



ECONOMIA MARCHE Journal of Applied Economics

Vol. XLIV, No.3, Dicembre 2025

From the digital divide to cohesion: the PNRR and Mission School 4.0 as levers for sustainable development

S. Di Sisto, Università Politecnica delle Marche

M. Orci, Università Politecnica delle Marche

Abstract

This paper examines Italy's National Recovery and Resilience Plan (NRRP), focusing on Mission 4.0 – Education and Research – as a driver of sustainability, inclusion, and regional development. Within the framework of Next Generation EU, education is framed as a strategic lever for resilience, tackling territorial disparities, the digital divide, and gaps in early childhood services. The paper contributes to the existing literature by offering a policy-oriented analysis of Mission 4.0's implementation challenges and opportunities, highlighting its potential to reduce territorial inequalities and strengthen educational governance. The analysis adopts a qualitative, document-based approach, drawing on legal provisions, institutional reports, and academic literature. A distinctive feature is the allocation of at least 40% of resources to Southern Italy, where structural weaknesses risk undermining cohesion goals. Evidence from the European Commission, ISTAT, INAPP, and the Court of Auditors highlights persistent challenges such as early school leaving, gender inequalities, poor digital infrastructure, and limited administrative capacity. The paper argues that Mission 4.0 can foster inclusive growth, female labour participation, and employability, but its transformative potential depends on effective governance and long-term reform institutionalisation.

Keywords: *Education, regional development, social cohesion, digital transition, sustainability*

Affiliations and attributions

Serena Di Sisto, Department of Information Engineering, Polytechnic University of Marche. Email: s.disisto@staff.univpm.it; ORCID: 0009-0007-3741-0221

Martina Orci, Post-doc researcher at Department of Information Engineering, Polytechnic University of Marche. Email: m.orci@univpm.it; ORCID: 0000-0001-8295-5756

1. Introduction

Education is increasingly recognised within the European framework as a strategic pillar to address the digital, ecological, and social transitions. Since the Maastricht Treaty (1993), which formally established education as a field of European coordination, and the Lisbon Treaty (2007), which introduced the “horizontal social clause,” the EU has progressively strengthened its role in promoting high-quality education, mobility, and lifelong learning (Arts. 165–166 TFEU). These provisions frame education not only as a service, but as a key factor for cohesion and sustainable progress across European Member States. The Covid-19 pandemic further exposed the vulnerability of national education systems, magnifying territorial inequalities and the digital divide. In Italy, the sudden shift to remote learning revealed structural gaps between North and South, with many students lacking access to adequate devices or stable internet connections (ISTAT, 2022). These dynamics underscored the urgent need for extraordinary recovery measures. At the European level, this response materialised in Next Generation EU (Regulation 2020/2094), an innovative recovery instrument designed to foster resilience and convergence. Within this framework, the Italian National Recovery and Resilience Plan (NRRP), approved in 2021, earmarks more than €30 billion for the education sector. Mission 4.0 – Education and Research – represents the largest component of the NRRP in terms of both resources and reforms. Its objectives include modernising the school system, reducing early school leaving, bridging territorial and digital divides and supporting inclusive growth. A distinctive feature is the clause mandating that at least 40% of territorialised resources be allocated to Southern Italy, an area historically affected by weak infrastructures and administrative capacity. This provision embodies an attempt to use education policy explicitly as a lever for territorial cohesion (NRRP, 2021). In this context, Mission School 4.0 is not only an extraordinary recovery measure but also a potential driver of sustainability, inclusion and regional development. The analysis focuses on three interrelated dimensions: (1) the recognition of education as a social right and factor of cohesion; (2) the role of educational infrastructures in addressing gender disparities and supporting women’s labour participation; and (3) the governance challenges of translating digital and educational investments into long-term structural reforms. The Italian case is examined as a national policy experiment that may offer broader insights into how education can contribute to a just and inclusive transition. The structure of the paper is as follows: Section 2 describes the methodological approach adopted for the analysis, including the selection of sources and criteria for evaluation. Section 3 outlines the theoretical and regulatory framework underpinning the study, with a focus on the evolution of the European Union’s role in education and the design of the Italian NRRP. Section 4 presents the main findings and discusses their implications for policy and practice. Finally, Section 5 concludes by summarising the key insights and proposing directions for future research and implementations.

2. Methodology

This paper adopts a qualitative, document-based methodology aimed at assessing whether Mission School 4.0 of Italy's National Recovery and Resilience Plan (NRRP) can effectively contribute to sustainability, inclusion, and regional development. The approach combines an analysis of regulatory frameworks, institutional reports, and scientific literature. At the European level, the study takes into account Regulation (EU) 2020/2094 establishing Next Generation EU (European Commission, 2020), Regulation (EU) 2021/241 on the Recovery and Resilience Facility (European Commission, 2021), and Treaty provisions on education (Arts. 122.2, 165 and 166 TFEU; Di Comite, 2018). At the national level, the analysis focuses on the NRRP (Presidency of the Council of Ministers, 2021), with particular attention to Mission 4.0 – Education and Research. These sources outline both the legal foundation and the operational design of the reforms and investments. Complementary evidence was drawn from reports and data published by the European Commission (2023), the Italian Court of Auditors (2023), ISTAT (2022), and INAPP (2022). These documents provide insights into early school leaving, digital connectivity, female labour participation, and administrative capacity. In addition, the paper considers contributions from the scientific literature (e.g. Cassese, 2021; Santangelo, 2022; Sacchi, 2021; Gagliardi, 2022), which provide interpretative frameworks on governance, public policy, and the socio-economic impact of the NRRP. The inclusion of both institutional and academic sources allows for a multidimensional perspective on the implementation challenges of the NRRP. The analysis adopts an interpretative and comparative approach, aiming not merely to describe the measures in place, but to critically assess their potential for transformative impact. The Italian case is examined as a possible policy laboratory for Europe, especially in relation to the Adriatic-Ionian region. In this respect, reflections from the Skillman Alliance Summit 2025 (Skillman, 2025) are used as an additional interpretative lens, highlighting the connection between education, skills, and territorial cohesion.

3. Theoretical framework and regulations

3.1 The Role of the European Union in Education: Legal and Strategic Evolution

Over the past two decades, the European Union has progressively consolidated its role in education policy, recognising it as a key driver of skills development, social cohesion, and sustainable growth. The Maastricht Treaty (1993) formally established education as a field of European coordination, while the Lisbon Treaty (Arts. 165–166 TFEU) reinforced this mandate through the introduction of the “horizontal social clause,” which requires all EU policies to support education, mobility, and lifelong learning (Di Comite, 2018). In response to successive crises – from the 2008 financial downturn to the COVID-19 pandemic – the EU has adopted extraordinary interventions to strengthen education and related sectors (Santangelo, 2022). A pivotal moment came in May 2020, when the European Commission proposed Next Generation EU (NGEU), an innovative and temporary recovery instrument designed to support Member States in addressing the socio-economic consequences of the pandemic (Fabbrini, 2022). Governed by Regulation 2020/2094, NGEU was accompanied by a reinforcement of the EU's Multiannual Financial Framework for 2021–2027. Its legal basis lies in Article 122 TFEU, which empowers the Union to assist Member States facing economic hardship due to unforeseen events, reflecting the principle of solidarity (Viesti, 2023; Salmoni, 2021). In this framework, cutting expenditure in key sectors such as health, culture, or education would be counterproductive for growth. Instead, the Union promotes large-scale investments in these fields, especially in times of crisis, supporting national

recovery efforts through the NRRP. Within this framework, the Italian National Recovery and Resilience Plan (NRRP) was formally presented on 30 April 2021 and subsequently approved by the Council (Santangelo, 2022; Fabbrini, 2022). This programme marked a new era in Italian public finance, combining non-repayable transfers and debt (Santangelo, 2022). In line with the objectives of NGEU, the Italian plan provides more than €30 billion for nurseries, schools, universities, and the labour market (D'Arrigo et al., 2022). The governance of national recovery plans is regulated by Regulation 2021/241, which outlines the procedures, monitoring mechanisms, and evaluation criteria for implementation. As a multiannual and cross-sectoral financial instrument, NGEU has implications across several EU policy domains, but its operationalisation through the NRRP provides a unique opportunity to assess how European legal and financial frameworks can be mobilised to support transformative investments in education. Substantial resources are expected to be mobilised by 2026 for the renewal of the country's infrastructures and services (D'Arrigo et al., 2022). The Italian NRRP includes six macro-missions, divided into 16 components, 63 reforms, and 134 investments. Mission 4.0 – Education and Research – is the largest in terms of scope and resources, with €30.88 billion and ten reforms (Magni, 2022). These measures are designed to strengthen education and skills, with a focus on digital competences, workforce retraining, and integration programmes for the unemployed, as well as investments in education, health, and work (Magni, 2022). For Italy, this also means addressing long-standing weaknesses in the school system, considered by national statistics a structural flaw (D'Arrigo et al., 2022). Reforms aim to restore education as a central driver of growth and inclusion, ensuring that students are not exposed again to the inequalities revealed during the 2008 crisis or the pandemic. The COVID-19 emergency highlighted Italy's lag in education and innovation compared to other European countries (Cocconi, 2022). In this sense, the pandemic has reinforced supranational intervention, extending EU support to new instruments that, though conceived as temporary, are intended to sustain long-term investment and recovery (Cassese, 2021). The next steps will focus on improving educational provision, facilities, and digitalisation across the country (Cassese, 2021).

3.2 The Italian NRRP as a Tool for Cohesion and Sustainable Development

The NRRP strongly emphasises education as a social right, consistent with Articles 33 and 34 of the Italian Constitution. These provisions define education as universal and as an instrument of substantive equality. This constitutional perspective intersects with the European framework, where education is recognised as a key lever for cohesion and sustainable progress (Lisbon Treaty, Arts. 165–166 TFEU). In recent years, ISTAT data have highlighted the persistence of early school leaving. Among young people aged 18–24, the share exiting the education system with only a lower secondary degree remains above the EU average, with critical peaks in Southern Italy (ISTAT, 2022). This phenomenon is not only educational but also socio-economic, as it reduces employment prospects and reinforces intergenerational inequalities. Mission School 4.0 responds to this challenge by strengthening educational provision and encouraging students to remain in school through infrastructure and digital investments. The COVID-19 pandemic exacerbated existing difficulties, widening the digital divide. Many students lacked adequate devices and stable connections, making distance learning inaccessible and undermining equal opportunities (OECD, 2021). To address this, the NRRP allocates substantial resources to school connectivity. By 2025, strategic buildings – including schools, libraries, and public offices – are expected to have access to networks of at least 1 gigabit per second. Digitalisation thus becomes not only a technological goal but also a policy tool for social and territorial inclusion. Another dimension concerns gender disparities. The scarcity of early childhood services and inadequate school infrastructure have contributed to the so-called child penalty, forcing many women to leave the labour market after childbirth (INAPP, 2022). Planned investments include €4.6 billion for nurseries and preschools, €1.19 billion for new schools, and €3.9 billion for

renovations. These measures aim to increase women's labour market participation and reduce social gaps. Childcare provision should not be considered only as welfare, but as labour market policy with macroeconomic implications, directly influencing female employment rates, household income, and productivity (Addabbo & Giovannelli, 2020; Del Boca & Vuri, 2021). Sustainability is therefore not only environmental or economic, but also social and gender-based. Education is conceived as a system that supports families and communities. Mission School 4.0 is designed to transform schools into a factor of inclusive cohesion, strengthening resilience and promoting equal opportunities. However, these objectives risk remaining incomplete unless supported by stronger administrative capacity and multilevel governance to ensure timely implementation (Cassese, 2021). The analysis shows that Mission School 4.0 stands at the intersection of social rights, gender inclusion, and territorial rebalancing. Persistent macro-regional disparities remain one of Italy's most critical socio-economic challenges. In 2022, GDP per capita in the North was about €36,000 compared to €20,000 in the South, reflecting a gap that has remained virtually unchanged over the past decade (ISTAT, 2023; SVIMEZ, 2023). Employment rates also show a marked divide, standing at 67% in the North and only 47% in the South, with female participation particularly low in Southern regions (Eurostat, 2023; INAPP, 2022). Early school leaving, although declining nationally, still affects 16.6% of young people aged 18–24 in Southern Italy, compared to 9.5% in the North (ISTAT, 2022; OECD, 2021). The gap extends to tertiary education: university enrolment rates in the South are approximately 20 percentage points below the national average, with notable outmigration of students toward Northern universities (MIUR, 2023; Viesti, 2023). These persistent asymmetries underscore the rationale for a territorially differentiated approach to public investment. Reducing them is essential not only for equity but also for enhancing overall productivity, innovation capacity, and resilience in the Italian economy (Barbieri & Boitani, 2022; European Commission, 2023). Education is reaffirmed as a universal right aimed at reducing structural inequalities such as early school leaving. Yet, despite significant investments, ISTAT data confirm that dropout rates remain above the EU average, particularly in the South (ISTAT, 2022). Without accompanying measures and regionally targeted support, resources may risk becoming financial inputs without producing concrete results. The gender dimension reinforces this concern. While the expansion of early childhood facilities is strategic for inclusion and sustainable economic development, the impact may remain temporary unless these measures are consolidated into long-term policies of equal opportunity (INAPP, 2022; Santangelo, 2022). Finally, Mission 4.0 is characterised by the clause that mandates 40% of resources to the South. This innovative mechanism addresses long-standing territorial disparities but clashes with the limited administrative capacity already highlighted by the Court of Auditors (Corte dei conti, 2023). This 40% allocation clause represents both a continuity and an innovation. In previous national cohesion policies, such as the Cassa per il Mezzogiorno (1950–1984) or the Fondo per lo Sviluppo e la Coesione, regional targeting was implicit but never quantified through a binding percentage. The NRRP introduces, for the first time, a legally binding territorial earmark: at least 40% of all territorialised resources must be directed to Southern regions. In practical terms, this corresponds to approximately €82 billion of the total €205 billion plan (MEF, 2023). The novelty lies not only in the scale of resources but in the *ex ante* legal constraint, which transforms what was once a discretionary objective into a measurable commitment to territorial equity. Digitalisation poses an additional challenge. At least 20% of NRRP resources are earmarked for this sector, yet the pandemic demonstrated that the divide remains significant in the South. Thousands of students were excluded from distance learning due to inadequate devices and poor connectivity (OECD, 2021). For this reason, infrastructure must be complemented by training and digital inclusion measures. Mission School 4.0 can thus act as a driver of sustainability, inclusion, and cohesion. Its success, however, depends on the ability to transform temporary investments into long-term structural reforms, capable of addressing the persistent weaknesses of the Italian education and social system.

4. Discussion and Policy Implications

The Italian case offers relevant insights for the European debate on education and cohesion policies. Mission School 4.0 shows that education can be framed not only as a social service but also as a strategic instrument for regional development and sustainability.

The analysis reveals a complex interplay between policy ambition and implementation challenges across the three dimensions examined. As summarised in Table 1, the recognition of education as a social right is reflected in the NRRP's commitment to reducing early school leaving and promoting universal access. However, persistent regional disparities—particularly in Southern Italy—continue to hinder progress, with dropout rates remaining above the EU average (ISTAT, 2022). In terms of gender and inclusion, the allocation of €4.6 billion to early childhood education represents a significant investment aimed at mitigating the child penalty and enhancing female labour market participation. Yet, concerns remain regarding the sustainability of these measures, which risk having only temporary effects unless embedded within long-term structural policies (INAPP, 2022). Finally, the governance and digital dimension highlight the innovative nature of the 40% clause for Southern regions and the prioritisation of digitalisation, which accounts for 20% of the resources. Nonetheless, low administrative capacity and a persistent digital divide pose substantial barriers to effective implementation (Corte dei conti, 2023; OECD, 2021). These findings underscore the need for integrated and territorially sensitive strategies to ensure that recovery investments translate into lasting educational and social transformation.

Table 1: Summary of key findings by analytical dimensions

Dimension	Main Evidence	Critical Issues	Sources
Social right and cohesion	NRRP aims to reduce early school leaving; education recognized as a universal right.	Early school leaving rate still above EU average, with peaks in Southern Italy.	ISTAT (2022)
Gender and inclusion	€4.6 billion allocated to nurseries and early childhood education to reduce child penalty and foster female employment.	Risk of only temporary impact if not transformed into structural policy.	INAPP (2022)
Governance and digital divide	40% clause for the South as a unique innovation in Europe; 20% of resources for digitalisation.	Low administrative capacity and persistent digital divide.	Corte dei conti (2023), OECD (2021)

Authors' elaboration

Moreover, the ambitions of the NRRP risk remaining incomplete if not accompanied by structural reforms and effective governance (Corte Dei conti, 2023; Sacchi, 2021). A first challenge concerns administrative capacity. The 40% clause represents an innovative tool to address territorial disparities, but without stronger local expertise and stable personnel, funds risk being inefficiently spent or even left unused (Barbieri & Boitani, 2022). This reveals a crucial trade-off: the urgency of spending before 2026 versus the need to guarantee quality and continuity in reforms (Gagliardi, 2022). A second issue is digitalisation. The pandemic showed that inadequate devices and poor connectivity deepened territorial and social inequalities (OECD, 2021; ISTAT, 2022). For this reason, digitalisation must be seen not

merely as a technological goal but as a policy of inclusion. Only when combined with training, teacher support, and equitable access programmes can it act as a real driver of social cohesion (European Commission, 2023; Addabbo & Giovannelli, 2020). A third dimension relates to gender equality. Investments in early childhood services are crucial to addressing the child penalty and supporting women's participation in the labour market (Del Boca & Vuri, 2021; INAPP, 2022). Childcare provision should not be considered only as welfare, but as labour market policy with macroeconomic implications, directly influencing female employment rates, household income and productivity (Addabbo & Giovannelli, 2020; Del Boca & Vuri, 2021). To generate lasting effects, however, these measures must be stabilised as structural policies integrating welfare, employment, and equal opportunities (Santangelo, 2022). The Italian approach appears even more distinctive when compared with other European recovery plans. Spain's Plan de Recuperación, Transformación y Resiliencia prioritised digitalisation and vocational training but without binding territorial clauses (European Commission, 2022; Díaz López, 2021). Portugal's Plano de Recuperação e Resiliência focused on the green transition and workforce reskilling, again without regional allocation mechanisms (OECD, 2022; Reis, 2022). In contrast, Italy's 40% clause is an institutional experiment in cohesion policy absent elsewhere (Viesti, 2023). This makes Mission School 4.0 not only nationally relevant but also potentially exportable as a model for other peripheral European regions, including the Balkans and the Adriatic-Ionian area (Beqiraj, 2022). This innovation also echoes previous experiences, which already in 2019 stressed the urgent need for stronger school and digital infrastructures in the Adriatic-Ionian region. The Italian NRRP elevates these issues to the rank of national priority, embedding them in a legally binding territorial clause. This comparative evidence underlines that Mission School 4.0 should be understood not only as a national reform, but as an institutional experiment in cohesion policy with potential relevance for Europe¹.

5. Conclusions

Mission School 4.0 represents one of the most ambitious attempts in Europe to use education policy as a lever for resilience, cohesion, and sustainable growth. The Italian case highlights that education cannot be reduced to a social service but must be understood as a strategic asset for territorial development and democratic stability (Bobbio, 1990; Sacchi, 2021). Three conclusions stand out. First, binding territorial allocation clauses, such as the 40% earmark for Southern Italy, can represent innovative instruments of cohesion. However, as Cassese (2021) and Barbieri & Boitani (2022) note, without robust administrative capacity these provisions risk remaining symbolic, generating financial flows without structural change. Strengthening governance at the regional and municipal levels thus emerges as a non-negotiable condition. Second, digitalisation in education must be framed as a policy of inclusion. The pandemic revealed that technological gaps quickly translate into social inequalities (OECD, 2021; ISTAT, 2022). As Addabbo & Giovannelli (2020) argue, infrastructure alone is insufficient: digital investments must be integrated with training, cultural inclusion, and support for teachers, otherwise they risk reinforcing, rather than reducing, divides. Third, investments in early childhood services have the potential to mitigate the "child penalty" and foster women's labour market participation, making education a driver of both social and economic sustainability (Del Boca & Vuri, 2021; INAPP, 2022). Yet, as Santangelo (2022) and Gagliardi (2022) emphasise, temporary measures tied to the NRRP will not suffice: only their institutionalisation as permanent welfare and labour policies can ensure long-term impact. This article contributes to the debate on the governance of recovery policies by providing a policy-oriented analysis

¹ Skillman Magazine. (2019). Bridging skills and innovation: education and training for the Adriatic-Ionian region. Skillman International Forum, Bologna. Disponibile su <https://skillman.eu>

of Mission 4.0 as a tool for sustainable and inclusive regional development. Its originality lies in linking legal, institutional, and socio-economic perspectives to assess how education policies can act as levers for territorial cohesion. Nevertheless, the study has limitations: it adopts a qualitative approach and relies on secondary sources, without empirical verification of implementation outcomes. Future research could integrate quantitative analyses of project-level data and regional outcomes to test the actual redistributive effects of the 40% clause. Taken together, these findings suggest that Mission 4.0 is both a fragile and promising experiment. It is a fragile but potentially exportable institutional innovation, providing Europe with a new model of how education can be embedded in recovery strategies, linking digitalisation, gender equality, and territorial rebalancing in a coherent framework. As Viesti (2023) underlines, the Italian clause is almost unique in the European panorama and could serve as inspiration for other peripheral regions, from the Balkans to the Adriatic-Ionian area, where the nexus between education and cohesion is particularly urgent. In this sense, Mission School 4.0 may become more than a national policy: it could evolve into a European laboratory for integrating education, skills, and social rights into a sustainable and inclusive growth model. This confirms that education policies, when embedded in recovery frameworks, can evolve into instruments of state-building and Europeanisation. Its success or failure will thus send a powerful signal to the Union about the capacity of education to act as a true engine of territorial cohesion and democratic resilience.

References

- Addabbo, T., & Giovannelli, A. (2020). Gender equality and social policies in Italy: Challenges and perspectives. *Journal of Social Policy*, 49(3), 421–438.
- Barbieri, G., & Boitani, A. (2022). Governance e capacità amministrativa nel PNRR: un'analisi critica. *Rivista di Politica Economica*, 112(4), 55–78.
- Beqiraj, J. (2022). Education and regional development in the Adriatic-Ionian area. *European Journal of Comparative Education*, 17(2), 203–219.
- Bobbio, N. (1990). *L'età dei diritti*. Torino: Einaudi.
- Cassese, S. (2021). *La nuova costituzione economica*. Bari: Laterza.
- Corte dei conti. (2023). *Relazione sullo stato di attuazione del PNRR*. Roma.
- D'Arrigo, G., & David, P. (2022). *Next Generation EU e PNRR Italiano: analisi, governance e politiche per la ripresa*. Soveria Mannelli: Rubbettino.
- Del Boca, D., & Vuri, D. (2021). Childcare, maternal employment and the child penalty in Italy. *Labour Economics*, 72, 102046.
- Díaz López, J. (2021). El Plan de Recuperación, Transformación y Resiliencia en España: avances y retos. *Revista Española de Economía*, 38(2), 145–167.
- Di Comite, V. (2018). *La dimensione europea dell'istruzione superiore*. Bari: Cacucci.
- European Commission. (2020). Regulation (EU) 2020/2094 of the Council establishing the European Union Recovery Instrument. Brussels.
- European Commission. (2021). Regulation (EU) 2021/241 of the European Parliament and of the Council establishing the Recovery and Resilience Facility. Brussels.
- European Commission. (2022). Recovery and Resilience Facility: Spain country report. Brussels: Publications Office of the European Union.
- European Commission. (2023). Education and Skills for the Green and Digital Transition. Brussels: Publications Office of the European Union.
- Eurostat. (2023). Employment rate by NUTS 2 regions. Retrieved October 26, 2025, from <https://ec.europa.eu/eurostat/databrowser/view/tgs00007/default/table>
- Gagliardi, C. (2022). The Italian NRRP: implementation challenges and opportunities. *Italian Journal of Public Policy*, 17(1), 75–92.
- INAPP – Istituto Nazionale per l'Analisi delle Politiche Pubbliche. (2022). Rapporto annuale. Roma.
- ISTAT – Istituto Nazionale di Statistica. (2022). Rapporto annuale. La situazione del Paese. Roma.
- Magni, F. E. (2022). Le scuole oltre la pandemia: orizzonti pedagogici per possibili rilanci. In *Riflessioni ai confini del diritto pubblico* (pp. 115–125). Torino: ETPbooks.
- OECD. (2021). *Education at a Glance 2021: OECD Indicators*. Paris: OECD Publishing.
- OECD. (2022). *Education for Inclusive Societies*. Paris: OECD Publishing.

Reis, J. (2022). O Plano de Recuperação e Resiliência em Portugal: análise e perspetivas. *Revista Portuguesa de Estudos Regionais*, 59, 31–48.

Sacchi, S. (2021). Il PNRR tra politica europea e vincoli nazionali. *Quaderni di Economia Politica*, 84(2), 221–240.

Salmoni, F. (2021). Recovery Fund, condizionalità e debito pubblico. *La grande illusione*. Milano: FrancoAngeli.

Santangelo, S. (2022). La dimensione geografica del PNRR. *Documenti geografici*, 1, 331–338.

Skillman Magazine. (2019). Bridging skills and innovation: education and training for the Adriatic-Ionian region. Skillman International Forum, Bologna. Disponibile su: <https://skillman.eu>

Viesti, G. (2023). Il divario Nord-Sud e le politiche di coesione nell'Italia post-pandemica. Bologna: Il Mulino.

Sitografia

<https://www.corteconti.it/>

<https://pnrr.istruzione.it/>