bergvall-Kåreborn et al., 2009; Schuurman et al., 2015). They emphasise co-creation, multi-stakeholder collaboration, and experimentation outside controlled laboratory environments. Unlike traditional research infrastructures, LLs operate in operational environments where solutions are tested under real institutional, economic, and social conditions.

The governance relevance of LLs lies in three core characteristics.

- First, LLs institutionalise structured stakeholder engagement. Drawing on the quintuple helix model (Carayannis and Campbell, 2010), they bring together public authorities, firms, universities, civil society actors, and environmental stakeholders.
- Second, LLs operate through iterative experimentation which are not based in designing policies ex ante and evaluating them only after implementation but LLs encourage cycles of co-design, pilot testing, feedback collection, and adjustment (Schuurman et al., 2015). This aligns with experimental

governance approaches that promote learning-by-doing and adaptive policymaking (Sabel and Zeitlin, 2012).

- Third, LLs embed innovation in real-life contexts which test interventions in operational settings (i.e., regional labour markets which produce context-sensitive evidence that is more likely to translate into implementable policy measures).

Within regional policy scholarship, such participatory and experimental approaches resonate with place-based development paradigms. The Barca Report (Barca et al., 2012) argues that effective regional policy must be territorially tailored and grounded in local knowledge. Similarly, smart specialisation strategies emphasise entrepreneurial discovery processes that rely on stakeholder interaction and iterative learning (McCann and Ortega-Argilés, 2015). Living Labs can be interpreted as operational infrastructures enabling such processes in the field of labour market transition.

3. Methodological Framework: Living Labs for Labour Market Transitions

The Living Lab framework developed within the ISABEL project structures the LL process in two main stages: (1) co-exploration and co-design, and (2) co-experimentation and co-evaluation. The first stage focused on understanding regional labour market dynamics, identifying critical JCD parameters, and mapping stakeholder perspectives. Participants in the workshops ranged from employers and employees to trade unions, environmental groups, education providers, employment service agencies, and government policy makers. This stage mirrors qualitative labour market research methodologies, which emphasise how the context and actors affect how transitions occur (Boschma, 2015). As the different insights were synthesised using the common coding matrix and common structured report templates, this framework combines the rigidity of the code with the ability to compare across sites. Additionally, the purpose of the co-exploration is more than just diagnostic; it also creates an agreed-upon definition of the problem, reduces the level of asymmetry in information between stakeholders, and creates a level of confidence in the existence of the problem. Stakeholders are less likely to refuse to accept new policies and programmes the sooner they are engaged in the design of those policies and programmes, which will lessen the level of resistance during subsequent implementation (Sabel and Zeitlin, 2012).

The second stage involves the co-development and pilot testing of “potential co-experiments”—implementation-ready models addressing specific JCD challenges. These may include targeted reskilling programmes, institutional coordination mechanisms, or sectoral diversification initiatives. Rather than aiming to demonstrate definitive long-term labour market impacts—often beyond project timelines—the framework emphasises process quality, feasibility, and stakeholder validation. Evaluation criteria include implementability, alignment with regional strategies, and potential scalability. This approach reflects experimentalist governance principles, where iterative learning and stakeholder feedback guide policy refinement (Sabel and Zeitlin, 2012) and also resonates with transition management literature, which underscores the importance of niche experimentation for systemic change (Loorbach, 2010).

Conclusion

The green and digital transitions pose complex challenges for regional labour markets, combining structural employment shifts, skill transformation, and spatial inequalities. Addressing these dynamics requires governance arrangements that are participatory, adaptive, and territorially grounded. This paper conceptualised Living Labs as instruments of policy co-creation capable of bridging policy formulation and implementation in regional labour market transitions. Through structured stakeholder engagement,

iterative experimentation, and mixed-method evidence integration, LLs will enhance the relevance, feasibility and legitimacy of transition policies. Rather than serving solely as research infrastructures, Living Labs operate as governance platforms for place-based labour market innovation enabling collaborative learning and context-sensitive experimentation and contributing to more resilient and socially inclusive regional transition pathways.

References

- Barca, F., McCann, P., & Rodríguez-Pose, A. (2012). The case for regional development intervention: Place-based versus place-neutral approaches. *Journal of Regional Science*, 52(1), 134–152.
- Bergvall-Kåreborn, B., Eriksson, C., Ståhlbröst, A., & Svensson, J. (2009). A milieu for innovation – Defining Living Labs. *ISPIM Innovation Symposium Proceedings*.
- Boschma, R. (2015). Towards an evolutionary perspective on regional resilience. *Regional Studies*, 49(5), 733–751.
- Carayannis, E., & Campbell, D. (2010). Triple Helix, Quadruple Helix and Quintuple Helix innovation systems. *International Journal of Social Ecology and Sustainable Development*, 1(1), 41–69.
- European Commission (2020). *The Just Transition Mechanism: Making sure no one is left behind*. Brussels.
- Iammarino, S., Rodríguez-Pose, A., & Storper, M. (2019). Regional inequality in Europe. *Journal of Economic Geography*, 19(2), 273–298.
- Loorbach, D. (2010). Transition management for sustainable development. *Governance*, 23(1), 161–183.
- McCann, P., & Ortega-Argilés, R. (2015). Smart specialization and regional innovation policy. *Regional Studies*, 49(8), 1291–1302.
- Newell, P., & Mulvaney, D. (2013). The political economy of the ‘just transition’. *The Geographical Journal*, 179(2), 132–140.
- Sabel, C., & Zeitlin, J. (2012). Experimentalist governance. In D. Levi-Faur (Ed.), *The Oxford Handbook of Governance*. Oxford University Press.
- Schuurman, D., et al. (2015). Living Labs: A systematic literature review. *Technology Innovation Management Review*, 5(12), 7–16.