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**Are the European Regional Development Fund and the Italian National Recovery and Resilience Plan contributing to reduce intra-regional disparities? A comparative analysis of Campania and Toscana**

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## **Abstract (IT)**

Dal 2008 l'Italia, come altri Stati membri, è entrata in un periodo di "permacrisi" (Zuleeg, et al. 2021), con una successione di crisi economiche, sociali, politiche e sanitarie. In risposta alla crisi di Covid-19, nel maggio 2020 la Commissione europea ha lanciato un Piano di ripresa per l'Europa (Next Generation EU) di cui lo Strumento di ripresa e resilienza è una pietra miliare. Il Piano nazionale di ripresa e resilienza (PNRR) negoziato dall'Italia è il più grande piano negoziato da uno Stato membro e mira ad attuare la doppia transizione ma condivide anche lo stesso obiettivo della politica di coesione: promuovere la coesione sociale ed economica per ridurre le disparità fra territori differenti. D'altro canto, il Fondo Europeo di Sviluppo Regionale costituisce lo strumento principale attraverso cui la politica di Coesione promuove interventi infrastrutturali nelle regioni.

La combinazione fra il PNRR e il Fondo Europeo di Sviluppo Regionale che verranno utilizzati negli stessi anni e perseguiranno gli stessi obiettivi richiede la messa in atto di sinergie e complementarità, al fine di massimizzare l'efficacia degli interventi e promuovere politiche di sviluppo efficaci.

Questa tesi indaga la combinazione tra FESR e PNRR e come questi strumenti stanno contribuendo alla riduzione delle disparità territoriali intraregionali. Tale domanda sarà indagata attraverso l'analisi comparativa di due regioni italiane, la Campania e la Toscana.

## **Abstract (EN)**

Since 2008, Italy, like other EU Member States, has entered a period of 'permacrisis' (Zuleeg, et al. 2021), with a succession of economic, social, political and health crises. In response to the Covid-19 pandemic, the European Commission launched a Recovery Plan for Europe (Next Generation EU) in May 2020, of which the Recovery and Resilience Instrument is a cornerstone. The Italian National Recovery and Resilience Plan (NRRP) is the largest plan negotiated by a Member State. It aims to implement the double transition but also shares the same objective of EU Cohesion policy: to promote social and economic cohesion in order to reduce the disparities between European regions. On the other hand, the European Regional Development Fund is the main instrument through which Cohesion policy promotes infrastructure interventions in the regions. The combination of the NRRP and the European

Regional Development Fund requires the implementation of synergies and complementarities in order to maximise the effectiveness of interventions and promote effective development policies. This thesis investigates the combination of the ERDF and NRRP and how these instruments are contributing to the reduction of intra-regional territorial disparities through a comparative analysis of two Italian regions, Campania and Tuscany.

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### List of abbreviation and acronyms

ERDF	European Regional Development Fund
NRRP	National Recovery and Resilience Plan
SME	Small and Medium Enterprise
GDP	Gross Domestic Product
ESF	European Social Fund
ESF+	European Social Fund Plus
ESIF	European Structural and Investments Funds
RRF	Recovery and Resiliency Facility
EC	European Commission
CSR	Country Specific Recommendation
JTF	Just Transition Fund
CF	Cohesion Fund
CPR	Common Provisions Regulation
RSO	Regional Specific Objective
BesT	Benessere Equo e Sostenibile Territoriale

## Introduction

This research seeks to understand how the European Regional Development Fund, the beating heart of the European Union's Cohesion policy, and the Italian National Recovery and Resilience Plan are contributing to reduce intra-regional disparities in a two Italian regions: Tuscany and Campania.

Following the multiple crises in the post-pandemic context, the European Commission launched the Next Generation EU, of which the Recovery and Resiliency Facility (RRF) is the main operational instrument. The RRF pursues cohesion objectives according to the article 4 of the regulation (European Commission 2021) and the Italian NRRP is divided into six missions that have a strong thematic overlap with the ERDF.

In the Italian context, there has been an ongoing debate about the potential effects of the NRRP on territories and on Cohesion policy. At the European level, an important debate involving several international expert and scholars was launched a year ago to understand how to reform Cohesion policy also considering the novel elements introduced by the RRF. The academic and political debate in Brussels focused on how to reform cohesion in times of emergency, to make the instrument flexible and increase its effectiveness. However, there was also room to reflect on the need to continue to promote a place-based approach in light of the geography of social disparities being created in Europe (European Commission, 2023)

The research proposed here is part of this line of investigation. By exploring a still little-known area, namely the performance of the provinces with respect to the ERDF and the NRRP in the Italian case, it intends first of all to contribute to the strand of research committed to grasping the effectiveness of European redistributive policies. Secondly, it offers a closer look at the issue through a territorialisation of the analysis. Thirdly, the study provides an overview of the Italian case, in which the dynamics between NRRP and ERDF take a very different form compared to the other Member States, for various reasons related to governance, the size of the funds, and administrative capacity.

The aim is twofold: to shed light on the effectiveness of the two instruments in reaching the objective of territorial cohesion, and to explore the interaction between the two instruments and their implications for the capacity of local and regional actors.

The approach that will guide this work reflects the author's background and comprises:

1. A geographical approach. The author recognises the importance of having a geographical approach in the analysis that considers the local level as the unit of analysis, in order to capture imbalances that at the aggregate (regional) level are less clear and more blurred. Furthermore, territorialising interventions represents a novelty concerning the NRRP, which in public reporting is always measured in terms of 'progress per mission', or in terms of 'regional absorption'.
2. An economic approach. The author recognises that the study of redistributive policies also implies a critical look at the market in which these policies are set. The quantitative approach and the mapping of the expenditure of both the ERDF and the NRPP in the light of the territorial needs of the provinces investigated meets this necessity. Territorial needs are revealed by the territorial fair and sustainable welfare indicators developed by ISTAT, which not only show when there is a territorial need but also when one policy area in a specific province has a comparative advantage over the others.
3. A political/institutional approach: the author recognises that mere quantitative approaches are not sufficient to explain the dynamics that occur on a territorial level in the implementation of redistributive policies. The institutional framework, policy concepts such as coordination between different levels of government, communication, the active involvement of local authorities, the coherence of the policy with respect to the territory are all elements that were considered in the design the research and investigated.

The work is structured as follows. In Chapter 1, the existing literature on the subject is reviewed. Chapter 2 discusses the methodological approach, the research question and the hypotheses and sub-hypotheses that guided the work. Chapter 3 presents the first case study, with a presentation of the Campania region and its characteristics, a brief methodological introduction and an analysis of the data by province. Following the analysis, both quantitative and qualitative results are reported. The same structure is proposed for case study 2 concerning the region of Tuscany (Chapter 4). Chapter 5 discusses the results and is followed by conclusions.

# 1. Literature overview

## 1.1 Cohesion policy: a historical overview

Cohesion policy is the European Union's main, distinctive, and priority policy. Article 174 of the Treaty on the Functioning of the European Union defines economic social and territorial cohesion as an objective to be achieved to reduce the gap between the levels of development of the least-favored regions, that is regions with a per capita GDP lower than 75 percent of the EU average. These include also those territories with permanent structural and geographic disadvantages, such as island regions, rural areas, mountainous areas, and depopulated areas. At the time of the Treaty of Rome (1957), Cohesion policy was far from being on the political agenda of EU Member States. Member States were reluctant to transfer competences to regional development for several reasons: 1. Regional development was still in its infancy at the national level; 2. It involved internal affairs related to the organisation of the national state and its productive fabric; 3. Attention was mainly focused on the ambition to create an international trade; 4. Development was entrusted to the World Bank (created in 1944), which was responsible for promoting development dynamics in underdeveloped contexts (Brunazzo p.18). Cohesion policy did not appear on the political agenda until the 1970s. On the one hand, the external shock of the oil crisis in the 1970s led Member States to take joint action to tackle regional disparities between countries. On the other hand, there was an idea in all Member States that the correction of structural and regional imbalances in the Community would be a strong precondition for the implementation of Economic and Monetary Union (ibid., p.18).

In the 1973 the European Commission published the Report on the Regional Problems in the Enlarged Community, also known as Thompson Report, in which was stated that reducing regional disparities was “ *a human and moral requirement of the first importance since no community could maintain itself nor have a meaning for the people which belong to it so long as some have very different standards of living and have cause to doubt the common will of all to help each MS to better the condition of its people*”. (CEC 1973:4; ibidem)

Following this report, the European Commission drafted the proposal for the European Regional Development Fund, which was finally established in 1975. The first ERDF aimed to support infrastructure and industrial development. However, as the instrument was strongly dominated by the willingness of the Member States and had a very small budget, it did not

produce valuable results throughout the European Union. (ibid, p.19). There was still no clear political will to establish a redistributive policy for all Member States (Graziano 2004).

This political will becomes more evident with the 1986 Single Act, adopted in 1988 with the reform of the Structural Funds. In this act, at the urging of the Delors Commission, it was pointed out that regional disparities were a hindrance to the fulfillment of the European internal market. As a result, the budget allocated to the Structural Funds was increased, and the Cohesion policy reform was based on four important principles (*Brunazzo, p.22*): programming, concentration, additionality, and partnership.

- Programming: investments and reforms should be embedded in a multi-year (7-year) planned programming cycle, agreed upon among all partners involved at different levels, to ensure a long-term strategy.
- Concentration: of resources, spending and efforts. To avoid scattered interventions, thematic and specific objectives are introduced.
- Partnerships: cohesion policies must be designed by all actors involved, local, regional and national authorities, as well as relevant stakeholders on the ground.
- Additionality: European cohesion policies should not replace ordinary domestic policies but complement them. It is necessary to ensure adequate national co-financing.

These principles were adopted in the first multi-year planning cycle 1989-1993.

In addition, five political priorities were defined, of which Objective 1 - which is still valid - was to promote the development and adjustment of the regions whose development is lagging behind (where per capita GDP is less than or close to 75% of the Community average).

Subsequently, the 1994-1999 cycle introduced some important new elements introduced by the Maastricht Treaty (1992).

Among these was the Cohesion Fund. It promotes infrastructure interventions in the fields of environment and transport, especially for Member States whose Gross National Income (GNI) per capita was less than 90 per cent of the EU average. The principle of subsidiarity was also introduced, along with the Committee of the Regions. The principle of subsidiarity states that public functions should be carried out at the level of government closest to the citizen. It essentially introduces a principle of territorialisation of policies. At the same time, the creation of the Committee of the Regions demonstrates the political will to highlight the perspective of

regional and local authorities and to strengthen multi-level governance in the management of cohesion funds. (Schönlau, 2016).

But the process of fine-tuning Cohesion policy was just beginning. The 2000-2006 programming cycle introduced further elements of innovation to cope with EU enlargement by taking into account the countries of the Eastern Union. The economic context of the eastern countries made the entire territory of these new candidates eligible for Objective 1. At the same time, the Member States that had joined the European Monetary Union were facing a period of economic recession. In order to take full account of this new geography of development, the political priorities were reformulated as follows: Objective 1 areas are those where per capita GDP is less than 75% of the European average; Objective 2 areas are those with structural problems where economic and social conversion is to be encouraged; Objective 3 areas are the whole of the country, except for Objective 1 areas, for measures to adapt human resources. Then, in the 2007-2013 programming, other relevant changes occurred. The Lisbon Strategy (2000) played an important role in orienting the 2007 reform, especially on put on the political agenda crucial topic for EU competitiveness. Some of there were the need to foster research and innovation to build a knowledge-based economy, the reform of state aid policy, the development of the internal market for services and the need for a common approach to economic migrations. (ibidem, p.28).

As a part of this reform, three new objectives were defined - naturally drawn from a revision of previous ones (Brunazzo, 2016). In particular:

- (a) Convergence Objective - to stimulate employment growth in less developed regions.
- b) regional competitiveness and employment objective - to strengthen the competitiveness and attractiveness of regions and employment by anticipating economic and social changes.
- (c) European Territorial Cooperation Objective - to promote common solutions in areas such as urban, rural and coastal development, the development of economic relations and the creation of small and medium-sized enterprises (SMEs).

In addition to this, a further step was taken in fostering the strategic planning of interventions. As early as the review of the 2000-2006 cycle, it became clear that there was a need to define - at multiple levels of government - operational programmes to be included in a broader national and European strategy. The evaluation of each programming period was becoming even more

important to provide indications and recommendations for the next cycle, also considering the progressive enlargements the EU was experiencing, which meant that new countries and regions would be funded by the Cohesion policy programmes.

The evaluation and shortcomings from the 2007-2013 programming period led to multiple steps ahead. Firstly, a need to strengthen administrative capacity in Local and Regional Administrations. Staff fluctuations, a lack of knowledge and experience, absence of an adequate administrative framework were some of the obstacles highlighted. (Schönhofer H.T et al., 2014). Absorption rates were considerably low, especially in Objective 1 regions. These elements were also worsened by the 2007 crisis that Member States were experiencing.

Considering these results, the 2014-2020 programming period introduced new elements of novelty with the ultimate goal to reinforce the results-orientation emphasis (Ibidem, p.33) . Partnerships with Local and Regional administrations were encouraged, to fully promote a bottom-up approach. Administrative capacity was included as a thematic objective, differently from the previous programming periods. Ex-ante conditionalities were applied also to thematic objectives to guarantee the properly implementation of the invention foreseen. A new logical Framework was introduced to better align European objectives and Member States ones, and to foster results-based indicators.

This programming period also saw a strong European focus on strengthening the social union, which began with the Europe 2020 Strategy<sup>1</sup> and peaked with the introduction of important new elements in the 2021-2027 cycle. At the foremost there is the European Social Fund Plus. It will provide comprehensive support to youth employment, up- and re-skilling of workers, social inclusion and poverty reduction, including child poverty, by merging existing programmes: the European Social Fund, the Youth Employment Initiative, the Fund for European Aid to the Most Deprived and the Employment and Social Innovation programme.<sup>2</sup> The fund, deeply

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<sup>1</sup> Europe 2020 is a 10-year strategy (developed in 2010 and to be pursued "until" 2020 - hence the name) of collective action identified by the European Union in order to overcome the crisis that has wiped out years of economic and social progress in all member states. The main objectives are to emerge from the critical period by transforming the EU into a smart, sustainable and inclusive economy characterized by high levels of employment, productivity and social cohesion. (European Commission, COM(2010) 2020)

<sup>2</sup> <https://ec.europa.eu/european-social-fund-plus/it/cose-1fse>

renovated, will have a shared-management part, and a specific component under the European Commission management related to employment and social innovation.

In addition, are divided into target categories, but the resource allocation system will follow the Berlin formula. This methodology, adopted by the European Council in 1999, not only considers GDP per capita but also reflects certain social and territorial aspects to represent a multidimensional level of development. In this case, the formula uses new criteria such as youth unemployment, low levels of education, climate change and integration of migrants, for all regions, to more comprehensively report the socio-economic situation on the ground.

Investment priorities are divided into five strategic objectives:

- A smarter Europe, through research and innovation;
- A greener Europe by pursuing energetic transition, climate change adaptation and mitigation and models of circularity;
- A more connected Europe, provided with strategic digital networks and transport networks,
- A more social Europe with the final aim to reach what was already set in the European Social Pillar;
- A Europe closer to the citizens, able to put in place local development strategies and a sustainable urban development aligned with territorial needs.

### **1.1.1. How has the EU promoted cohesion over time? An overview of ESI funds and different programming periods**

Many researchers have tried to understand and investigate the “utility” of cohesion policies as well as to measure the effectiveness of these interventions within regional development. Part of the extensive literature on the topic is analysed by Marzinotto (2012). She highlighted that impact assessments of European Structural funds depend mostly on the methodology used. While macroeconomic studies find mostly positive impact between economic growth and structural funds, empirical studies show mixed results, depending on different conditions: institutional framework, strategic planning behind the use of cohesion policies, type of national commitment, and territorial and social capital. (Darvas, Collin, Mazza, Midoes, 2019). An



interesting work in the field is the longitudinal study made by Bachtler, Begg, Charles, and Polverari (2014) assessing the achievements of the ERDF (1989-2012) in 15 regions belonging to different levels of development. By using a theory-based approach aiming to investigate whether the programmes answer what they are designed to do, and if they fit with regional needs, they find out that cohesion was promoted to some extent. Regions with a clear strategy investing in basic infrastructure and services succeeded more than others. In many cases, it was clear that ERDF contributed partially to a broader journey of regional transformation. Two aspects were also outlined: 1) Regions with a better administrative capacity were more able to fully untap cohesion policies potential by better identifying weaknesses and strengthening their territory; 2) ERDF impacts were territorially uneven.

Different outcomes in the literature on the effectiveness of Cohesion funds largely depend upon the complexity of assessing the effectiveness of structural funds apart from national spending or in the absence of regional data. Despite this, it is agreed evidence that investments in human capital and regional development contribute to reducing regional disparities in a long-term perspective while spending on infrastructure could only impact in the short-term period. (Darvas et al., 2019). But also, that Cohesion policies were a significant stimulus to boost regional convergence, especially in less developed regions. (Di Cataldo and Monastiriotis, 2020). Very few attempts were made to investigate how EU structural funds produce uneven territorial results. Fratesi and Perruca (2014) revealed that regions with a stronger territorial capital were more able to take advantage of ESIF funds. Analyzing three types of territories- large urban areas, rural areas and intermediate areas- they conclude that while intermediate areas benefit from ESIF funds, similar results were not found for large urban areas and rural ones. In other words, less developed territories were left behind. Gagliardi and Percoco (2016) by performing a regression discontinuity design on cohesion policies in urban and rural regions found that geographical characteristics matter. Rural regions close to a city have more opportunities to fully exploit cohesion policies and opportunities for growth.

The latest report to assess how Cohesion policies in the programming period 2014-2020 have contributed to reducing regional disparities highlights relevant shortcomings. Econometric models show that GDP per head in the less developed regions will increase as a result of the programming period 2014-2020. In addition, gaps between more developed regions and less developed regions will decrease. In this analysis, cities – especially in East and Southern Europe- were more able to create economic growth and sustaining employment in capital

centers than related peripheries. Different less developed regions, mostly in Southern Europe, suffered from economic stagnation suggesting they are still in the development trap. Many of them were hit by the 2008 crisis and the other crises that came subsequently. To sustain a long-term growth, relevant reforms of the public sector should be undertaken, innovation should lead the change, supported by an upskilled labour force.

In the recommendations outlined for the 2021-2027 programming period, relevance on strengthening the place-based approach and the territorial impact assessment is given, to better identify regional needs and do not harm cohesion while implementing related programmes.

## **1.2 Overcoming the *permacrisis* by preparing future societies: NextGenerationEU and the long-term budget 2021-2027**

The spread of the COVID-19 pandemic in 2020, and the resulting health, economic, and social crises that followed, were part of an already very complex macro-context for European Member States. In 2007 the financial crisis generated by the collapse of Lehman brothers' Bank (US) destabilized the macro-economic balances of many Member States, leading to a general economic recession, which resulted in a sharp increase in unemployment, a precarization of work, by stimulating a period of austerity policies. While the crisis impacted the whole of Europe, its consequences spread unevenly across Member States. Southern Europe, in particular, has been heavily affected by these effects (EPRS, 2019).

As a result, regional economic convergence slowed down substantially. Moreover, in 2015, Europe had to deal with the management of the refugee crisis. 1 million migrants landed on European shores, and about 3,700 of these died in the Mediterranean Sea putting the migration crisis at the top of the EU political agenda. The migrant crisis and the arrival of new foreigners have played an important role in dividing European societies on xenophobic and Islamophobic positions, and also in fostering populist and anti-European governments. One of the major gains achieved by a populist government was the victory of "*leave*" in the referendum instituted by the United Kingdom on whether to remain within the European Union (2016). Boris Jhonson's

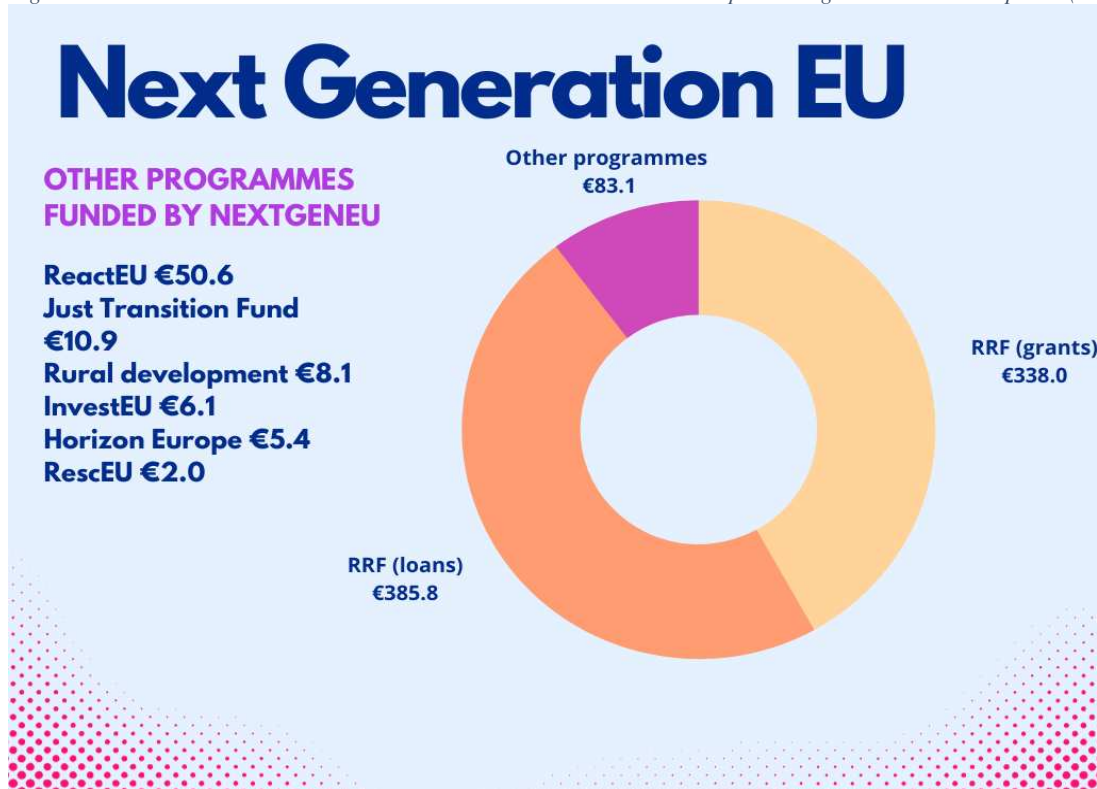
party campaigned precisely on the changed assumptions of the European Union: to no longer be able to guarantee protection against crime and terrorism, to not foster a prosperous economy and to not detain an efficient migration control. (Whitely, 2017)

The global health crisis that arrived in 2020 due to the spread of COVID-19 was *the icing on the cake*, compared to the multiple pre-existing crises that Europe was facing. The multiple crises described so far were permanently halting not only the process of integration and convergence of the enlarged Europe but at the same time the countries' chances for development.

In light of these interconnected crises - not least the climate crisis, the European Commission in 2020 launched the Next Generation EU Plan - a temporary instrument to power the recovery of EU Member States without compromising the budget allocated to the policy objectives of the long-term budget of the Multi-Annual Financial Framework.

The instrument provides for the allocation of 806.9 billion euros (2018 prices) most of which is earmarked for the Recovery and Resiliency Fund (723.8 billion in grants and loans, hereafter RRF) and the remaining budget will contribute to strengthening other relevant programmes with the ultimate goal to foster a greener and more digitalised European Union (figure 1.)

Figure 1. Next Generation EU. Autor's own elaboration based on: <https://next-generation-eu.europa.eu> (billion, euros)



The RRF resources will be distributed according to National Recovery and Resiliency plans prepared by each Member State and agreed upon with the European Commission which will check- every six months- the congruence with the set objectives. The Next Generation EU will strongly contribute to the Multi Annual Financial Framework for the long-term budget 2021-2023, by adding financial support to three main areas (figure 2) :

- A single market based on innovation and on digitalisation.

The Next Generation EU has allocated 11.49 billion to the policy area, out of which 6.1 billion for the InvestEU and 5.4 billion euros to Horizon Europe. Additionally, the RRF will allocate 20 per cent of its budget to the goal of creating a more digitised Europe by fostering a wider use of digital technologies at all levels of society.

- Natural Resources and Environment.

The Next Generation EU has allocated 18.94 billion to this area, out of which 8.1 billions to the Rural development (EAFRD) and 10.9 billion euros to the Just transition Fund. This latter was established to support specific territories facing socio-economic challenges in undertaking the ecological transition. Furthermore, the RRF is committing 30% of the overall budget to address climate change effects and restore and preserve natural ecosystems. The share is highest ever from the largest EU budget ever.

- Fostering Cohesion and Resilience.

This policy area had the largest allocation of resources among the different policy areas. In addition to the allocation for the inherent structural cohesion funds (ERDF, CF, ESF+), the NextGenEU added 776.50 billion resources. Of these, 723 billion finance the Recovery and Resiliency Fund. 50.6 billion are earmarked for ReactEU, a programme specifically developed to extend the measures implemented during covid until 2023. Finally, 2 billion is earmarked for RescEU, a programme developed to protect European citizens from disasters and manage emergencies.

The other headings financed in the 2021-2027 long-term period are described in the figure 2.

Figure 2: Allocation per heading 2021-2027, Autor's own elaboration based on <https://next-generation-eu.europa.eu/>



### 1.3 The Recovery and Resilience Facility

The Recovery and Resiliency Facility (RRF) represents the cornerstone of the Next Generation EU and the main channel through which funds are allocated to the Member States. It entered into force in February 2021 (EU regulation 2021/241) with the ultimate goal of mitigating the economic and social impact of the COVID-19 pandemic and making European economies and societies more able to further exploit opportunities and challenges of the green and digital transition, as well as to be more equipped to face future shocks and crisis. (Sanchez-Barrueco, 2023).

Member States are in charge of using RRF to implement specific reforms and investments, identified in *ad hoc* National Recovery and Resiliency Plans, approved by the Council upon proposal by the Commission. National reforms and investments should be aligned with five pillars identified by the Commission: 1) Green transition; 2) Digital transformation 3) Smart, sustainable and inclusive growth 4) Social and territorial Cohesion 5) Health, economic, social and institutional resilience; 6) Policies for the next generation, notably for children and young people. They should also address country-specific recommendations outlined in the European Semester framework- which plays a major role in coordinating economic and social policies within EU27 Member States.

By being under the legal framework of assigned revenues (Article 21(2)(a) of the EU's Financial Regulation this instrument is not part of the Multiannual Financial Framework, and it must be regulated under the direct management of the European Commission. This is an element of novelty in the EU redistributive policies, considering the shared management governance of the ESIF funds. Once final national plans are finalized, they are subjected to an ex-ante assessment by the European Commission, that will check different dimensions: relevance, effectiveness, efficiency and coherence. **Relevance** will be assessed according to the principle of conditionality. The plans should be aligned with the six overarching pillars as well as the specific country-specific recommendations provided by the European Semester. The quota of green and digital investments must be respected, and each intervention should respect the principle of “*do not significant harm*” about environmental objectives set out in article 17

of the Taxonomy Regulation.<sup>3</sup> About the **effectiveness** the EC will assess targets and milestones previously specified by each Member State in the plan, to assess through quantitative and qualitative indicators the implementation of investments and reforms. The European Commission will check every six months the intermediate achievements of outputs and inputs of milestones and targets – and proceed with the regular disbursements of the RRF funds. The European Commission will promote also internal control systems to prevent corruptive behaviours.

**Efficiency** will be evaluated according to the principle of plausibility and commensurability of the costs indicated for each intervention by Member States but also accuracy, accountability, transparency, simplicity and consistency.

Lastly, National Recovery and Resilience Plans should guarantee **coherence** with CSRs of the European Semester, with OPs of ESIF funds and National Energy and Climate Plans. Member States could present amendments in case of impossibility to reach set milestones and targets, but these amendments should be approved by the Commission and ratified by the Council.

### **1.3.1 Cohesion policy and Recovery and Resilience Facility: similarities and differences, opportunities and challenges**

Cohesion policy and the Recovery and Resilience Fund should pursue the same purpose, although they are very different. The first is a place-based, made at the regional level with a long-term convergence objective in terms of growth, jobs and economy. The RRF instead is a reform and investment-driven policy managed at the national level to boost recovery in a short time. (Koopman J G, 2022). Different authors already highlighted the elements of the novelty of this instrument in comparison with cohesion policies. The clearest difference to be pointed

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<sup>3</sup> As outlined by the European Commission Communication published the 12<sup>th</sup> February 2021, C(2021) 1054 final, every intervention that could harm climate change mitigation and adaptation, the sustainable use and protection of water and marine resources, circular economy, pollution prevention and intervention, protection and restoration of biodiversity and ecosystems- could not be financed by the Recovery and Resilience Facility.

out is the governance proposed. ESIF funds are characterized by shared management, in which Managing Authorities (ministries or regional administrations) propose operational programmes drafted to the EU Commission that check if the programmes are in line with European Priorities. After that, the Managing Authority is in charge to oversee the implementation phase and to provide reliable data to monitor them. On the contrary, in the RRF, although the Commission has direct control over National Plans, of which the ultimate beneficiaries are the Member States, there is no direct link with the implementing authorities or local and Regional administrations (Corti and Nunez Ferrer 2021).

The proposed approach clashes with the principle of subsidiarity, established in the treaties, which requires that European funds be managed at the level of government closest to the territory. Many regions have developed a much deeper knowledge of their territorial needs - especially through the experience of Cohesion policies - than that possessed by the central government, but this experience is now being undermined by the new RRF governance (Corti and Ferrer 2021; Bachtler and Mendez 2021).

Fontas (2021) on behalf of the CPMR (Conference of Peripheral Maritime Regions) outlined that RRF Regulation Article 18 requires Member States to provide a summary of the consultation process to draft the plans, although it does not require the extent and the details needed in the summary. This means that the quality of the consultation process is not assessed, as well as the involvement in the design stage of the Local and Regional Administrations. A study commissioned by the Committee of the Regions (2021) on the involvement of LRAs in the NRRP highlights that LRAs are seen as executors and recipients excluding them from the entire design stage. By doing this, LRAs will only achieve targets and milestones without thinking about the outcome (desired change).

Moreover, territorial cohesion is not systematically considered in all plans even if it represents one of the Facility's six investment priorities. Despite COVID-19's effects having impacted territories in different ways, exacerbating existing disparities, only a few Member States pointed out in the plans how digital connectivity, health infrastructure, accessibility, competitiveness and depopulation will be addressed territorially, to overcome imbalances and different levels of development. This approach could also impoverish the territorial element of the European Semester (Bachtler and Mendez 2021).



Furthermore, several authors raised critical points about the monitoring system. With regards to Cohesion policy, the Member States had to set up separate internal, institutional, legal and procedural systems to manage the European Regional Development Fund (ERDF), the European Social Fund Plus (ESF+), the Cohesion Fund (CF), and the Just Transition fund (JTF). Audit authorities, as a part of a shared management implementation system, perform system audits and assess the effective functioning of these national management and control systems, based on a specific system of key requirements. This system prevents illegalities and double funding, and is comparable among EU 27 Member States.

In the Recovery and Resilience Facility setting consistent monitoring information, verified both internally and externally, with a principle of comparability, is far from being implemented (Corti and Ferrez 2021). Monitoring is mainly in charge of National authorities and is based on two building blocks: *milestones and targets* for tracking Member States' progress on reforms and investments; and 14 predefined *common indicators* for monitoring success in achieving the RRF's objectives. Milestones and targets are not enough to track Member outcomes being mostly related to procedural objectives. They could inform on the state of the implementation, but few data are available on the expected change, and this could be partially explained by the tight timeframe for implementing the NRRP that does not allow for a realistic assessment of impacts. On the other side, common indicators often do not provide enough information on how projects on the ground contribute to the RRF's general objectives. This is especially true about major structural reforms or to areas not covered by indicators, like the rule of law, the financial sector or taxation (ECA, 2023).

## **1.4 The Italian National Recovery and Resilience Plan**

Italy is the country that negotiated the plan with the highest number of financial resources compared to other European countries. 191 billion, including 68.9 billion in grants and 122.6 billion in loans. Hardly any European country has requested funding for the plan in loans, especially in the early stages of plan negotiation, making the Italian plan not only the largest but also incomparable with other European countries in light of its size and characteristics. The

Italian NRRP is structured in six missions and sixteen components (table 1) developed around three strategic axes shared at the European level: digitalization and innovation; ecological transition; and social inclusion.

*Table 1: Italian Missions and Objectives. Author's own elaboration based on: [www.italiadomani.it](http://www.italiadomani.it)*

Italian NRRP: Missions and Objectives		
	Missions	Aim
1	Digitalization, innovation, competitiveness, culture and tourism	digital transformation of the country, the innovation of the production system as well and the development of two key sectors for Italy, such as tourism and culture.
2	Green revolution and ecological transition	Improve environmental and energy sustainability and resilience, ensuring a fair and inclusive transition.
3	Infrastructure for sustainable mobility	Promote the rational development of a sustainable modern transportation infrastructure extended to all areas of the country.
4	Research and Education	Strengthen the school-age and preschool education system, promote digital skills, and enhance research on digital and ecological transition
5	Cohesion and Inclusion	Promote labour market innovation by strengthening active labour policies, reduce social, economic and territorial inequalities, and support women's entrepreneurship.
6	Public Health	Effective improvement of the National Health System to make facilities more modern, digital and inclusive, ensure equity of access to care, and strengthen prevention and services on the ground by promoting research.

In addition to investments, specific attention to reforms is given, in particular:

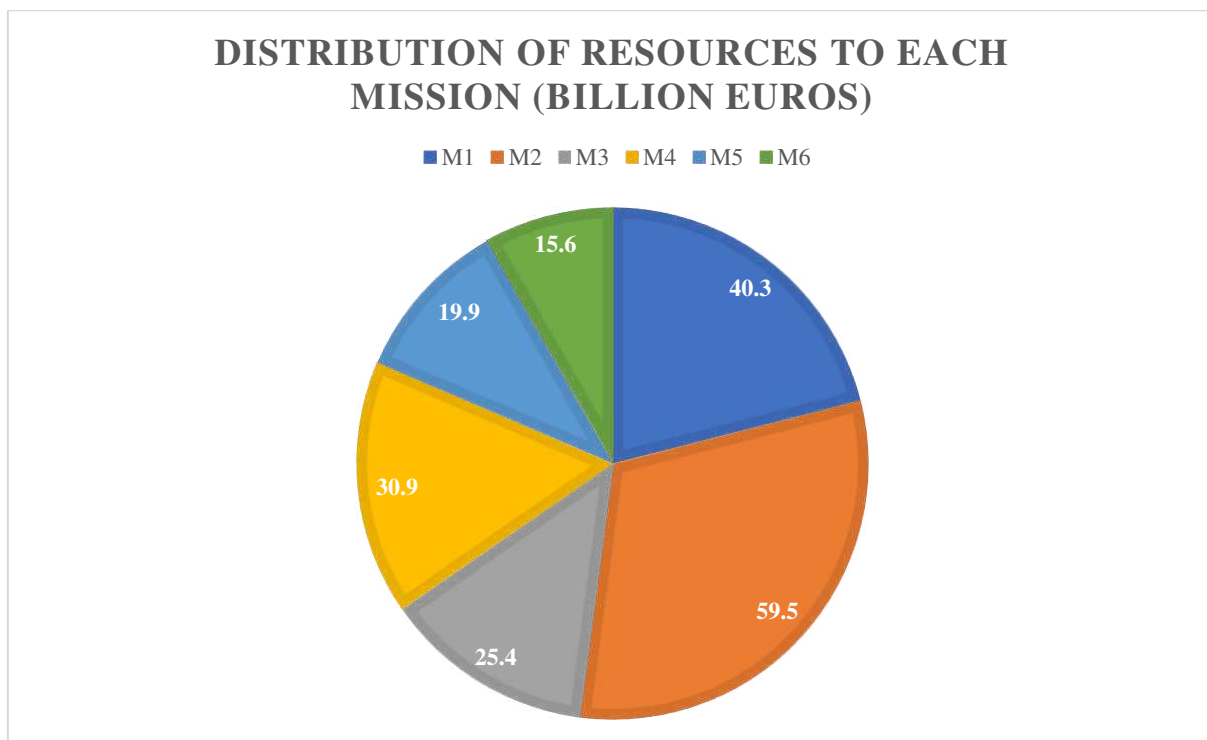
**1. Horizontal reforms:** of public administration and justice, to make these two systems more effective and efficient.

**2. Enabling reforms:** concerning competition, and other aspects relating to public bureaucracy, to simplify and speed up the processes of access to public services.

**3. Sectoral reforms:** to make the country more innovative and cutting-edge. Reforms concern structural adjustment to implement the ecological and green transition, the rapid construction of sustainable transportation infrastructure, and the upgrading of education, university, and labour systems to adapt them to contemporary challenges.

o understand how resources are divided by ministries that handle specific reference missions, (figure 3)

Figure 3: distribution of resources to each mission. Autor's own elaboration based on [www.italiadomani.it](http://www.italiadomani.it)



As it emerges, a major role is played by the double green and digital transition to which more than half of the resources are allocated. This is followed by "Education and research" " Infrastructure for sustainable mobility," " Inclusion and cohesion" and " Health."

On the other hand, on examining the distribution of resources by component, it turns out that the most funded components are:

1. Investments in digitalization and technological innovation (M1C2)
2. Development of rail networks (M3C1)
3. Strategic investments in renewable energy, hydrogen, networks and sustainable mobility;
4. Strengthening education and education services;

The following table summarizes the relevant projects for each mission giving an overall idea of how the plan will be operationalized.

Table 2: Relevant projects for each mission. Autor's own elaboration based on Corte dei Conti (2022)40.359

	Relevant projects
Mission 1	<ul style="list-style-type: none"> <li>➤ Transition 4.0: tax breaks for digital investments in companies covering tangible and intangible 4.0 assets, training activities, and investment in research and development.</li> <li>➤ Develop ultrafast networks (ultra-wideband and 5G) with the so-called 1 Gbps Italy Plan, which consists of, among other things, ensuring efficient connectivity to 8.5 million households and businesses</li> </ul>
Mission 2	<ul style="list-style-type: none"> <li>➤ Ecobonus and sismabonus: 110 percent super tax credit for interventions aimed at energy efficiency and safety of the building stock.</li> <li>➤ Interventions in urban areas to secure the territory, adapt public buildings, and promote energy efficiency in public lighting systems.</li> </ul>

Mission 3	<ul style="list-style-type: none"> <li>➤ Strategic investment in upgrading high-speed rail links, financing rail links on the west/east diagonal of the peninsula, and electrification of southern railways.</li> </ul>
Mission 4	<ul style="list-style-type: none"> <li>➤ Kindergarten and Preschool Plan and Early Childhood Education and Care Services</li> <li>➤ School Building Safety and Redevelopment Plan.</li> </ul>
Mission 5	<ul style="list-style-type: none"> <li>➤ Strengthening active labour policies to reduce the number of NEETs and encourage women's participation in the labour market;</li> <li>➤ Urban regeneration and social housing interventions to counter degradation and social exclusion</li> </ul>
Mission 6	<ul style="list-style-type: none"> <li>➤ Create a healthcare system that is more resilient to the risks manifested by the pandemic through strengthening nursing homes, hospitals, and home care</li> <li>➤ Strengthening hospital facilities and related technology infrastructure by fostering the digital transition in the medical field.</li> </ul>

In addition to responding to a sectoral rationale, the interventions outlined in the plan contribute to three cross-cutting objectives of the NRRP: 1 Increasing youth employment, 2 Reducing territorial gaps, and 3 Achieving gender equality.

As a cross-cutting principle of the NRRP, the “*do not significantly harm*” principle, will prevent projects that may conflict with environmental objectives stated by the Taxonomy for Sustainable (Regulation EU 2020/852). In detail, projects should not conflict with 1. Climate change mitigation, 2) climate change adaptation, 3) sustainable use and protection of water and marine resources, 4) transition to a circular economy, with reference also to waste reduction and recycling; 5) Air pollution prevention and reduction; and 6. Protection and restoration of biodiversity and ecosystem health.

The size of the resources to be managed, their number and complexity, and also the need to report on all operations carried out to unlock new tranches of funding, led to the choice of

adopting centralized governance. The NRRP finds its political direction in the cabin established at the presidency of the council of ministers, where coordination with territorial institutions takes place if the issue requires it.

However, all investments and reforms are divided by ministries, which are responsible for calling for projects and managing applications and follow-up.

An analysis conducted by the Court of Accounts (2022) on individual ministries and their operational investment program, reveals that many of the NRRP projects were already planned or being implemented in the individual ministries of reference and have been financed by the Recovery and Resilience Facility.

In addition to this, in the assessment of the implementing entities of the NRRP projects to better understand the territorialization of each intervention, it appears that out of 191 billion, 37 percent is allocated to territorial implementing entities (Regions, Provinces, Universities, local Port Authorities) and 63 percent by national implementing entities (ministries, national organizations, Italian public companies such as state railways).

### 1.4.1 State of implementation of the NRRP 2021-2023

The Italian Court of Auditors published in May 2023 a report on the status of implementation two years after the signing of the NRRP. The share of resources allocated for the milestones achieved for the years 2021-2023 is highlighted in Table 3.

Table 3: NRRP expenditure in the years 2021-202. Autor's own elaboration based on Corte dei Conti (Maggio 2023)

	Expenditure in the years 2021-2023 (million euros)	% of expenditure on the total of resources programmed
<i>Mission 1</i>	7,743	19.2
<i>Mission 2</i>	11,136	18.7
<i>Mission 3</i>	4,239	16.7
<i>Mission 4</i>	1,465	4.7
<i>Mission 5</i>	988,3	5.0
<i>Mission 6</i>	111,2	0.7

Some observations can be made about the share of resources spent under each mission.

First of all, the total expenditure from 2021 to 2023 turns out to be about 25 billion euros out of an overall total of 191 billion euros.

However, the state of progress of the examined interventions is based on milestones and targets achieved, which are procedural, by not providing an exhaustive picture of the results achieved by 2023. Examples of milestones to be achieved at the end of the first half of 2023 were: notices of calls for tenders, adoption of administrative measures, and issuance of territorial decrees. Essentially, not measures that could properly inform about achievements, being essentially based on preliminary activities carried out.

In light of what has emerged so far, mission 1 has the highest ratio of expenditure incurred to resources allocated. It is followed by Mission 2 and Mission 3.

As can be seen, the spending capacity per mission remains very low. In part, this can be explained by the fact that the structure of the plan is directed toward spending the majority of resources in the years 2024 and 2026.

Another reason why spending remains low could be found in the various delays occurring between the achievement of the projected milestone for the intervention and the actual deployment of resources, which is affected by several elements: increased costs and/or scarcity of materials; imbalance of supply and demand due to the unpreparedness of the productive fabric for certain interventions; regulatory, administrative and managerial difficulties occurring during the implementation phase; and finally, critical issues related to the redefinition of objectives during the course of implementation. (Court of Auditors, November 2023).

Additional critical issues occurred during the implementation phase include:

1. Too tight timelines for the implementation of the planned interventions, which do not reflect the actual implementation timelines. This is due to the need to meet milestones and targets at the European level and because of the large number of resources to be spent that require the implementation of numerous projects.
2. Payments for financed projects, following the logic of the NRRP, come only when the work itself is completed. This forces local and/or regional authorities to advance a large

amount of resources. This discourages many financially weak municipalities from participating in NRRP calls, thus undermining a cardinal principle of the plan: territorial cohesion. To remedy this problem, Anci demanded from the Italian government during the NRRP discussions that the government implement an ad hoc regulation for an advance of 30% of the resources won, to be given directly to local authorities.

In July 2023, the government proposed strategic amendments to the NRRP. This choice lies in the fact that a number of critical issues that emerged during the implementation phase would not have allowed for the timely implementation of existing interventions. Furthermore, amendments also included the integration of an additional chapter regarding the RepowerEU. Three sections of amendments were requested:

1. Formal changes related to the description of measures and verification mechanisms;
- 2 Reprogramming of interventions that fail to meet expected milestones and targets due to critical issues that emerged during implementation. This category includes interventions related to high-speed rail, for which archaeological and geological criticalities emerged during implementation.
3. Request for reduction of funding for specific measures in the NRRPs: substantial criticism was found since several existing projects were included within the NRRP even if they did not meet the principles required by the European Union, such as the do not significant harm principle. For this reason, the Italian government requested the defunding of some measures, amounting to 15,890 million euros, by stating, however, that they would refinance such works with different resources (e.g. Cohesion policy or the domestic Development and Cohesion Fund).

For an overview of the defunded measures, see the Table 4 below.



Table 4: Measures and components leaked from the Italian NRRP. Autor's own elaboration based on [politicheeuropee.gov.it](http://politicheeuropee.gov.it)

Measures and components leaked from the Italian NRRP		
Component measure	Measure description	Amount to remove from NRRP (million)
M2C4I2.2	Interventions for the resilience, land development and energy efficiency of municipalities	6,000
M5C2I2.1	Investment in urban regeneration projects, aimed at reducing situations of marginalization and social degradation	3,300
M5C2I2.1	Integrated urban plans - general projects	2,493
M2C4I2.1.A	Measures for flood risk management and hydrogeological risk reduction	1,287
M2C2I3.2	Hydrogen utilization in hard-to-abate sectors	1,000
M5C3II.1.1	Inland areas - Strengthening community social services and infrastructure.	724.99
M2C2II.3	Promotion of innovative plants (including offshore)	675
M5C3II.2	Enhancement of property confiscated from the mafias	300
M2C4I3.1	Protection and enhancement of urban and suburban greenery	110

#### 1.4.2 The National Recovery and Resiliency Plan and the Implications for sub-regional actors: an overview of the existing literature.

The issue of centralized governance, already addressed above, is also found in the Italian case and is largely debated among Italian scholars and experts (Profeti and Baldi 2021, Viesti 2023). Nevertheless, the impact of this political choice on the Italian regions, a country with a high degree of inequality both between and within regions, is likely to be mixed. The competitive

process underlying the NRRP, whereby the call for proposals is the instrument through which nationally predetermined resources are allocated, will allow local and regional administrations with more planning capacity to win all tenders (Fabbri 2022)

This means that resources will not be distributed after a cognition of territorial needs but will be hoarded by the strongest administrations. This is the case, for example, with the call for kindergartens: although the southern quota (40 percent) was guaranteed, an equitable allocation of resources based on territorial needs was not ensured. For instance, the province of Ferrara, which has a coverage index of 36.5 percent, received 2831 euros per capita compared to 589 in the province of Caltanissetta, which has a coverage index of 5 percent. The shortage of qualified and appropriate human capital seems to be another crucial point that may compromise the effectiveness of Recovery and Resiliency Dispositive projects. In 2019, the public staff employed in Italian municipalities was 29.1 percent smaller than twenty years ago and the average age raise from 45 years (2001) to 53 years (2019).<sup>4</sup> Although hiring spaces have been created by the NRRP, as ANCI notes<sup>5</sup>, fixed-term contracts do not make it attractive for professionals to go to work for municipalities, not resolving this human capital gap which takes on even greater relevance in southern Italian municipalities. In addition to this, to what extent it will be sustainable for the most fragile municipalities to sustain the current spending of investments made within the NRRP will be a crucial point. A report by Banca d'Italia (2022) highlights that out of 153 municipalities in Italy are in a state of financial distress, 85 percent of them are located in the South of Italy where 8.6 percent of the total population lives (compared to the 1 percent of the population in the central north).

The report also notes that, among the municipalities in financial distress or critical conditions there is a sharp contraction in current spending, which is limited to spending on personnel employed by the debt burden and deficit repayment. Given that, it can partially be explained why many municipalities do not participate in the NRRP tenders: because they would make investments that they would not be able to sustain in current spending in the years to come.

To provide a general idea of the territorial impacts NRRP will have on Italian municipalities, Viesti proposes a synthetic index of human capital per province cross-referenced with the

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<sup>4</sup> Ministero dell'Economia e Finanza, Ragioneria generale dello stato, Regioni ordinarie ed enti locali, [https://i2.res.24o.it/pdf2010/Editrice/ILSOLE24ORE/QUOTIDIANI\\_VERTICALI/Online/Oggetti\\_Embedded/Documenti/2021/11/16/FOCUS%2021%20Regioni%20ordinarie%20ed%20enti%20locali.pdf](https://i2.res.24o.it/pdf2010/Editrice/ILSOLE24ORE/QUOTIDIANI_VERTICALI/Online/Oggetti_Embedded/Documenti/2021/11/16/FOCUS%2021%20Regioni%20ordinarie%20ed%20enti%20locali.pdf)

<sup>5</sup> PNRR, De Caro (ANCI), "C'è troppa burocrazia e poco personale", 2023, <https://www.agenzianova.com/news/pnrr-decaro-anci-ce-troppa-burocrazia-e-poco-personale/>

allocation of NRRPs per province (2022). The result shows different trends. In the Northeast municipalities, there is a high intensity of NRRP allocation but also a better staff allocation, so in these cases NRRP is likely to lead to improved conditions.

The second trend is related to the North-Center municipalities, even if also other cities such as L'Aquila, Lecce, and Sassari belong to this category. These ones have a good public staff but with relatively less intense allocations, where the implementation of NRRP could represent the least problems. The third scenario is related to 26 municipalities in the South of Italy which that are administratively weak but also recipients of resources that are not particularly large in relative terms: these may be the areas that will receive the least impetus from the NRRP in absolute terms. Finally, there are 10 cities (among these, Napoli, Brindisi, Taranto, Reggio Calabria, Catania, Messina Trapani) with critical staffing issues but also with relatively large allocations relative to their size: these are the ones where the most significant problems for the implementation of NRRP are being met.

A relevant point to highlight is also the administrative burden Local and Regional Administrations will face in the years to come. The NRRP will be managed in addition to cohesion funds for the programming period 2021-2027, the National Complementary Plan, and the React EU that will be spent up to 2023. The ability to coordinate different funds based on diverse mechanisms and foster synergies among them will have a large impact on the absorption capacities of the resources available.

To sum up, as emerges from the literature review, the lack of an ex-ante identification of territorial needs and resources available on the ground is likely to undermine cohesion rather than promote it. The National Recovery and Resilience Plan could be a great opportunity for some municipalities to stimulate growth but simultaneously may contribute to the marginalization of others.

## Chapter 2: Analytical Framework

### 2.1 From the research topic to the research question

This chapter will illustrate the rationale for the research and outline the analytical framework. The purpose of this research is to understand whether ERDF and RRF in Italy, applied to two different regions are contributing to reduce intra-regional disparities or not.

Territorial cohesion was defined for the first time in the Lisbon Treaty (2007). Article 174 of the Treaty of Functioning of the European Union (TFEU) defined cohesion as the need to reduce disparities between level of development between various regions and different areas, like rural areas, areas affected by industrial transition, islands and mountain areas.

Cohesion is a cornerstone of both instruments. A recent document produced by the EC aimed at assessing the Multi-Annual Financial Frameworks 2021-2027 in the Mid-Term Evaluation highlights that the Recovery and Resilience Facility along with Cohesion policy is crucial for supporting reforms and growth-enhancing investments. However, as the report states *“Growth without cohesion will compound concentration trends, increasing territorial and social division. Those left behind*

*may grow resentment and discontentment towards the democratic system and the values in which the EU is grounded.”*<sup>6</sup>

The “Joint Observations on the 8<sup>th</sup> report of Cohesion”, produced by the Cohesion Alliance highlight clear key messages: between them, regional disparities remain high and are growing within EU Member States and local and regional capacity in economic development remain uneven.

In the Italian National Plan territorial cohesion is considered as a transversal priority. Moreover, cohesion and inclusion are one of six specific missions. On the other hand, cohesion is the main objective of Cohesion policy, in particular for the ERDF, the flagship of this policy.

The study of these two instruments in Italy, in a 2021-2023 period in which they were both used, in a post-emergency scenario, in two different regions belonging to different development

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<sup>6</sup> European Commission, Regional Trends for Growth and Convergence in the European Union, Commission Staff

Working Document. Brussels, 1.6.2023, SWD(2023) 173 final, p.7-8

[https://ec.europa.eu/regional\\_policy/sources/reports/swd\\_regional\\_trends\\_growth\\_convergence\\_en.pdf](https://ec.europa.eu/regional_policy/sources/reports/swd_regional_trends_growth_convergence_en.pdf)

objective, will help to better understand the intra-regional spatial effects of the two instruments and to answer the research question that drives this work:

*RQ: How RRF and ERDF 2014-2020 are contributing to reduce intra-regional disparities?*

This research question stems from two important strands of research: the first concerns all quantitative and qualitative work done to investigate the effectiveness of Cohesion policy, work which is examined in chapter 1.1.1. The second strand of research, which is more recent and therefore less investigated, is whether the recovery and resilience mechanism is effective in ensuring a recovery that is at the same time homogeneous across territories. In this sense, chapter 1.4.2 provides several insights.

Several hypotheses have been put forward to investigate this research question, and these and the literature supporting them are presented below.

This is followed by a discussion of how these hypotheses will be investigated, which methodology will be used, and how the research design has been set up.

## **2.2 Why does harmonisation between different funds matter?**

Ensuring synergies between each Cohesion policy fund has always been a key issue for the European Commission, as it allows to increase effectiveness and avoid double funding and overlaps.

A dominant approach in the 2007-2013 programming period was to clearly ensure “*demarkation of tasks and responsibilities to avoid costly administrative overlaps, duplication or double financing*” (Ferry et al.,2016).

In the transition from the 2007-2013 to the 2014-2020 programming cycle, in order to maximise synergies between the European Regional Development Funds (ERDF), the European Social Fund (ESF), the Cohesion Fund (CF), the European Agricultural Fund for Rural Development (EAFRD) and the European Maritime and Fisheries Fund (EMFF), the Commission proposed a single CPR for the five Funds. The ultimate aim was to promote thematic concentration of EU 2020 priorities and result-oriented simplification, which could also relieve Managing Authorities from the bureaucratic overload of previous programming cycles. As it emerges from European Commission communications, complementarities

between ESI funds could also have the potential to contribute to areas in which additional resources were needed.

To assess whether coordination, complementarity and coherence between ESI Funds were foreseen in the 2014-2020, a study on harmonisation and coordination of ESI funds was conducted by the European Commission. It highlighted that:

1. Despite the introduction of the CPR and CSF for 2014-2020 to strengthen coordination and synergies, **the variations in fund specific rules between the five ESI funds is limiting synergies by adding administrative burdens within Member States.**
2. Problems resulting from overlaps between ESI Funds resulting in suboptimal allocation of resources and waste expenditure. **Overlaps are intended as programmes or projects in which the applicant were unsure on which fund to opt for and obtain both of them.** Overlaps may occur especially in terms of policy objectives. For instance, it was found out that environmental issues were addressed both by the EAFRD and the ERDF. As it states another relevant study on the topic *“the overlap of policy objectives and gaps that remain between the funds are reducing the possibilities for real integration and synergies between them”*
3. From the interviewees and focus groups conducted by the study here mentioned, it was acknowledged the success of Community-Led Local development strategies, in which starting from specific sub-regional areas local stakeholders identify local needs and potential and apply a single methodology across all ESI Funds and regions. This practice, introduced as an element of novelty in the 2014-2020 common provision regulation allows to coordinate different funds and create synergies.

The study concluded that two different strategies should have been followed to avoid sub-optimal allocation of resources by increasing spending capacity:

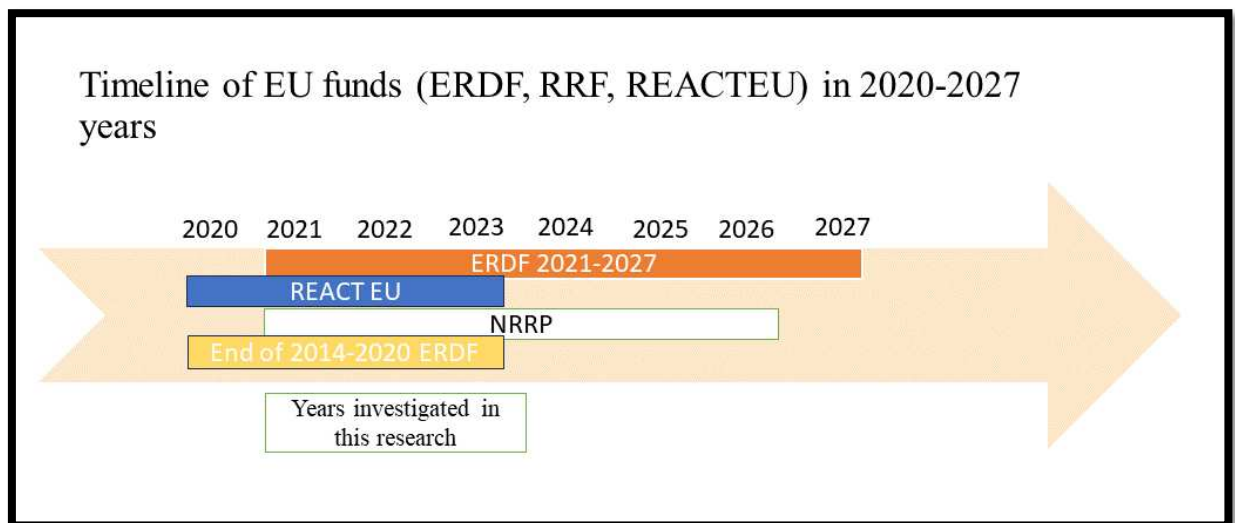
On the one hand, simplifying the rules between different EU funds by unifying the systems or, on the other hand, making clearer demarcations. The promotion of synergies between ESI funds and other EU instruments has also been analysed in the literature to date. For instance, a consultation organised by the European Commission on synergies between Horizon 2020 and ERDF outlines some possible pathways for synergies:

1. **A sequential coordination:** creation of conditions and an ecosystem facilitating the participation in a European programme or providing resources for the follow-up of funded projects through calls for European programmes.;
2. **A parallel synergy:** supporting a parallel or complementary activity related to a European Programme funded projects;
3. **An integrated synergy:** cohesion funds are used within a European programme and counts as a national contribution.

As it emerges so far, already in the literature background complementarity and demarcation emerges clearly as a strategy to promote effectiveness and coherence.

The delays in the 2014-2020 programming cycle, linked to the pandemic context and subsequently to the crises that followed, created a circumstance whereby 3 major programmes overlapped in the 2021-2023 period as it emerges from figure 4.

Figure 4: Timeline of EU funds (ERDF, RRF, REACTEU) in 2020-2027 years. Author's own elaboration



The first hypothesis can be formulated on the basis of these aforementioned circumstances and the need to ensure coherence and coordination between the various funds.

*H1: The antithetical governance, procedures and rules of the RRF and ERDF 2014-2020 despite similar content priorities, do not allow for an effective integration of the two instruments and will produce a suboptimal allocation of resources.*

To investigate the first hypothesis two different sub-hypothesis were formulated.

The European Court of Auditors (2023) had already pointed out that although the RRF contained vague indications on how to promote complementarity between this instrument and other cohesion policies, further coordination at regional or sub-regional level was needed. Coordination between these funds, in circumstances where there is a change in governance as in the case of the RRF and Cohesion Funds, can be even more difficult (EC, RRF Midterm Evaluation, 2024).

The Mid-Term Evaluation of the RRF (2024), in the case study related to the synergies and complementarity found between Cohesion policy and Recovery and Resiliency Fund highlighted that some Managing Authorities in Italy were providing complementarity on a temporary base. The idea is to first use the NRRP, which has an expiry date of 2026, and then the Cohesion Fund, which can instead be spent until 2030 (taking into account the 3-year reprogramming cycle 2021-2027).

In the Italian case, the RRF amounts to 191 billion euros that should be spent up to 2026. Meanwhile regions in the Cohesion policy have a managing role, as well as role to coordinate and foresee a long-term programming period, in the NRRP they are seen as beneficiaries, on the same line of local authorities. This shift towards governance may not allow to foster effective coordination at territorial level. Moreover, the size of the NRRP and the limited timing to be spent, are additional elements that may undermine coordination between NRRP and ERDF. On the base of these considerations, it can be formulated the first subhypothesis:

*SubH1: The multiplication of the resources actually available and its scheduling will lead to a displacement effect and may harm the absorption capacity of ERDF and/or NRRP.*

The study on harmonisation and synergies between ESI funds promoted by the European Commission (2018) already highlighted those overlaps between policy objectives and policy areas is reducing possibilities for real integration and synergies between them. Moreover, the Mid-Term Evaluation of the RRF (2024) reveal that during the implementation phase of investments-type intervention of RRF it has been observed that local authorities are facing the same challenges faced with Cohesion policy, such as, administrative capacity issues, excessive



administrative burden for managing authorities, the lack of mature projects. The overlapping policy objectives of the two funds combined with the heavy administrative burden resulting from the management of these two instruments may lead to the formulation of a further sub-hypothesis:

*SubH1.2: The NRRP and the ERDF work either in parallel, funding the same policy areas, or alternatively, through a demarcation of policy areas (the ERDF funds some, the NRRP others).*

Sub-hypothesis 1.1 will be investigated by means of semi-structured interviews. Sub-hypothesis 1.2, on the other hand, by means of quantitative analysis, and further confirmations will be investigated in interviews. Confirmation of both sub-hypotheses will lead to confirmation or non-confirmation of hypothesis 1 .

## **2.3 Redistributive policies based on administrative capacity rather than territorial need**

A recent work of Bachtler and Mendez (2023) on opportunities and challenges between RRF and Cohesion policy at the EU level (2023) points out four analytical categories to use while comparing different National Plans. These categories are useful to assess how synergies between the two instruments are promoted.

### **2.3.1 Strategic planning**

Strategic planning responds to the question: *how to place RRF in the European architecture of redistributive policies?*

Different answers were given by Member States. Some countries (Denmark) have adopted **Implicit Strategic alignment with limited explicit coordination**. This usually occurs when the RRF size is small and does not require strong coordination, or when both instruments share an emphasis on similar objectives such as the twin transition. Bulgaria, Cyprus, Hungary and Ireland promoted **strategic alignment through institutional synergy**: in some cases the same institutions are responsible for managing both instruments (Hungary), in other cases strong inter-departmental communication has been set up in both instruments (Ireland). On the contrary, Estonia and Portugal developed a long-term roadmap identifying objectives to be

achieved that require both instruments. In this regard, there is a **long-term strategy alignment**. France, Finland and Germany adopted **either demarcation or coordination**. For instance, France has developed a comprehensive framework to allocate specific investments to distinct funds. Germany planning RRF by considering it as a temporary instrument, so with a contrasting rationale in comparison with the Cohesion policy. Italy Spain and Austria on the other side, opted for a **centralized planning of the RRF versus the decentralized planning of the Cohesion policy**. This has created tension with the multilevel governance of the Cohesion policy and- in the Italian case- this is particularly emphasized by the large size of the National Plan. This latter together with the centralized governance make coordination between the two instruments needed.

### 2.3.2 Governance mechanisms

The category seeks to answer the question: *“which governance mechanism have been implemented to facilitate coordination?”*

In some cases, **formal mechanisms for inter-ministerial coordination** have been set up with a joint steering committee for both instruments (Bulgaria, Belgium, Croatia, Estonia, Romania and Luxembourg). Moreover, in Belgium an Inter-ministerial Conference for coordinated action reflecting the federal political structure was set up to facilitate **multi-level governance frameworks**. Ireland and Poland, by having small administrative structures and existing relationships are able to foster **informal coordination**, as well as Hungary and Greece. In the case of Italy, **centralised governance** implies that departments at the central level oversee the RRF. Coordination by contrast is devolved to each region. Indeed, regions by having a programming role seek coordination strategies with the National Plans to avoid overlaps and double financing. This implies that according to the administrative capacity of each region, coordination is implemented or not.

### 2.3.3 Implementation

Coordination at the implementation stage could be found by scheduling timing or by providing synchronisation or sequencing of interventions. Indeed, differences in rules and timing may

impact coordination. This category answers the question: *How the implementation of the RRF and Cohesion policy is coordinated over the years to avoid overlapping and double-financing?* For instance, France has promoted **the development of timetables**, while Greece by providing **annual reports on the implementation of both policies can effectively monitor in an integrated manner the state of the art**. Italy in the design stage of the National Plan set up a special committee to ensure robust coordination between different financial resources, by also integrating the Agency for Territorial Cohesion into the Department for Cohesion policy. However, modification to the National Recovery and Resilience Plan with the consistent cut in funding for several missions has impacted the effective coordination foreseen, with critical implications for local entities.

### **2.3.4 Territorial alignment**

This category aims to *analyse how the territorial dimension is addressed in RRF in addition to the Cohesion policy*. In some cases, National Plans finance national strategic objectives (Estonia, Finland, Germany, Ireland, Luxembourg, Romania, Slovenia, Slovakia, Sweden). In these cases, demarcation occurs at the level of territorial dimension addressed (national, regional, local), since the Cohesion policy is a long-term strategy for regional development. When mixed models are pursued, generally RRF presents both national and regional elements. In most cases indeed, National Plans complement Cohesion policy programmes (Bulgaria, Czechia, Cyprus, France, Hungary, Netherlands, Poland, Portugal). In this case, the risk is to foster top-down approaches by limiting subnational actors' involvement.

Another scenario occurs when there is territorial alignment in the National Plan. In this case Local and Regional Administrations are involved in the design and implementation phase, or it may also happen that specific budget allocations are given for regions to manage. In the case of Italy, regions are implementers of defined objectives at central levels, and southern regions should have 40% of these resources. This may result in administrative delays in regions with limited capacity.

The categories analysed above may give a complete overview of how coordination in Italy is organized between RRF and Cohesion policy. What emerged so far is that, **since programming and governance are centralised, the task of coordinating Cohesion policy and the NRRP, in synergy with local authorities, is on the regions' shoulders. Since in the RRF regions are not managing authority anymore, but just implementers, coordination will take place only if there is a political willingness to do it, also to preserve ERDF functioning.** This means that only regions with a better administrative capacity and consolidated multi-level governance will be more able to exploit all the financing opportunities offered and will find coordination strategies. From these considerations arose the second hypothesis.

*H2: Administrative capacity plays a central role in guaranteeing policy effectiveness. RRF by being based on this mechanism and not on regional needs will produce a distorted geography that will reflect the administrative capacity geography and not territorial needs, thus increasing disparities between north and south, cities and other areas.*

Moreover, it should be pointed out two additional points.

Firstly, central planning and governance cannot acknowledge each territorial need. On the contrary, since RRF allocates resources on a competition-based mechanism, local entities with the best project design capabilities will win NRRP tenders. Similarly, if the ERDF did not target interventions in specific areas upstream, it could allocate resources to the provinces with the best projects. This led to formulate the following subhypothesis:

*H2.1 NRRP and ERDF may be allocated according to 'territorial endowments', including the presence of universities, research centres and innovative companies in key sectors (energy/environment) or (third sector/NGOs). This territorial endowment can attract resources despite territorial needs, widening the gap between less competitive areas and more dynamic ones.*

This subhypothesis is investigated through the descriptive analysis in which at the provincial level, for each policy areas ERDF and NRRP expenditure in the years 2021-2023 are assessed.

Then the expenditure is compared between the different provinces and according to territorial needs identified. The subhypothesis is also explored through semi-structured interviews.

Secondly as already mentioned in Chapter 1 (1.4.2), municipalities in financial distress that could not sustain the current expenditure in the years to come of new infrastructural investments will be less encouraged to participate in NRRP tenders. From this consideration stem the second subhypothesis.

*SubH2.2: Local authorities with low planning capacity and/or inadequate financial resources will not participate in the RRF despite their territorial needs.*

This subhypothesis is investigated through semi-structured interviews with policy-makers working at local level and at regional level in the two regions selected. The methodology will be discussed in the next paragraph.

## **2.4 Methodology: the rationale of a mixed-method analysis and research design**

The research is based on the application of a mixed methods methodology. The proposed methodology relies on the need to properly answer the research question by combining and overcoming the limits of the two approaches if implemented in isolation. Mixed-methods analysis rejects the incompatibility of methods thesis, based on the fundamental differences between the paradigms underlying those methods (neo-positivists vs constructivist) (Teddlie and Tashakkori, 2010). It is based on a pluralism paradigm, “*the belief that a variety of paradigms may serve as the underlying philosophy for the use of mixed-methods.*” (ibidem, p.9). By endorsing pluralism, it adopts *a methodological eclecticism* (Venkatesh et al, 2023) that allows researchers to be free to combine methods when they are the best tools to answer research questions.

The research question driving this work, as has already been discussed, is as follows: “*is the coordination of ERDF and NRRP contributing to reducing regional disparities?*”. Answering this research question needs both a confirmatory and an explanatory answer. The confirmatory answer will be given by the quantitative method applied to understand **whether disparities are occurring or not in terms of allocations of resources** from the two instruments for provinces in the years 2021-2023. The univariate descriptive analysis will be conducted to understand the relation between “resources” and “province” by ERDF thematic objective in the years (2021-2023). The analysis will be integrated with NRRP data for province.

The qualitative method, on the other hand, will be used to obtain an explanatory answer. This latter will respond to the “how” of these questions. Semi structured interviews will be conducted in a comparative analysis between two regions, to try to find out what is happening on the ground as well as gain valuable insights.

The justification for this choice is that neither quantitative nor qualitative methods are sufficient in themselves to understand the phenomenon under investigation. (Creswell et al., 2004). The research is a *qualitative-dominant mixed methods design*, since primary data are collected by structured interviews. Despite this, quantitative data will complete and enrich some parts of the research (Johnson et al., 2007), by also orienting qualitative methods.

Indeed, a qualitative approach alone could lead to the risk that participants may not reveal their true beliefs or respond honestly to questions being asked, considering their political position.

**To overcome this limit, a quantitative analysis was also proposed, to better orient respondents’ answers.** In this sense, there is a compensation purpose behind this analysis.

The theory behind the hypotheses will be tested by both methods: hypothesis 1 will be investigated by quantitative and qualitative analysis: subhypothesis 1 will be tested through semi-structured interviews, while subhypothesis 2 will be tested through descriptive analysis.

Hypothesis 2 will be investigated through qualitative analysis even if the quantitative analysis will give valuable insights to support the investigation of this hypothesis. The research will follow a sequential design, in which I first collect and analyze quantitative data, and then collect and analyze qualitative data to help explain or elaborate the results obtained in the first strand (i.e., quantitative) of the study (Creswell & Plano Clark, 2018) The rationale behind the sequential logic is that findings collected by quantitative data could be later refined with in-depth interviews. Moreover, performing semi-structured interviews to understand what kind of coordination there was to integrate the two instruments into regional programming, without

knowing what allocation of resources have been put in place, **would not have allowed the researcher to ask the right questions.**

The mixed methods analysis will be carried out in a comparative analysis considering two regions: Campania and Toscana. Campania belongs to “less developed” regions of the Cohesion policy (in which the final aim of EU value is to promote the development of regions whose development is lagging behind) and Tuscany to “more developed” regions (to support the adaptation and modernization of systems already developed). Comparing these two cases will give back insights on the role that administrative capacity plays in this process, but also the influence that *size and magnitude of funds* may have in spending.

Italian National Recovery and Resilience Plan is the biggest ever negotiated withing Member States and need to be spent up to 2026. It allocates a specific quota to Southern regions, which by belonging to “less developed” also have a bigger quota of ESIF funds to spend. Considering this, it will be investigated the relation between “expenditure” and “magnitude of the money”, also to understand if *more money means more development*. The comparison between the two regions may also outline North-South differences, providing interesting insights.

#### **2.4.1 Univariate descriptive analysis: measuring allocation of resources.**

Univariate descriptive analysis involves examining and summarizing the characteristics of a single variable. Frequency distribution, a key component of univariate analysis, entails organizing and presenting data to showcase the frequency of different values within a variable. This technique is particularly valuable as it allows researchers to identify patterns, trends, and outliers in the data, facilitating a deeper exploration of social phenomena.

In this work, a univariate descriptive analysis will be implied. This is due to the lack of reliable and updated documents presenting territorial data in a structured way. For this purpose, aggregated .csv data related to the ERDF in the two regions will be extracted from Open Cohesion. Open Cohesion is a database of data on the programming and implementation of Cohesion policy, updated every two months. The data are available for download in .csv and are also collected at the municipal level. For this analysis, only data at the provincial level are analyzed, but the researcher acknowledges that for a more in-depth and detailed study, the unit of analysis should be at the municipal level. Indeed, the analysis at the municipal level could better capture what intra-regional disparities look like and what forms they take. However,

since secondary data are used that are collected at the provincial level, (namely the data on open.pnrr.it and the territorial sustainable and equitable well-being indicators) the researcher has stuck to this level. Using open cohesion data will assure degree of consistency and data quality. In this work it will be analysed the distribution of “resources” by “province” by ERDF thematic objective in the years (2021-2023). The analysis will be integrated with NRRP data for each province. For this purpose Open PNRR data will be used. Data on NRRP are not easy to find, and for this reason, main findings will be integrated with relevant documental analysis (Annual report of ERDF, Syntesys of level of implementation of NRRP). As evident so far, for the quantitative analysis secondary data will be used. Graphical tools will be used to visually represent the data distribution.

To guarantee validation of the analysis some steps have been undertaken: quality data have been checked to understand how much missing values there are and how they can impact research findings. Data results were also cross-verified with relevant document analysis to validate analysis findings.

## **2.4.2 Qualitative methods: Semi structured interviews**

In this research work, semi-structured interviews will be undertaken. The reason why standardized instruments of data collection were not chosen (for instance, questionnaires) is due to the difficulty of standardizing the phenomenon under consideration. The topic under investigation is to some extent new and little investigated. At the same time, the risk of undertaking unstructured interviews is to highlight personal suggestions. Indeed, interviewing decision-makers may produce distorted answers, according to the principle of social desirability. On the other hand, structured interviews do not allow for flexibility required from the topic. For all these reasons, semi-structured interviews were proposed. The interviews will be conducted after the completion of a descriptive analysis and were standardized according to the region under consideration and the type of respondent (regional-municipal). A detailed checklist document is provided in the Annexes. The same figure at the regional level in charge of ERDF for the period 2014-2020 and 2021-2027 was interviewed both for Tuscany and for Campania. Similarly, the same figure at the



municipal level in charge of NRRP and representing the coalition of local entities was interviewed in both regions. An overview is provided in the table 5.

*Table 5: type of respondents*

Respondent	Type of interviewee
Respondent belonging to the ERDF Managing Authority of Campania	Structured Interviewee A
Respondent belonging to the ERDF Managing Authority of Tuscany	Structured Interviewee A
Representative of ANCI Campania	Structured Interviewee B
Representative of ANCI Toscana	Structured Interviewee B

Interviewees (A and B) were divided into two parts: the first one was on the ERDF 2014-2020 experiences, with relevant questions also on territorial unbalances that emerged from the descriptive analysis on the allocation of resources. The second part was inherent to the coordination of ERDF and NRRP, both in the reprogramming of ERDF in the 2020-2023 and in the new programming period.

Interviewees of type B had in-depth questions on the experiences of local authorities in choosing to apply to NRRP fund or ERDF. During the interviews questions that were “not properly answered” were re-asked to clarify the answer. All the interviews were conducted online. All interviews were recorded, under the previous agreement of the interviewee. This element allowed the interviewer to focus on conducting the interview and to perform a better analysis. All the interviews were conducted in Italian, the native language of respondents. Respondents were asked to sign a privacy policy informative according to the GDPR. Indeed, the names of the respondents will be anonymized. Building trust between the interviewee and the interviewer was also an important step. (Corbetta,2003).

Gaining access to interviewee insights required different specifications in terms of the scope of the research. Indeed, during one of the interviews conducted, one policymaker was sceptic to answer to some questions, since he felt like the descriptive analysis I performed previously resulted in a political attack. For instance, the fact that some provinces had more resources than others in his eyes resulted as I was supposing to “attack” his work. Several times I

repeated the nature of the research was not to blame workers in the field, but to highlight possibilities, opportunities, as well as contradictions and frictions, of such a policy architecture.

In the work conducted special attention was given to having an impartial attitude towards the topic investigated. I acknowledged all the time I was investigating a topic that could also result in unexpected outcomes. This approach to semi-structured interviews was proposed to obtain the more objective data according to the qualitative tool implied.

### **2.4.3 Limits of this approach and acknowledgements**

A case-study was chosen to understand a real-world case and the role that contextual conditions play in such case (Yin, 2018). In the case of Tuscany and Campania, institutional setting, size of resources to be managed, different territorial needs and geopolitical positions may be relevant to determine how coordination between the RRF and the ERDF is producing intra-regional disparities. Even if two-case “case studies” are time-consuming, the methodological choice was made in order to have analytical benefits. Choosing contrasting situations, in terms of level of development and size of resources to be allocated, will result in findings that-if coherent with hypothesis stated- could be a good starting point for further research. A comparative analysis of different EU regions belonging to “less developed regions” may be for instance evaluated, in order to understand if it is the political architecture of these two instruments to be challenging, or if in other EU regions- with different institutional, territorial, normative settings- this approach may produce convergence results.

This work indeed, is a first attempt to investigate the topic, and through a mixed-methods research tries to provide the more objective results. More interviewees could also lead to more robust results, but policy-maker availability to be interviewed is hard to obtain. Indeed, multiple reminders was sent before scheduling online interviews. Also, the lack of open data on the National Recovery and Resilience Plan is a strong disincentive to undertaking research in the field. However, the intersection of documental analysis, interviewees to obtain relevant data by key informants and official statistics documents may be useful to break the wall of this unknown research topic.

### **3. ERDF and NRRP spending in Campania over the period 2021-2023: case study n.1**

This chapter presents the case study of the Campania region. The first section presents the territory and the different provinces, the economic indicators and the positioning of the provinces in the territorial indicators of fair and sustainable development (ISTAT, 2023). This will be followed by an analysis of ERDF and NRRP expenditure for 2021-2023 by province and by policy area (Section 3.2). The third section (3.3) presents some results from the descriptive analysis and the fourth section (3.4) discusses quantitative finding and qualitative findings to reject or accept hypothesis formulated.

### 3.1 Introduction of Campania Region.

The Campania region has a population of 5.6 million people (Istat,2023), 550 municipalities and seven provinces.

Figure 4: Campania region



The largest province is Naples, a metropolitan area with a population of 2.9 million. According to the ISTAT classification of local employment systems, the metropolitan area of Naples (ex province) includes 8 local employment systems: Naples, Nola Castellammare di

Stabia, San Giuseppe Vesuviano, Torre del Greco, Sorrento and the island LSSs, namely Capri, Ischia and Forio di Ischia. The LLS of Naples, which is the largest and includes 58 municipalities, is classified as the most important urban area with portual specialisation, because it also has the highest population density. The local labour system of Naples has several production specialisations within it, including the footwear and clothing system, located in Grumo Nevano. San Giuseppe Vesuviano and Torre del Greco, on the other hand, are textile subcontracting sectors supporting the major Made in Italy brands, while the district of Castellammare di Stabia is configured as a non-specialised urban system. Sorrento, Capri, Ischia and Forio di Ischia are classified as local tourist work systems.

The province of Salerno counts 1.06 million of inhabitants, and includes different Local Labour System divided in:

- LLS in the coastal areas (Positano, Amalfi, Camerota, Ascea, Castellabate, Capaccio and Agropoli). The first four areas are classified as tourist work systems, while Agropoli is classified as a non-specialised urban local system;

- LLS that are urban areas: Pagani, Agropoli and Salerno, which are considered as multi-specialised urban areas.
- LLS in the inner areas. They include Eboli, Vallo della Lucania, Sapri, Roccaspide, Sarno. These Local Labour Systems are classified as non-specialised areas;
- Local agri-food systems. These include Nocera Inferiore, Oliveto Citra, Sala Consilina, Padula and Buccino. Salerno has the highest AUS (Agricultural Used Superficie) in the region and the highest percentage of protected areas within the provinces of Campania.

Caserta, with 906,704 inhabitants, is a plurispecialised urban centre with a medium population density. Caserta includes six local working systems, including Mondragone, Sessa Aurunca and Piedimonte Matese, which are considered non-specialised local systems. Then there is Teano, which is an agri-food local system, and Caserta, which is a multi-specialised urban local system. The province has the lowest number of enterprises for a province within the region.

Avellino counts 398.392 inhabitants, it is a medium urban center with a manufacturing specialization and is the second larger area for agricultural lands implied. It includes, Vallata and Ariano Irpino, which are local working systems specialised in Agrifood, the latter belonging to the National Strategy for Inner Areas within the Structural and Investment Funds. Sant'angelo dei Lombardi and Avellino, on the other hand, are considered local transport systems, and also include Solofra, which is considered a local leather system.

Benevento has 263,125 inhabitants and is classified as a non-specialised urban centre with an agricultural vocatio. It includes several LLS: San

Bartolomeo in Galdo, Colle Sannita, Morcone, Telese Terme, Benevento, Montesarchio, San Marco dei Cavoti.

Telese Terme and Colle Sannita are non-specialised local systems. San Bartolomeo in Galdo, on the other hand, is classified as a local food system. Morcone, on the other hand, is a local transport system included in the heavy goods transport systems. Montesarchio and San Marco dei Cavoti are both local textile and clothing systems. Finally, Benevento is a non-specialised local urban system.

Table 6 shows the presence of enterprises per 1000 inhabitants and Figure 6 highlights the added value per inhabitant by province, in order to give an idea of the economic development of the province under consideration. Finally, figure 7 represents the region in terms of level of urbanisation and presence of inner areas. It can be seen that Salerno and Naples are the most economically developed provinces. Avellino and Benevento maintain a high level of industrial development, although they generate less value added. Caserta, on the other hand, is considered to be a province that is not very dynamic in terms of production.

Table 6: N. of enterprises in Campania Region.  
Autor's own elaboration based on BEST ISTAT Campania 2023

<i>N. of enterprises every 1000 inhabitants for province (2020)</i>	
Provinces	N. of enterprises every 1000 inhabitants (15-64years)
Caserta	92.0
Napoli	100.9
Avellino	108.7
Benevento	114.2
Salerno	117.1

Figure 5: Added value for each inhabitant per province (2020). BesT, ISTAT,2023

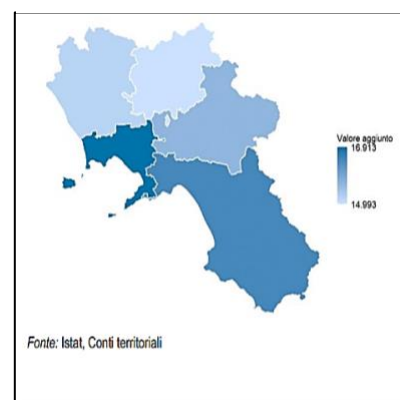
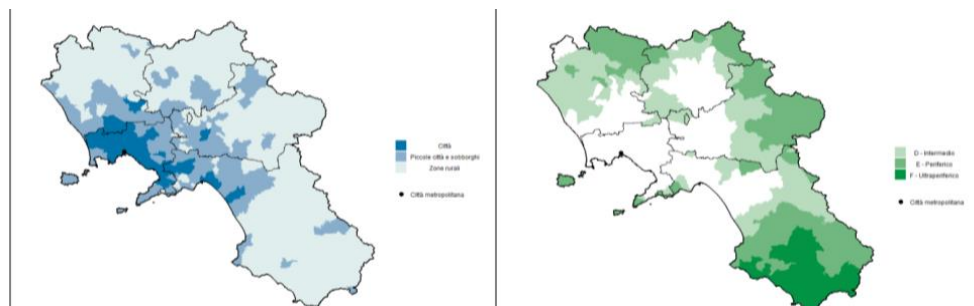


Figure 6: Municipalities for Level of Urbanisation- Municipalities for level of Internal Areas (2020)



### 3.1.2 An overview of main indicators on fair and equitable development in Campania Region per province

The Istat (Best) 2023 report on Campania highlights the territorial indicators of fair and sustainable wellbeing in different domains. The report aims to inform every year on the multidimensional nature of wellbeing and its territorial declinations. In this analysis, the results emerging from the report will serve as a basis for the knowledge of the territory. In addition to this, these results also partially outline the territorial needs of the Campania provinces, guiding the interpretation of the quantitative results. In the final overview all the domains considered are aggregated by province and classified according to wellbeing classes ranging from 'low' to 'high'. These indicators include domains such as education and training, work and lifetime balance, economic welfare, cultural heritage, environment, innovation research and creativity, quality of services, social relations, politics and institutions, security and public health. The aggregate distribution of the indicators of the level of well-being for the provinces of Campania shows a mixed picture. Caserta, Salerno and Naples are the provinces that have more than 50 per cent of the indicators in the 'low and medium-low' classes (65.6 %, 59 % and 55.8 % respectively). Although Caserta seems to be the most penalised province, the most alarming

figure is highlighted by Salerno, which has only 16.4 % of indicators in the medium-high and high wealth classes (compared to Caserta 21.3 % and Naples 17.9 %).

Avellino and Benevento, on the other hand, have the highest number of wellbeing indicators in the low and medium classes.

### 3.1.3 Campania in the ERDF programming cycle 2014- 2020

**2014-2020** ERDF programme of Campania region was approved by a decision of the European Commission C(2015) 8578 final (1.12.2015). The amount of the ERDF was set at EUR 4,864 million, of which EUR 3,713 million was the EU contribution. As of 31 October 2023, the expenditure progress of the Campania Region on the ERDF was 2,915 million euro, 73,09% of the overall programme value. (Ministry of Economy and Finance, Monitoring Cohesion Policies Programming 2021-2027).

Table 7 shows the status of the ERDF of the Convergence Objective 1 regions in the 2014-2020 programme (updated to 31/10/2023). On an average value of 75 % of expenditure, Campania is just below the average, halfway between regions with a higher spending capacity (Puglia and Basilicata) and regions with a lower spending capacity (Sicily and Calabria).

*Table 7: ERDF 2014-2020 expenditure in the less developed regions.  
Autor's own elaboration based on MEF Monitoraggio Politiche di Coesione (2023)*

ERDF	% of progress (programme value/payments)
Puglia	95.43%
Basilicata	76.95%
Campania	72.40%
Sicilia	66.15%
Calabria	61.94%



Total	75.00%
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Considering ERDF policy interventions, Campania 2014-2020 ERDF was developed around eleven priorities, out of which seven on eleven were reprogrammed. ERDF reprogramming period lasted from 2020 to 2023 foresaw the reprogramming only of specific actions that will be listed below.

- **Priority 1: Promoting research, innovation and technological development.** Actions financed include boosting business innovation activity (1.1) and promoting the investments needed for crisis response capacity building in health services (1.6)
- **Priority 2: Promoting the development of Information and Communication Technologies for citizens, businesses and public administrations.** Specific actions relate to enhancing the ICT demand of citizens and businesses in terms of the use of online services, digital inclusion and e-participation. (2.3). Action 2.2, on the other hand, provides for the digitisation of administrative processes and the dissemination of fully interoperable digital services.
- **Priority 3: Promoting entrepreneurship and competitiveness for businesses and SMEs.** This priority includes several actions, including boosting investment in the production system (3.1); employment development in areas affected by widespread crisis also due to covid-19 (3.2); consolidation and diversification of industrial districts (3.3); support for internationalisation (3.4); and dissemination of economic activities with a high social content (3.7).
- **Priority 4: Promoting sustainable energy.** This priority includes several actions including energy efficiency in companies (4.2) and energy efficiency in public buildings (4.1)
- **Priority 5: Prevention of natural and anthropogenic risks.** This priority included interventions to reduce hydrogeological risk and coastal erosion. (5.1)
- **Priority 6: Protection and enhancement of the natural and cultural heritage.** This priority included actions to return polluted areas to productive use (6.2) and actions to improve the integrated water service (6.3); as well as the competitive repositioning of tourist destinations (6.8).

- **Priority 7: Transport.** The priority envisaged several actions to improve the transport infrastructure in the entire regional area. As the priority has not been reprogrammed in the period 2020-2023, it will not be taken into account in the descriptive analysis.
- **Priority 8: Social inclusion.** The priority included support for disadvantaged groups and the development of innovative social and health services. Specific actions envisaged are increasing the services and infrastructure of socio-educational care services for children and persons with disabilities (action 9.3) and increasing legality in areas of high social exclusion (9.6)

Other priorities that were not reprogrammed were Priority 9 Infrastructure for the regional education system, which included support for the renovation of school buildings. Priority 10, which provided for sustainable urban development, and Priority 11, which provided for technical assistance to regional programme offices.

## **3.2 Analysis of 2021-2023 ERDF and NRRP expenditure in the Campania provinces**

### **3.2.1 Introduction to the analysis: methodological note**

This descriptive analysis is structured as follows: first, the distribution of the 2014-2020 ERDF is analysed in absolute terms per province and in per capita terms (expenditure per province/number of inhabitants). The analysis is based on actual expenditure, both for the ERDF and the NRRP, although for stylistic reasons terms such as 'allocated' and 'received' are used.

Then, for each province, a summary table is used to analyse in detail and comment on how the money is spent for each specific objective and priority. The analysis is proposed in order to understand at the provincial level, for each policy area, what kind of dynamics there are between the two funds. As it is not possible to look in detail at each project and assess aspects such as complementarity and demarcation between the two funds, the following will be observed at this stage:

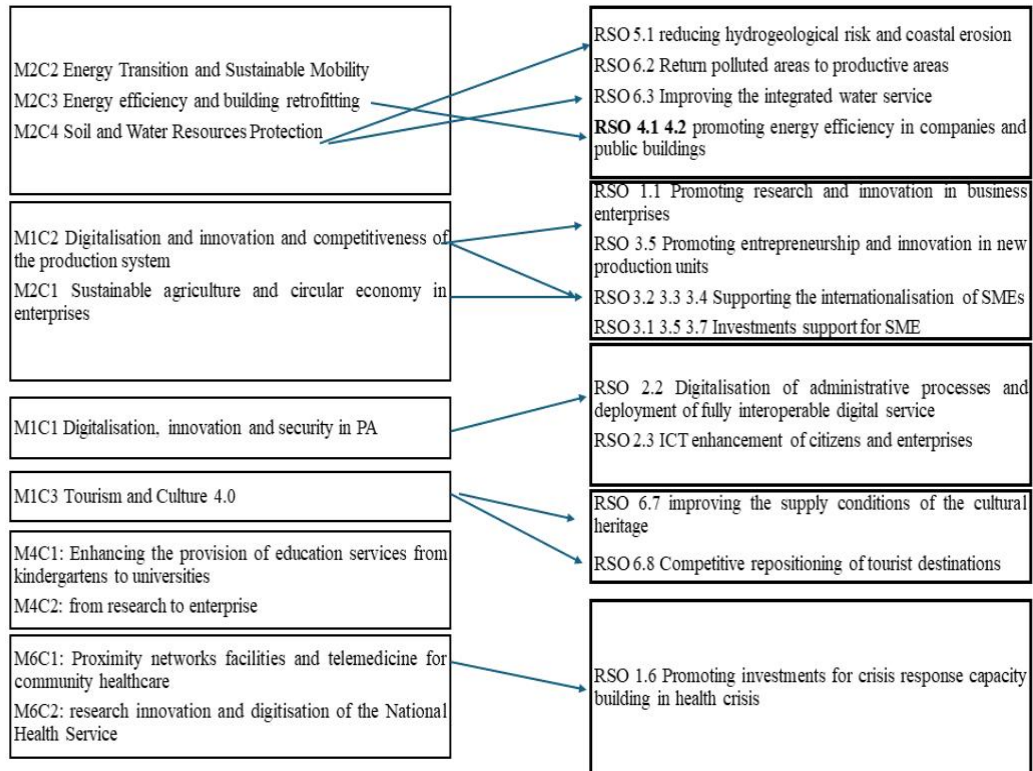
- whether there is a "concentration" of resources in some provinces and not in others: concentration is defined in relation to the other provinces.
- whether there is a "concentration" of resources in policy areas where there is no identified territorial need;
- whether there is more spending from one instrument than another.
- whether the ERDF and the NRRP respond to identified territorial needs.

The analysis will consider 2021-2023 reprogramming period of 2014-2020 ERDF actual expenditure and the actual expenditure of the NRRP in the 2021-2023 years. **The 2021-2027 ERDF will not be taken into account** since the interventions pertaining to the 2021-2027 ERDF only started in 2023 and are not sufficiently advanced to be considered. It should be noted that when reference is made to the ERDF 2021-2023, this always refers to the 2014-2020 reprogramming that lasted until 2023.

In the analysis proposed here by province, the expenditure in the years 2021-2023 of both the ERDF and the NRRP is analysed. The ERDF data are taken from OpenCohesion and updated to 31/12/2023, while the NRRP data are taken from Open PNRR, a project developed by the OpenPolis Foundation in collaboration with the Gran Sasso Science Institute.

In order to create macro areas financed by similar interventions of both ERDF and NRRP, an analysis of expenditure that goes into specific objective detail for ERDF and the mission and component for NRRP is proposed. (figure 8). As the figure shows, each mission of NRRP is associated with Regional Specific Objectives of the same policy areas. In many cases, there are interventions that may overlap thematically, as indicated by the arrows. In other sporadic cases, the interventions funded are simply part of the same policy area but do not overlap and no arrows are proposed. For example, in the case of school education and universities, Campania did not activate a specific objective in the reprogramming to strengthen research in universities, so the share of the NRRP devoted to this policy area is assessed on a stand-alone basis. Furthermore, Mission 3 'Infrastructure and sustainable mobility' has not been proposed, as the 'Transport' axis has not been reprogrammed by the 2014-2020 ERDF in 2021-2023. Finally, mission M5C1 "Policies for employment" has been excluded from the analysis as it does not cover infrastructure interventions.

Figure 7: NRRP Missions and ERDF Regional Specific Objectives: assessing the thematic overlap. Author's own elaboration.



ERDF reprogramming in the years 2021-2023 resulted in EUR 417 million being spent, about 6.5 per cent of the total ERDF 2014-2020. Looking at the per capita expenditure per province of the ERDF in 2014-2020 and the NRRP in 2021-2023, a different picture emerges (Tables 8 and 9). Firstly, the very different size of the two instruments is evident. The ERDF will spend an average of 85.3 euro per inhabitant in Campania in 2021-2023, while the NRRP will spend an average of 3073.4 euro per inhabitant in the same years. Moreover, the provinces of Benevento and Avellino seem to have attracted more resources than the others. Benevento attracted 5702 euro per citizen in the NRRP, 2000 euro more than the average and 4000 euro more than the metropolitan area of Naples. In the ERDF, the differences are less marked, but just as obvious: Caserta attracted only 33.3 euro per inhabitant, against an

average of 85 euro. The metropolitan area of Naples received only 52.41 euro. In the following paragraphs, the expenditure per policy area for each province of the two instruments will be systematically analysed in order to ascertain whether or not the above-mentioned assumptions are true. (3.2.1) Next, the first results from the descriptive analysis will be discussed and then the data will be used as a starting point to guide the qualitative results.

Figure 8: Distribution of payments by province in relation to ERDF 2014-2023. Autor's own elaboration from: [opencohesion.gov.it](http://opencohesion.gov.it)

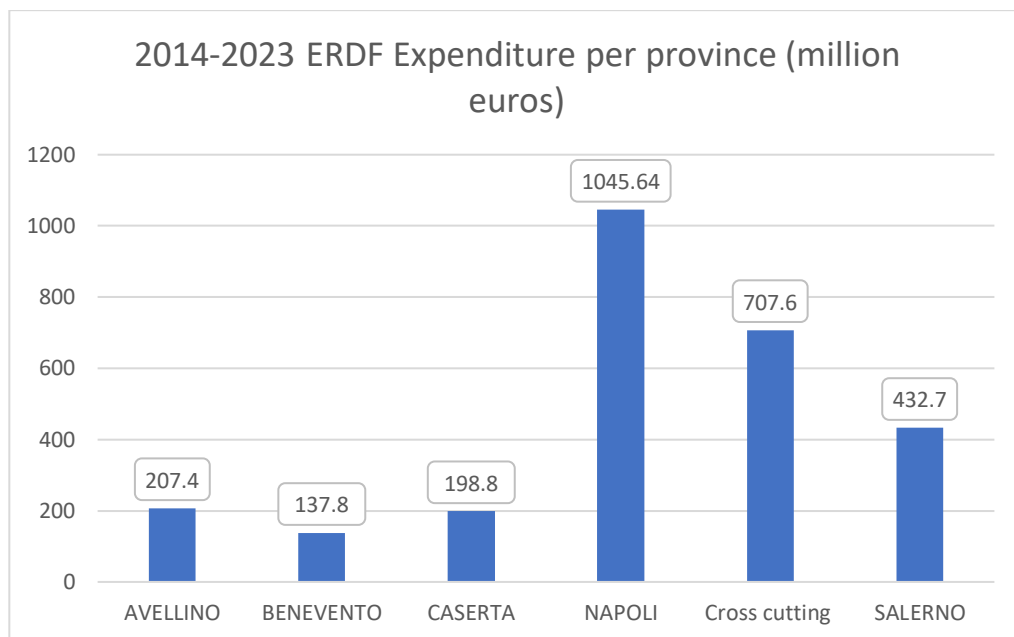


Figure 9: Expenditure per province in the years 2021-2023 (ERDF 2014-2020). Author's own elaboration from: [opencohesion.gov.it](http://opencohesion.gov.it)

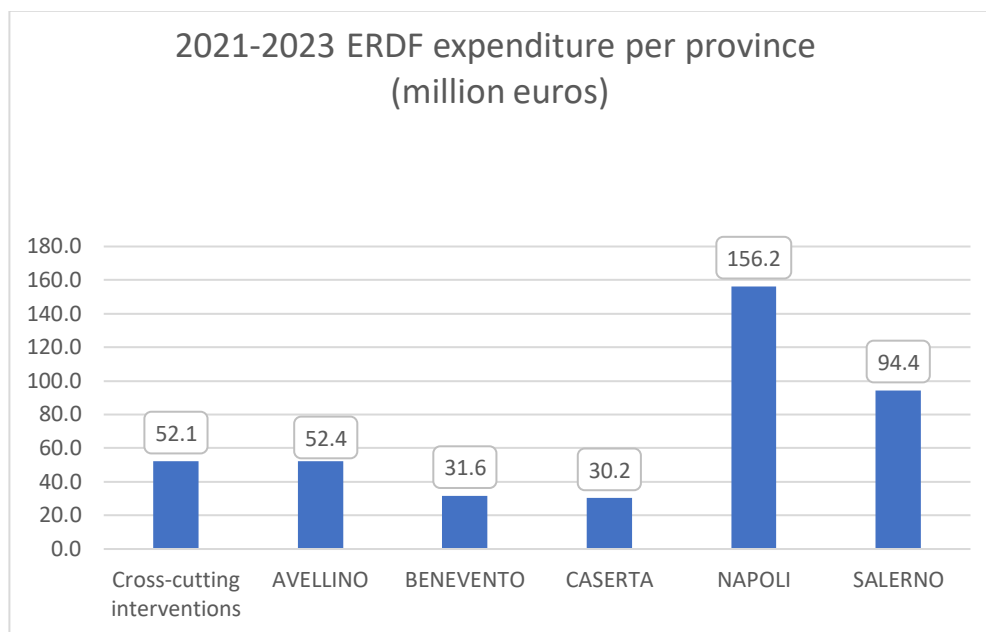


Table 8: NRRP per capita expenditure in Campania region  
author's own elaboration based on [openpnrr.it/Campania](https://openpnrr.it/Campania)

<b>NRRP per capita expenditure per province, euros (2021-2023)</b>	
Benevento	5702.23
Avellino	3271.74
Salerno	2515.49
Caserta	2164.94
Napoli	1712.73
Average value	3073.4

Table 9 ERDF per capita expenditure in Campania region,  
author's own elaboration based on [opencohesion.gov.it](https://opencohesion.gov.it)

<b>2021-2023 ERDF reprogramming period per capita expenditure per province, euros, (2021-2023)</b>	
Avellino	131.83
Benevento	119.93
Salerno	88.97
Napoli	52.41
Caserta	33.37
Average value	85.30

### 3.2.1 Avellino.

The province of Avellino in the years 2021-2023 benefitted from 12.60% of the total amount reinvested for those years (ERDF).

Avellino spent the highest per capita share of the ERDF 2021-2023 and the second highest share of the NRRP. It is also the province that together with Benevento has the highest values in the fair and sustainable welfare classes described by the ISTAT Report 2023 (Best). The most ERDF-funded domain is health (EUR 11.27 million). This figure is consistent with the regional choice, following the crisis by Covid19 the Campania Region, to reprogramme a substantial portion of funds to all the provinces in the health domain, in order to strengthen the response capacity of health facilities in the event of a crisis.

Beyond this domain, the environmental sustainability area is the one that received the most resources from both the ERDF and the NRRP. This figure is consistent with the territorial need highlighted in the area. Indeed, Avellino presents the lowest value in the indicator people exposed to landslide risk. (Istat, Best Campania 2023). As shown above, even if the share of allocation on the total ERDF does not appear significant, the pro-capita allocation highlights how the province was dynamic in receiving infrastructural investments. Looking instead at the domain of digital services, Avellino ranks as the last province in the regional fabric in relation to the rate of fixed network coverage of ultra fast internet access. (Istat, BEST, Campania) In this sense, ERDF reprogramming is significant in digital services and responds to an identified territorial need. Compared with the other provinces in fact, Avellino after Naples has the highest expenditure in digital services in the ERDF. NRRP spending on the other hand, in the digitisation area, is the lowest after Benevento at the regional level, contradicting an identified territorial need.

Table 10: Avellino NRRP and ERDF expenditure. *Internal elaboration. Data from opencohesion.gov.it and Openpnrr.it/RegioneCampania*

Table 9: Avellino NRRP and ERDF expenditure 2021-2023 (million,euros)				
Policy area financed	ERDF	ERDF Priority and RSOs financed	NRRP	Missions financed
Environmental sustainability	9.47	P. 5 RSO 5.1 P.6 RSO 6.2	573	M2C2 M2C3 M2C4
Energy efficiency	9.24	P.4 RSO 4.1 4.2		
SMEs competitiveness	8.13	P.1 RSO 1.1. P.3 3.1 3.2 3.4 3.7	44.6	M2C1 M1C2
Digitalisation	3.65	P.2 RSO 2.3	28.4	M1C1
Culture and Tourism	9.55	P.6 RSO 6.7 6.8	8.3	M1C3
Social Inclusion and Cohesion	1.25	P. 8 RSO 9.3	88.1	M5C2 M5C3
Research and Innovation and School	/	/	235.2	M4C1 M4C2
Health	11.27	P.1 RSO 1.6	83.6	M6C1 M6C2



### 3.2.2 Benevento

The province of Benevento benefitted of 31.55 million of euros in the years 2021-2023 from ERDF, by being 7.56% of the total ERDF. As it is evident the share per capita of allocation makes Benevento a dynamic province in attracting resources both in ERDF and in NRRP. ERDF and NRRP have followed a similar dynamic considering policy areas financed. Environment sustainability and energy efficiency were the domains more financed also by being the province with the highest expenditure of NRRP in the policy area (891 million). On the contrary, Benevento spent very few resources in the domain of social inclusion: indeed, in the ERDF reprogramming the area was not financed, while in the NRRP was the province that spent less in the area. The BesT report places Benevento as the worst province in terms of youth emigration (30 per cent of Benevento graduates emigrate), and the worst among the Campania provinces in terms of reported fatal crimes and theft in private homes. These indicators highlight that territorial need for social inclusion exists, even if this need was not properly addressed. It should be also noted that the province has the highest indicators in the environmental domain compared to all the other provinces, in particular: the highest rate of electricity produced from renewable sources, the lowest rate of urban waste produced, the highest rate of differentiated waste collection, and the lowest rate of population exposed to the risk of flooding. The concentration of NRRP and ERDF expenditure in the environment domain, which in any case is the most competitive among the provinces in Campania, suggests that in this specific case resources have been spent in the policy areas that perform better.

*Table 11: Benevento NRRP and ERDF expenditure, autor's own elaboration based on [openchoesion.gov.it](https://openchoesion.gov.it) and [openpnrr.it/RegioneCampania](https://openpnrr.it/RegioneCampania)*

Table 10: Benevento NRRP and ERDF expenditure 2021-2023 (million,euros)				
	ERDF 2021- 2023 (milli	Priori ties and RSO	NRRP 2021 2023	Missi ons

	ons, euros)	finan ced	(milli ons, euros)	
Environme ntal sustainabilit y	11.39	P. 5 RSO 5.1 P.6 RSO 6.2 6.3	894.2 7	M2C 2 M2C 3 M2C 4
Energy efficiency	8.2	P.4 RSO 4.1 4.2		
SMEs competitive ness	4.42	P.1 RSO 1.1. P.3 RSO 3.1 3.2 3.4 3.5 3.7	40	M2C 1 M1C 2
Digitalisati on	1.73	P.2 RSO 2.3	20.6	M1C 1
Culture and Tourism	0.290	P.6 RSO 6.8	12.3	M1C 3
Social Inclusion and Cohesion	/	P. 8 RSO 9.3	39.9	M5C 2 M5C 3

University and Schools	/	/	189..3	M4C 1 M4C 2
Health	5.37	P.1 RSO 1.6	72.6 mln	M6C 1 M6C 2
Technical Assistance	0.139	P.11		

### 3.2.3 Caserta

The total amount of resources the province of Caserta received for the years 2021-2023 is 30,23 million of euros, the 7,24% of the total amount of resources allocated by ERDF in the considered timing. About the pro-capita allocation of resources, it should be pointed out that Caserta is the province that received less resources from ERDF. The province of Caserta shows an interesting dynamic between the ERDF and the NRRP. Per capita expenditure places Caserta last in the ERDF with an expenditure of €33 per citizen compared to a regional average of €88. However, in the NRRP the province of Caserta ranks second to last, with a per capita expenditure of 2164 euro compared with an average value of 3073 euro. The province's significantly better performance in the NRRP than in the ERDF is also reflected in some key areas not reprogrammed in the ERDF, namely the Social Inclusion and Cohesion area, which was the area in which the province attracted more resources (after Naples) from the NRRP than the other provinces. Also, the expenditure of resources for schools, university and research was- after Naples- the highest in the Campania region (385.3). It should be noted that Caserta has the lowest number of children using public nurseries (Istat,Best,2023), highlighting a territorial need for childcare infrastructure. Also, it has been the second province, after Naples to have attracted more

resources of NRRP in health, in which the province according to the Best report present the worst value in “availability of hospital beds, and “availability of beds in specialised medicine”.

In contrast, the ERDF focused purely on SMEs Competitiveness and Energy Efficiency. This expenditure suggests that the two instruments followed a strong demarcation dynamic in the province, preferring either one instrument or the other.

Table 12: Caserta NRRP and ERDF expenditure. Autor’s own elaboration based on [opencohesion.gov.it](http://opencohesion.gov.it) and [opnepnrr.it/RegioneCampania](http://opnepnrr.it/RegioneCampania)

Caserta NRRP and ERDF expenditure 2021-2023 (million,euros)				
	ERDF	Priorities and RSO financed	NRRP	Missions
Environmental sustainability	2.24	P. 5 RSO 5.1 P.6 RSO 6.2 6.3	644.4	M2C2 M2C3 M2C4
Energy efficiency	10.27	P.4 RSO 4.1 4.2		
SMEs Competitiveness	10.34	P.1 RSO 1.1. P.3 3.1 3.2 3.4 3.7	113.6	M2C1 M1C2
Digital Services	0.177	P.2 RSO 2.3	36.8	M1C1
Tourism and culture	3.19	P.6 RSO 6.8	40.2	M1C3

Social Inclusion and Cohesion	/		191.7	M5C2 M5C3
School University and Research	/	/	385.3	M4C1 M4C2
Health	3.93	P.1 RSO 1.6	216.6	M6C1 M6C2

### 3.2.4 Salerno

The total amount of resources the province of Salerno received for the years 2021-2023 is 94.41 million of euros, 22.6% of the total amount of resources allocated by ERDF in the considered timing. Salerno's per capita allocation in the ERDF is €2515 for the NRRP against an average value of €3073, and €88.97 per capita for the ERDF against a regional average value of €85 per citizen.

The per capita allocation shows that Salerno performed slightly better in the ERDF than in the NRRP. The most financed domains appear to be the same in both the ERDF and the NRRP. The policy area environmental sustainability and energy efficiency was the area most financed by both instruments. This data can be partially answered by the fact that Salerno has the highest number of protected areas in Campania. The Tourism and Culture sector also appears to be the most financed in relation to the expenditure of the other provinces, both by the ERDF and the NRRP. The BesT report shows that Salerno does not have a considerable percentage of agritourism farms (5.6 per 100 square kilometres, ranking second to last among the Campania provinces). Thus expenditure in this sector appears consistent with the identified territorial need. Finally, the health domain appears to be

considerably financed by the ERDF, by virtue of the strategic choice of the region and also of the population that Salerno, the second largest province in the region after Naples, has.

In addition, the NRRP also saw substantial expenditure in the school and education area, which is consistent with the indicator value for participation in the school system by children aged 4 to 5 being the lowest in Campania. (ISTAT, Best, Campania).

Table 13: Salerno NRRP and ERDF expenditure. Autor's own elaboration based on [opencohesion.gov.it](http://opencohesion.gov.it) and [openpnrr.it](http://openpnrr.it)

Salerno NRRP and ERDF expenditure 2021-2023 (million,euros)				
	ERDF	Priorities and RSO financed	NRRP	Missions
Environmental sustainability	34.8	P. 5 RSO 5.1 P.6 RSO 6.2 6.3	8909	M2C2 M2C3 M2C4
Energy efficiency	13.70	P.4 RSO 4.1 4.2		
SMEs Competitiveness	12.99	P.1 RSO 1.1. P.3 3.1 3.2 3.4 3.7	243.2	M2C1 M1C2
		P.2 RSO 2.3 2.2		M1C1

Digital Services	1.93		5 1	
Tourism and culture	5.09	P.6 RSO 6.8	4 0 . 2	M1C3
Social Inclusion and Cohesion	3.31	P. 8 RSO 9.3 9.6	1 9 1 . 7	M5C2 M5C3
School University and Research	/	/	5 4 9 . 3	M4C1 M4C2
Health	22.49	P.1 RSO 1.6	1 9 6 . 2	M6C1 M6C2

### 3.2.5 Naples

The total amount of ERDF resources the city of Naples received for the years 2021-2023 is 156 million euros, 37.44% of the overall 2021-2023 ERDF reprogramming.

The per capita expenditure of the metropolitan city of Naples underperforms in both ERDF and NRRP compared to the average regional value. Naples spent EUR 52 per citizen in the ERDF (2021-2023) compared to a regional value of EUR 85. In the NRRP, it spent 1712 euro in the same years compared to an average value of 3073 euro per citizen, about half the regional value.

Although expenditure in each policy area is the highest in absolute terms, it must be remembered that the metropolitan city of Naples has 2,980 million inhabitants, while Salerno has 1 million and Caserta, Avellino and Benevento have populations of under 1 million.

Therefore, the comparison with the other provinces cannot be made in absolute terms, for reasons of extremely different sizes. However, if the distribution of the ERDF and NRRP by policy area is observed, some trends can still be highlighted.

The environmental sustainability and energy efficiency domain was the most underfunded, both by the ERDF and the NRRP despite the fact that there was an identified territorial need. Indeed, the metropolitan city of Naples has the worst indicators in urban waste produced, separate waste collection rates and the presence of urban green areas.

The ERDF spent more on areas such as health, SMEs Competitiveness and Digital Services. The metropolitan city of Naples is the city with the highest added value per citizen and with a high value of enterprises in the territory (100 EVERY 1000 inhabitants), which are more specialised in the service sector. The ERDF's investment in digital services and the competitiveness of SMEs may be explained by the likely demand for this sector.

On the other hand, sectors like social inclusion, school University and Research were the areas most financed both in absolute terms and in relative terms (compared to the other provinces). Also it should be highlighted that in the area “health” the province of Naples attracted resources six times bigger than the other provinces even if the territorial need in this area appear to be uneven. Indeed, in relation to 'hospital emigration' and 'available beds' indicators Naples ranks as the province that performs best, while Caserta and Benevento have the worst values. (BesT, Istat, 2023). In terms of NRRP, on the other hand, the city of Naples has driven significant resources in Schools and Education (1.5 billion) and Social Inclusion and Cohesion (817.9 million).



In the specific case of the metropolitan area of Naples, it seems that the two instruments worked with a logic of strong demarcation of areas.

Table 14: Naples NRRP and ERDF expenditure. Autor's own elaboration based on [opencohesion.gov.it](http://opencohesion.gov.it) and [openpnrr.it](http://openpnrr.it)

Naples NRRP and ERDF expenditure 2021-2023 (million,euros)				
	ERDF	Priorities and RSO financed	NRRP	Missions
Environmental sustainability	13.45	P. 5 RSO 5.1 P.6 RSO 6.3	720.3	M2 C2 M2 C3 M2 C4
Energy	16.07	P.4 RSO 4.1 4.2		
SMEs Competitiveness	40.77	P.1 RSO 1.1. P.3 3.1 3.2 3.4 3.5 3.7	152.9	M2C1 M1C2
Digital Services	15.65	P.2 RSO 2.3 2.2	133.5	M1C1
Tourism and culture	6,51	P.6 RSO 6.7 6.8	84.9	M1 C3
Social Inclusion	10.34	P. 8 RSO	817.9	M5 C2

and Cohesion		9.3 9.6		M5 C3
School University and Research		/	1,500.0 0	M4 C1 M4 C2
Health	53.28	P.1 RSO 1.6	685.6	M6 C1 M6 C2
Technical Assistance	0.109			

### 3.3 Connecting quantitative and qualitative findings: discussing results

The first findings to emerge from the analysis are as follows.

A first reflection to be made is that in the Campania region, **the provinces that spent the most (Avellino and Benevento) in both the ERDF and the NRRP are those with the highest fair and sustainable welfare indicators.** It is interesting to note that the metropolitan city of Naples, despite being the area with the highest added value and the capital of the province, spent the least in NRRP per capita expenditure and is second to last in ERDF per capita expenditure.

In general, two dynamics can be observed: the first relates to provinces in which the same amount of ERDF and NRRP is spent proportionally in the different policy areas (Benevento, Salerno). In these provinces, both instruments are used in parallel. Benevento saw a concentration of resources in the environment and in SMEs competitiveness while it invested little or nothing in social inclusion where there was a territorial need. Both instruments in the case of Salerno, on the contrary, presented the same dynamics: more resources in Environment and Health, investments in Tourism and Culture more than the average of other provinces and less investments in Digital Services and Social Inclusion.

**What this dynamic highlights is that there is a concentration of resources of both the NRRP and the ERDF in some policy areas and not in others.** This concentration of resources in one area over another does not even depend on the identified territorial need but on the areas that are able to attract the most resources (those in which the ISTAT indicators reveal the highest values at regional level). In the case of Benevento SMES Competitiveness and Environment and Energy Efficiency.

The second dynamic to be noted relates to the provinces that invested in one instrument and not in another: such as **Caserta and Naples. Caserta invested everything in the NRRP and less in ERDF reprogramming.** This result can be partially explained by a political strategy of investing more in one instrument than another to ensure the implementation of certain interventions, regardless of territorial needs and the ability to sustain these interventions over time. Naples, on the other hand, very much demarcated the policy areas funded by the ERDF and those by the NRRP. For example, the NRRP funded the areas School and Education and Social Inclusion and Cohesion. The ERDF instead funded the Health, Digital Services and SMES competitiveness area. In summary, findings arose from the descriptive analysis are the follows:

1 In some provinces ERDF and NRRP are used in parallel: both finance the same policy areas leading to a concentration of resources on some policy areas and spending far fewer resources in other policy areas.

2 In some provinces either one instrument or the other is used, providing for a strong demarcation of one instrument over another in policy areas.

3 In many cases (Benevento in the Environmental sustainability and energy efficiency sector, Naples in the SMEs Competitiveness sector), resources are attracted to the most dynamic sectors, where there is no identified territorial need and which already have a good level of 'development'.

4 In many other cases (Naples in the Environment sector, Benevento in the Cohesion sector, Caserta in the Tourism sector) expenditure does not respond to an identified territorial need.

### 3.4 Connecting quantitative and qualitative findings: discussing results

In this section, it will be discussed how quantitative findings relate to qualitative findings to confirm or not the hypothesis formulated so far. Specifically, each sub-hypothesis will be explored through qualitative and quantitative analysis and the answers will contribute to confirming or not confirming Hypothesis 1.

#### 3.4.1 ERDF and NRRP: which integration is possible?

*Subhypothesis 1.1: The multiplication of available resources and their timing will lead to a displacement effect and may affect the absorption capacity of the ERDF and/or the NRRP.*

In relation to the ERDF, the 2014-2020 programming cycle in Campania was certainly affected by the impact of Covid-19, especially due to the blockage of construction sites that delayed many projects that were underway. In addition, other external factors, such as Russia's invasion of Ukraine and the consequent increase in prices, did not allow the post-crisis effects to be managed as expected.

**As emerged from the interviews so far, the ERDF 2014-2020 posed administrative difficulties for implementers because the legislative and regulatory framework had complexities that were not seen in the NRRP procedures, for example.** From the perspective of local authorities, the limited spending of ERDF (71%) due to administrative, bureaucratic and operational difficulties, have strongly limited the success of ERDF in Campania region. Moreover, the long-term development strategy should have been based on an effective monitoring system able to adjust and improve regional strategy on the way. As emerges from the local authority respondent knowledge, **the need for an effective monitoring system** was underestimated. At the end, it was pointed out that local stakeholders' involvement in ERDF programming was not provided, undermining the sense of “ownership” on the territories. Campania found itself with a low ERDF absorption capacity at the end of 2020, both due to the

delays caused by Covid-19 and as a structural dynamic of the southern Italian regions belonging to the Convergence Objective.

In this framework the launch of the NRRP starting at the end of 2021 and coinciding with the end of the 2014-2020 programming cycle - according to the regional respondent - **triggered a competition effect with the ERDF.**

Moreover, critical points emerged in the implementation phase, i.e. in the years considered in this analysis. On the one hand they partly depend on the lack of ex-ante harmonization of ERDF and RRF, by both financing infrastructural intervention in the same policy areas. On the other hand, they may also depend on the lack of involvement of local authorities in the design of the NRRP. These difficulties are the following:

1. In Campania region in **2022 there was a concentration of resources both from NRRP and from ERDF on energy efficiency.** This has led to a mismatch between supply and demand: the demand for works has, indeed, far exceeded the supply of construction companies willing to perform them.
2. **There is a critical issue related to the region's liquidity.** Indeed, due to its size, the NRRP requires advances from the region to the implementing authorities (municipalities), which have already burdened the end of the 2021-2023 programming, but will burden even more in 2021-2027.
3. One local authority respondent indicated that at the planning stage, **local authorities found it difficult to plan urban regeneration strategies due to the overlap between the ERDF 2021-2027 (urban strategies specific objective) and the NRRP urban regeneration mission.**
5. **There is a risk of duplication of interventions or overbooking of projects by administrations, which would result in significant implementation difficulties.**

**The region also explained that it is difficult to envisage complementary strategies: the NRRP's different size and deadlines, as well as its governance architecture, do not allow for complementary projects.** Quite the contrary: the size and

simplification of the NRRP, as well as the fact that it has a shorter deadline (2026), according to the interviewee, *"allows the NRRP to swallow up projects already activated on other programmes. The risk is that the ERDF will become a servant fund to the NRRP"*

Considering these qualitative findings the subhypothesis H1.1 can be confirmed.

*SubH1.2: The NRRP and the ERDF work either in parallel, funding the same policy areas, or alternatively, through a demarcation of policy areas (the ERDF funds some, the NRRP others).*

The descriptive analysis produced some findings that are useful to confirm subhypothesis 1.2. Findings 1 and 2 reveal that the NRRP and the ERDF are used either in parallel (as in the case of Benevento and Salerno) or alternatively (as in the case of Caserta and Naples). The case of Avellino is a borderline case because the ERDF and the NRRP are used to different degrees and respond to territorial needs. However, if 4 out of 5 provinces confirmed the hypothesis, the hypothesis could be confirmed. Furthermore, additional knowledge from interviews may confirm this subhypothesis. As the respondent from the Campania region put it, *'the beginning of the NRRP and the lack of coordination with the closure of the programming cycle meant that municipalities found it more attractive to engage in the NRRP than to re-invest in the ERDF.'*

**Then, investigating how “coordination” between the two instruments was found, it turns out that there was no attempt at coordination, given the novelty of the instrument at regional level.** Indeed, there are periods for metabolising the new regulations and procedures that must be taken into account. Moreover, the region, due to its role as a mere 'implementer' of the NRRP but not as a programmer, sought coordination in light of the possible overlap between the two instruments that finance infrastructure interventions. Attempts in this sense concerned the inclusion of the NRRP contact person in the ERDF steering committee, and the assignment of the major works coordination structure to manage the demarcation between the two instruments. As the municipality policy-maker interview stated: *“It is in the Regional*

*Operational Programme Monitoring committee that multilevel governance between the region, local authorities and other actors of the economic and social partnership takes place.*” The latter also added that although coordination between the two instruments is desirable and required, managing such a large budget does not allow for effective coordination.

In the 2021-2027 programming cycle, the region of Campania, because of its programming function in the definition of the new ERDF, had to clarify where the demarcation or complementarity applied concerning NRRP.

As the region's respondent explained, **mostly demarcation strategies were found**. For example, it was established that in the case of mobility, the NRRP "*only finances rail programmes*" while the regional programme finances other types of mobility. In the case of business support, it was defined that companies that finance ERDF incentives cannot benefit from NRRP incentives and vice versa. The ERDF reprogramming of 2020-2023 foresaw cuts to specific axes, beyond the territorial needs identified. The need to manage the economic, health and social crisis that arose after the pandemic crisis led many regional authorities to postpone relevant interventions in the next programming period and move resources to manage the crisis. In this framework, a crucial role was played by the Development and Cohesion Fund, a national complementary fund aimed at completing EU investments at the regional level. According to both respondents of Campania region, the DCF was not enough to complete the planning works considering the changed macro-economic context and the frictions brought about by Covid-19 and other successive crises. The Development and Cohesion Plan (PSC) for 2014-2020 programming period amounts at 1,8 billions of euros. The main issue raised also by the local respondent was that although allocation per region of the DCF has been made, payments to the regions have not been released from the central level, and this does not allow the closure of cycle 14-20 and the start of cycle 21-27. **Moreover, the issue of the complementarity of the funds has been raised on several occasions to turn out that while previously the Development and Cohesion Fund went to complement large-scale works in the ERDF of less developed regions, it is now much more oriented towards the complementarity of the NRRP.** This occurs for two reasons. Firstly, ministers at the central level have redefined the NRRP and its financial allocations taking resources

away from municipalities that had already started work counting on those resources. Due to this, there was pressure for the FSC to provide resources to make up for those cuts. Secondly, there is also a political issue: the NRRP is managed centrally and is under the spotlight of the Commission. The current government also stakes its political credibility on the success of the NRRP, which in Italy is unparalleled. The risk is that there will not be enough funds from the DCF to complement the two plans, given their magnitude.

These findings led to confirm the first hypothesis:

*H1: The antithetical governance, procedures and rules of the RRF and the ERDF 2014-2020, despite similar substantive priorities, do not allow for an effective integration of the two instruments and will lead to a suboptimal allocation of resources.*

### **3.4.2 Do not harm cohesion: when distributive policies are based on administrative capacity rather than territorial needs**

*H2.1 NRRP may be allocated according to 'territorial endowments', including the presence of universities, research centres and innovative companies in key sectors (energy/environment) or (third sector/NGOs). This territorial endowment can attract resources despite territorial needs, widening the gap between less competitive areas and more dynamic ones.*

This hypothesis is confirmed by findings 3 and 4. Benevento had a territorial need for social inclusion that did not receive a policy response from either instrument.



Naples had a territorial need to invest in the environment and energy efficiency domain and did not receive adequate spending. Moreover, only 2 out of 5 provinces have a per capita NRRP expenditure higher (Benevento) or equal (Avellino) to the regional average value. In the ERDF, likewise, the per capita allocation is sufficient in only 3 out of 5 provinces. (Benevento, Avellino and Salerno). Looking also at the distribution of BEST indicators by classes of well-being (IStat, 2023), it can be seen that Avellino and Benevento are the provinces with the most indicators in the classes of well-being. The metropolitan city of Naples has also had a per capita expenditure that is insufficient in the NRRP and ERDF to meet all identified territorial needs (environmental, social, and economic). These findings are sufficient to argue that the expenditure of the two instruments follows a logic in which the areas that manage to attract the most resources attract them, regardless of the identified territorial needs. In this sense, sub-hypothesis 2.1 is confirmed.

*H2.2 Local authorities with low planning capacity and/or inadequate financial resources will not participate in the NRRP beyond their territorial needs. (quantitative and qualitative)*

The first clue confirming this sub-hypothesis comes from the descriptive analysis. The provinces of Caserta and Naples -according to the Best Report (ISTAT, Best Campania 2023) are the most disadvantaged in all the fair and sustainable well-being classes, thus revealing the greatest territorial needs. These provinces are also those that have spent the least in both the ERDF and the NRRP, beyond the territorial needs identified. In order to better investigate this topic, the issue of the uneven response of territories to the ERDF and NRRP was also explored in interviews.

In the descriptive analysis it was found out that ERDF priority 2 'Digital Agenda' to spread broadband in all the municipalities of Campania, had seen very little participation by the provinces of Caserta and Salerno. Moreover, Specific Objective 9.2 "Investing in health and social infrastructure" was not reprogrammed in any province outside Naples in the 2021-2023 period. However, as emerged from 2019 evaluation of the ERDF provided by the Special office for the evaluation and

verification of public investments, the **priority had a low absorption capacity despite the high territorial need for these interventions especially in the provinces of Caserta and Benevento.**

In light of these considerations, the regional respondent turned out that about specific objective 2.1 there was a delay in the Ultra Broadband project on the national level, which resulted in almost all regions either reprogramming it with the DCF or postponing it to the next cycle 2021-2027.

About Specific objective 9.2 , the respondent turned out that the fact **that there is a territorial need does not necessarily mean that a policy response is given.** Sometimes there is a time factor that causes less capable territories to opt for other national or communicative instruments with longer-term deadlines. I was also pointed out that there are applications for calls for proposals from less capable territories, but that difficulties then arise in the implementation phase relating to problems of knowledge and/or lack of adequate human resources. **There is an intention on the part of the region to promote a homogeneous territorial response, but this does not happen in practice.** The greatest cause, identified on several occasions by both respondents, was linked to the administrative capacity of local authorities. Given the administrative difficulties posed by the ERDF, in the reprogramming period 2021 2023 the region set up an internal task force to provide "on-the-spot" assistance to municipalities with administrative capacity problems, in order to ensure their participation in the ERDF. One of the lessons learnt from the 2014-20 cycle, as one interviewee from the region put it, was *"to continue to invest in administrative capacity, especially in new areas such as waste, water and spatial strategies"*.

Both the Region and ANCI Campania have launched several initiatives to strengthen the administrative capacity of municipalities. The P.I.C.C.O.L.I. project, financed by the PON Governance 2014-20, involves 146 small municipalities and deals with the development of intervention plans for local administrative capacity and innovation. All these efforts were made after have understood that administrative capacity were affecting participation in ERDF.

Furthermore, as emerged from the municipality respondent some cities in the Province of Caserta, such as Capua or Santa Maria Capua Vetere, participated less in the NRRP due to administrative problems and changes in the political leadership. The

municipality respondent on the question related to the reprogramming of priority 2 and specific objective 9.2 revealed that one of the main reasons beyond the one of the reasons behind the limited success of the ERDF is the lack of connection between the monitoring and evaluation exercise and the 2021 2023 reprogramming. As pointed out by the respondent, territorial needs were highlighted, but then the need to spend the ERDF in reprogramming led to funding interventions that were 'certain', i.e. that could be implemented, rather than interventions that met a territorial need. A further comment added by the regional respondent was that everything that was not done in 2014 2020 will be re-programmed in 2021 2027.

## 4. ERDF and NRRP spending in Tuscany over the period 2021-2023: case study n.2

This chapter presents the case study of the Tuscany region. The first section presents the territory and the different provinces, the economic indicators and the positioning of the provinces in the territorial indicators of fair and sustainable development (ISTAT, 2023). (4.1) This will be followed by an analysis of ERDF and NRRP expenditure for 2021-2023 by province and by policy area (Section 4.2). The third section (4.3) presents some results from the descriptive analysis and the fourth section (4.4) discusses quantitative finding and qualitative findings to reject or accept hypothesis formulated.

### 4.1 Introduction of Tuscany Region

Tuscany region has the population of 3.661.981 of inhabitants (Istat,1.01.2023), 10 provinces and 273 municipalities, by being located in the northwest of Italy, overlooking the Tyrrhenian Sea. Tuscany is one of the 'more developed' regions in Cohesion policy. The region could be divided into three kinds of areas according to the density of the population:

*1. The most densely populated provinces (the north-east area):*

Prato is the highest-density population province (709 in/sk). It is the local textile-clothing labour system according to ISTAT distinction (2021). Pistoia (301 in/sk) is the second most densely populated area in the region and -according to LLS (Istat)- it is a local wood and furniture system.

The metropolitan city of Firenze (281 in/sk) , is the largest area of the region by counting 41 municipalities and 988.194 inhabitants. It entails six LLS (Castelfiorentino, Empoli, Firenzuola Faenza, Borgo San Lorenzo and Firenze). Apart from Firenze and Faenza classified as pluri-

specialised urban areas, the other areas belong to the local made-in-Italy systems, specialised either in the textile sector or in the leather sector.

Figure 10: Provinces of Tuscany region



#### 4.1.1. The medium populated provinces (the west-area):

The province of Livorno (269 in/sk) includes seven LLS with different specialization: Marciana Marina and Cecina are classified as turistic system. Livorno and Portoferraio are classified as plurispecialised areas with a portual specialization. Piombino and Rosignano Marittimo belong to the local labour systems of heavy manufacturing.

The province of Lucca (215 in/sk) entails 5 LLS: Barga and Lucca, urban areas with pluri-specialised local labour systems. Viareggio, considered as an urban area with a portual specialization. Castelnuovo di Garfagnana considered as a local system with an agricultural vocation and Pietrasanta a local specialized construction material system.

The province of Pisa (171 in/sk) includes five SSL: the city of Pisa seems to be the only specialised urban centre. In addition, there is San Miniato, which is part of the industrial districts specialised in Italian leather and leather production, Volterra and Pontedera, which have a heavy industry vocation, and Pomerance, which is a local non-specialised labour system.

Massa carrara (162,47 in/sk) entails three local labour system, even if some municipalities included in the province belong to La Spezia LLS. These ones are the following: Massa and Carrara which both are classified as local systems specialising in building materials. On the other hand there is Pontremoli, considered as local non specialized labour system.

#### 4.1.2 The less density populated (the east area):

**Arezzo** (103,33 in/sk) oversees six LLS: Arezzo and Cortona are classified as local made-in-Italy systems in the production of jewellery, glasses and musical instruments. Bibbiena stands out for the production of furniture, while Montevarchi as a leather and leather industrial district and Sansepolcro, a textile and clothing district. Moreover, **Siena** (68,19 ab./km<sup>2</sup>) comprises seven LLS: Sinalunga and Poggibonsi are local made-in-Italy systems specialised in furniture and wood production. Chiusi, on the other hand, is an agro-food system. Montepulciano and Montalcino are local tourism systems and PianCastagnaio a local leather system. Finally, the municipality of Siena is a multi-specialised urban system.

**Grosseto** is the less density populated province (48,11 ab./km<sup>2</sup>) including seven LLS: Orbetello, Monte Argentario and Castel del piano are local systems with an agricultural vocation. Manciano and Pitigliano are local tourism systems and Grosseto and Follonica are the main non-specialised urban areas.

#### **4.1.2 An overview of main indicators on fair and equitable development in the Toscana Region per province**

As analysed in Chapter 3 (3.1.2) it is now highlighted how the Tuscan provinces are positioned in the well-being classes defined by ISTAT in the year 2023. This exercise connected to the description of the Tuscan local production systems serves as an introduction to better understand the territorial needs and the "infrastructural" response to these needs through the ERDF and the NRRP. Considering the positions occupied by the Tuscan provinces in the national distribution, the level of relative well-being of the region is higher than both the Central and Italian territories as a whole. 52.1 per cent of the overall indicators place the Tuscan provinces in the two most virtuous groups. In contrast, 24.7 per cent of the placements are in the two lowest classes while 23 per cent of the indicators place the Tuscan provinces in the average wellbeing class. Florence Pisa Siena and Arezzo are in the top two classes for over half of the indicators, with Florence having indicators in the highest class for 26% of them. The province of Massa Carrara tends to have most indicators in the 'medium' class, while Grosseto and Prato are placed more frequently in the low and medium-low classes both with an incidence of 34.5%.

However, in addition to BesT report, The Region of Tuscany has identified complex crisis areas, i.e. areas in which the economic recession and job losses are of national importance due to their severity. This is especially the case in industrial sectors that need a process of productive

requalification. These include different municipalities in the province of **Livorno**, Piombino (**Grosseto**) and several municipalities in the province of **Massa-Carrara**.<sup>7</sup> To have a look to additional socio-economic indicators, such as added value for each province and number of enterprises for each province, the figure 12 and the table 14 below are presented. Firenze, Pisa and Siena represent the most attractive provinces, in which added value for each inhabitant is higher than in the rest of the provinces. Massa Carrara, Pistoia, Grosseto and Livorno on the contrary are the provinces in which there is the lowest added value.

Figure 11: Added Value for each Inhabitant, Tuscany, 2020, BesT Istat 2023

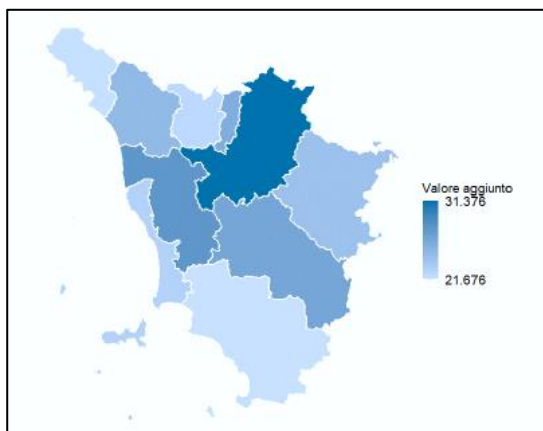


Table 3: N. of enterprises in Tuscany region, autor's own elaboration based on Istat, BesT, Tuscany region, 2023

N. of enterprises every 1000 inhabitants for province	
Prato	175.8
Firenze	159.9
Lucca	153.6
Pistoia	146.2
Massa Carrara	146.0
Siena	144.6
Arezzo	143.0
Pisa	142.8
Grosseto	141.4

<sup>7</sup> Piombino (Decreto Legge 26 aprile 2013 n.433; Livorno Decreto del Ministero dello Sviluppo Economico 7 agosto 2015; Massa Carrara, decreto dello sviluppo economico 9 novembre 2017.

Livorno	136.3
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#### 4.1.3 Toscana in the ERDF programming cycle 2014-2020

The ERDF 2014-2020 of Tuscany was approved by a decision of the European Commission and amounts to 779,03 million euros, of which 389,51 million euros comes from the EU contribution.<sup>8</sup>

The Region of Tuscany, due to the economic-social effects of the covid-19, and the increase in the prices of raw materials and the cost of energy, with Resolution no. 630 of 07-06-2022 updated the eligible costs of public works by raising the ERDF value of certified expenditure from 779 million euro to 1163 million euro. Then, about the state of progress of the Region of Tuscany in the payments released for the ERDF 2014-2020, it should be noted that the absorption capacity of the ERDF was 103.89%, with a performance well above the average of the most developed regions, at 83.68%. Toscana region indeed, was after Friuli Venezia Giulia the region with the best performance at the Italian level. For a detailed overview, consider the table below.

Table 16: ERDF expenditure in more developed regions, source: MEF, Monitoring of cohesion policies, 31.10.2023

<i>ERDF 2014-2020 More developed regions</i>	<i>% of progress (payments/total value of the programme)</i>
Emilia Romagna	100.69%
Friuli Venezia Giulia	111.54%
Lazio	79.49%
Liguria	84.95%
Lombardia	73.48%
Marche	66.33%
PA Bolzano	98.17%
PA Trento	77.25%
Piemonte	79.78%
Toscana	103.89%

<sup>8</sup> The value is the latest available after EU modifications in 2020.



Umbria	75.86%
Valle d'aosta	94.40%
Veneto	75.92%
Total	83.68%

With regards to the allocation to the policy interventions, the ERDF in 2014-2020 in the Tuscany Region was developed around 7 Priorities:

- **Priority 1:** Research and Innovation. This priority was particularly aimed at supporting research in the University and the application of Innovative technologies in the world of SMEs. Moreover, specific actions were financed for: Innovation in SMEs and Innovative Start up (1.1.2, 1.1.3 and 1.1.4); Research and Innovation from Universities to Enterprises (1.2) and e-health and health inclusion (1.6)
- **Priority 2:** Dissemination of ICT technologies with special focus on broadband deployment throughout the territory (2.3)
- **Priority 3:** SMEs competitiveness. Non-repayable grants for different types of businesses in the area. This Priority in 2020 was reprogrammed for post-pandemic emergency business support (3.1; 3.4)
- **Priority 4:** Environmental sustainability, energy efficiency, soft mobility (4.1;4.6)
- **Priority 5** Promoting cultural heritage. (6.7)
- **Priority 6** Social Inclusion and Cohesion in Urban Areas (9.6)
- **Priority 7:** Technical Assistance.

## 4.2 Analysis of resources allocation of ERDF and NRRP in the Tuscany Region

### 4.2.1 Methodological introduction

This descriptive analysis is structured as follows: first, the distribution of the ERDF and NRRP is analysed in absolute terms per province and in per capita terms (expenditure per province/number of inhabitants). (Fig.11,12,13) The analysis is based on actual expenditure,

both for the ERDF and the NRRP, although for stylistic reasons terms such as 'allocated' and 'received' are used.

Then, for each province, a summary table is used to analyse in detail and comment on how the money is spent for each specific objective (ERDF) and mission (NRRP). As shown in the figure 10, the objectives and priorities of the ERDF may overlap with NRRP missions. In any case, this analysis is proposed in order to understand at the provincial level, for each policy area, what kind of dynamics there are between the two funds. As it is not possible to look in detail at each project and assess aspects such as complementarity and demarcation between the two funds, the following will be observed at this stage:

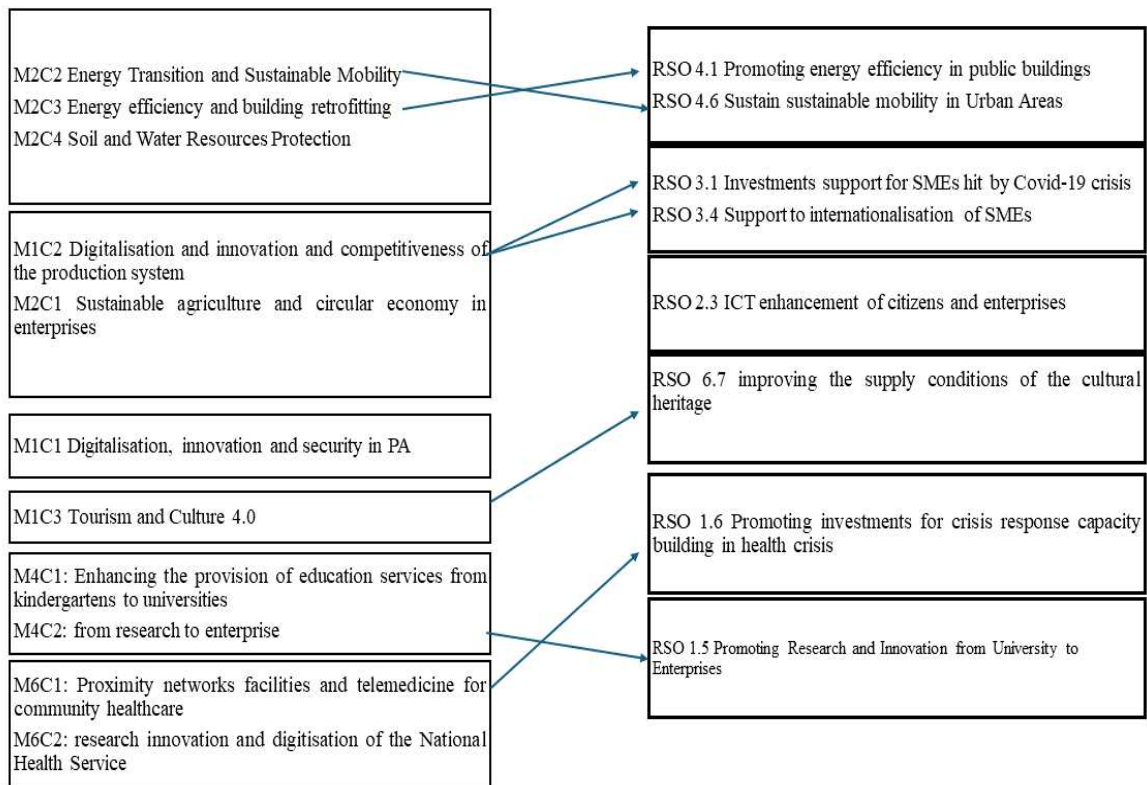
- whether there is a "concentration" of resources in some provinces and not in others: concentration is defined in relation to the other provinces.
- whether there is a "concentration" of resources in policy areas where there is no identified territorial need;
- whether there is more spending from one instrument than another.
- whether the ERDF and the NRRP respond to identified territorial needs.

Territorial needs are analysed by means of the indicators developed in the project "Measures of Territorial Well-being", promoted by the National Statistics Institute (ISTAT). The indicators developed are available in complete territorial series and are collected at the provincial level in a project developed by ISTAT in collaboration with the statistical offices of the local authorities. The indicators are collected for each domain of equitable and sustainable well-being, such as education and training, work and life balance, economic well-being, cultural heritage, environment, innovation research and creativity, quality of services, social relations, politics and institutions, safety and public health. The provincial distribution of resources allocated for the programming period 2014-2023 could be seen in Graph 1. In the analysis proposed here by province, the expenditure in the years 2021-2023 of both the ERDF and the NRRP is analysed. The ERDF data are taken from OpenCohesion and updated to 31/12/2023, while the NRRP data are taken from Open PNRR, a project developed by the OpenPolis Foundation in collaboration with the Gran Sasso Science Institute.

In order to create macro areas financed by similar interventions of both ERDF and NRRP, an analysis of expenditure that goes into specific objective detail for ERDF and the mission and component for NRRP is proposed. (fig.10). As the figure shows, each mission of NRRP is

associated with Regional Specific Objectives or actions where is need. of the same policy areas. In many cases, there are interventions that may overlap thematically, as indicated by the arrows. In other sporadic cases, the interventions funded are simply part of the same policy area but do not overlap and no arrows are proposed. For example, in the case of Digitalisation, Tuscany did not reprogrammed Specific objective 2.2. that may overlap with M1C1 NRRP Mission. Furthermore, Mission 3 'Infrastructure and sustainable mobility' has not been proposed, as the 'Transport' axis has not been reprogrammed by the 2014-2020 ERDF in 2021-2023. Finally, mission M5C1 "Policies for employment" has been excluded from the analysis as it does not cover infrastructure interventions.

*Figure 12: NRRP Missions and ERDF Regional Specific Objectives: assessing thematic overlap. Author's own elaboration*



Looking at the expenditure of the ERDF 2014-2023, it is immediately apparent that Florence spent 45 % of the total resources. (Fig.14)

This percentage rises to 52 % if the 2021-2023 reprogramming is taken into account. (fig.15)

The ERDF and the NRRP see the provinces ranking similarly. The best performing provinces are Florence, Siena, Pisa and Arezzo. Pisa invested more in ERDF reprogramming than the other provinces compared to the NRRP, but all four provinces have a per capita allocation above the regional average in both instruments. Lucca and Livorno are positioned in an intermediate range in terms of per capita expenditure: the former has invested more in ERDF, Livorno more in NRRP. Prato, Pistoia, Massa Carrara and Grosseto are the provinces 'left behind' in terms of per capita expenditure, in both instruments. Although Grosseto reveals a per capita expenditure of the NRRP in the average, the figure should be read considering the strong expenditure in the 'environment' area, which, however, has been homogeneous throughout the regional territory. (Table 17).

Figure 13: Distribution of payments for province in relation to ERDF (Tuscany Region 2014-2023). Author's own elaboration

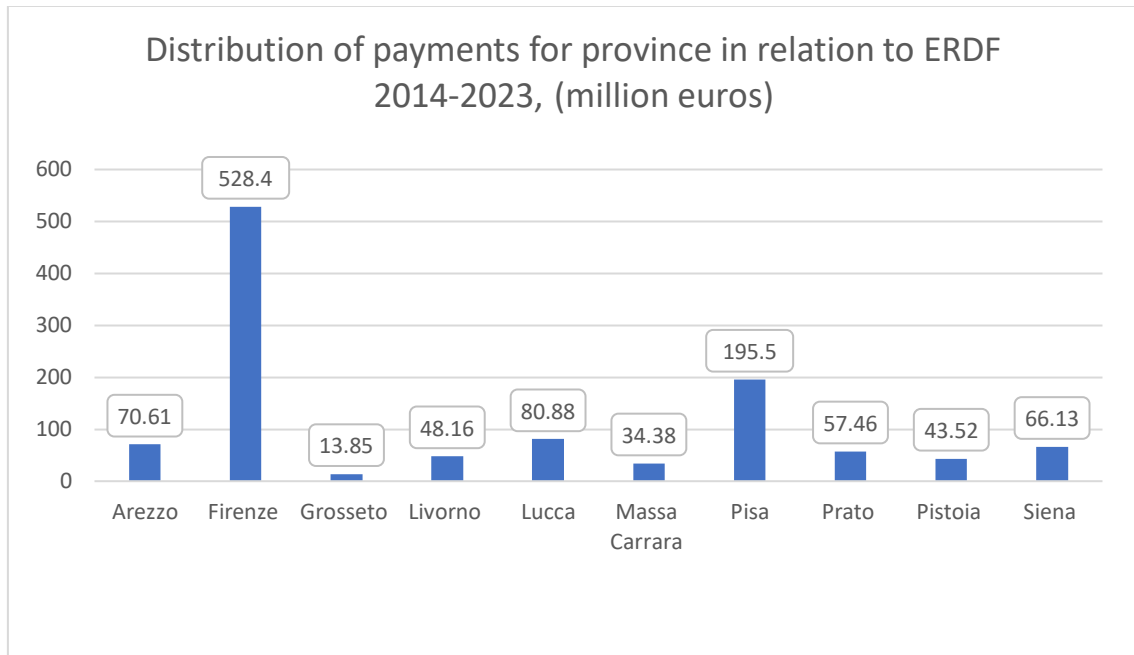


Figure 14: Distribution of ERDF payments for province in the 2021-2023 reprogramming, Tuscany Region. Author's own elaboration

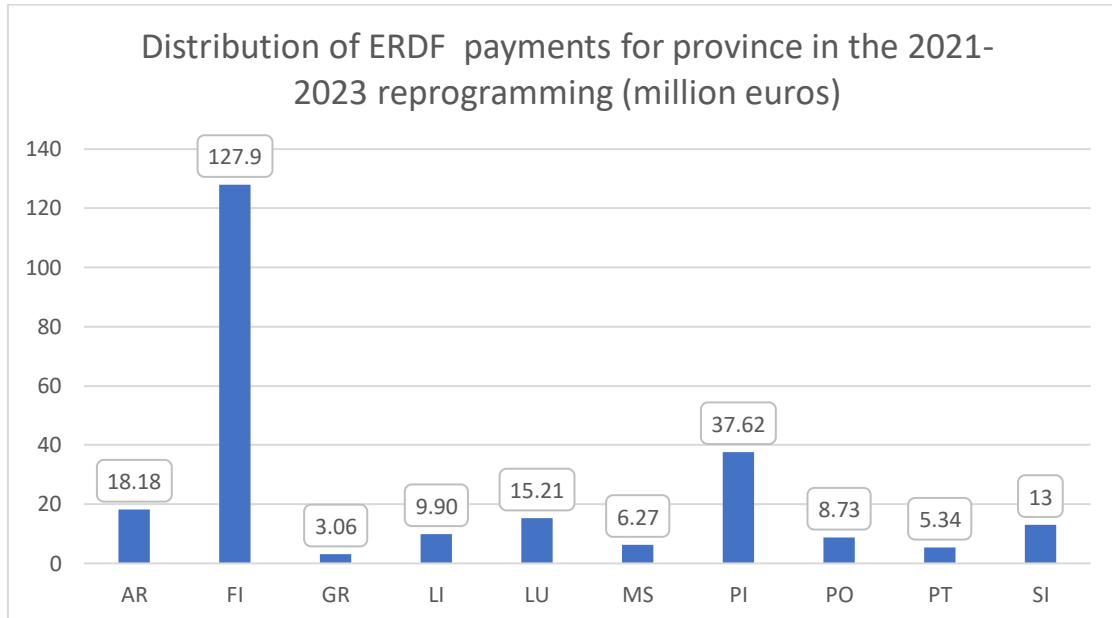


Table 17: 2021 2023 NRRP per capita expenditure, Tuscany, autor's own elaboration based on openpnrr.it

2021-2023 NRRP per capita expenditure (euros)	
Firenze	3340.08
Siena	3236.92
Grosseto	2882.87
Pisa	2877.69
Livorno	2575.46
Arezzo	2519.46
Prato	2490.73
Pistoia	2451.21
Lucca	2202.09
Massa	1807.48
Average Value	2638

Table 18: ERDF 2021 2023 per capita expenditure, autor's own elaboration based on Opencohesion.gov.it

2021-2023 ERDF per capita expenditure (euros)	
Firenze	129.45
Pisa	90.22
Arezzo	54.44
Siena	50.00
Lucca	39.83
Prato	33.71
Massa Carrara	33.53
Livorno	30.38
Pistoia	18.48
Grosseto	14.19
Average value	49.42

#### 4.2.2 Florence

The Province of Florence received 528.4 million euros for the 2014-2020 ERDF, about 45 percent of the total 2021-2023 ERDF reprogramming resulted in 127.9 million euros being allocated to Florence, 52% of the overall amount reprogrammed. In terms of per capita allocation, Florence has the highest share among the 10 provinces, with 129.45 euros per citizen. The province also attracted resources from NRRP, where it has spent many more resources than other provinces per domain. This primacy is partly explained by the fact that in metropolitan areas investments take on larger dimensions or spatial needs may be more articulated. What is striking at first glance is that the province attracted nearly half of the ERDF and had a similar trend in the NRRP by also being the province with 61 percent of the indicators in the medium-high and high well-being classes, 20 percentage points higher than the regional average. A first explanation may be given by a market-driven dynamic: the province of Florence has a concentration of businesses and services, universities, cultural enterprises that are able to attract more resources than the rest of the territory. A second explanation could be given by the fact that the province has a good spending capacity. Indeed, the province was the only one, apart from Pisa, to have reprogrammed all the ERDF priorities. Looking at policy areas finances, some consideration can be done: ERDF expenditure sees a large allocation in SMEs competitiveness, which partly reflects the regional choice to reprogramme ERDF 2021 2023 by stimulating innovation in production systems in the light of covid-19; partly reflects the territorial needs of the province. Indeed, the province has low indicators in the business patenting index (Istat, BEST,2023). An unexpected finding emerges from the province's spending on tourism and culture. The Florentine province in fact has the highest density and relevance of museum heritage in the region. The indicator developed by Istat considers elements such as the number of museums open to the public and the number of visitors to museum centres. This indicator shows a worsening between 2019-2021, denoting a territorial need in this policy area. However, this need is matched neither by policy action promoted by the ERDF nor by the NRRP, which sees Florence second to Arezzo in terms of resources attracted in the culture and tourism domain.

Table 19: Florence NRRP and ERDF expenditure 2021-2023, autor's own elaboration based on opencohesion.gov.it

Florence NRRP and ERDF expenditure 2021-2023 (million, euros)				
	ERDF	Priority ad RSO financed	NRRP	Missions
Environmental sustainability and energy efficiency	25.23	P.4 RSO 4.1 4.6	616	M2C2 M2C4 M2C5
Digitalisation	1.07	P.2 RSO 2.3	75.2	M1C1
SMEs Competitiveness	73.9	P.3 RSO 3.1; 3.4 Ax.I 1.1	75.1	M2C1 M1C2
Culture and Tourism	0.834	P.5 RSO 6.7	18.1	M1C3
Social Inclusion and Cohesion in Urban Areas	4.57	P.6 RSO 4.1 and 9.6	843.1	M5C2 M5C3
Research and Innovation in University and School	9.95	P.1. RSO 1.1.5	354.5	M4C1 M4C2
Health	4.34	P.1 RSO 1.6	228.7	M6C1 M6C2
Other if any	7.74	Ax VII (technical assistance)		

### 4.2.3 Pisa

The Province of Pisa had a good expenditure performance in the ERDF 2021-2023, with a per capita expenditure of 90.22 euro against an average of 49.42 euro. It also performed well in the NRRP, with a per capita expenditure of 2877 euro per citizen, compared to a regional average of 2638 euro.



Concerning the expenditure in the years 2021-2023 of the ERDF and the NRRP some trends can be highlighted: the spent in the environmental domain was of 20 million in 2021-2023, the highest share together with Florence. On the other hand, Pisa, after Grosseto and Massa Carrara, presents the lowest value in the resources attracted in the NRRP for the environmental field. According to BesT 2023, there is a provincial need in this field. Pisa is one of the three provinces, together with Prato and Florence, with the highest value of fine and ultrafine particles (PM2.5 and PM10) in the air. Moreover, the province has the highest risk value for people living at risk of flooding (Istat. BesT 2023). All other policy areas are consistently funded by the ERDF, approaching the levels of the province of Florence, and exceeding it in some areas (including Culture and Tourism). This positive performance is not as well confirmed in the NRRP where low investment is observed in both Mission 1 and Mission 2. However, it should be notated that Pisa attracted the the largest resources at regional level in the domains related to School and University and Health. In the Health domain, Pisa has the highest territorial indicators in relation to the number of hospital beds, available beds for high care specialities and the lowest number of people migrating to other regions for medical treatment. In other words, it has one of the best health systems at the provincial level and is at the same time the province that has attracted the most resources to the sector. Similarly, the province of Pisa does not show a territorial need in the School and University domain, on the contrary holding some of the best values in the indicators pertaining to the domain, such as the highest value in the 'participation in continuous training' indicator.

Table 20: Pisa NRRP and ERDF expenditure. Autor's own elaboration based on data from [openpnrr.it](http://openpnrr.it) and [opencohesion.gov.it](http://opencohesion.gov.it)

Pisa NRRP AND ERDF expenditure 2021-2023 (million, euros)				
	ERDF	Priority and RSO financed	NRRP	
Environment sustainability and energy efficiency	20.3	P.4 SO 4.1	413.7	M2C2 M2C4 M2C5
SMEs Competitiveness	4.78	P.3 SO 3.1; 3.4;	25.9	M2C1 M1C2
Digitalisation	/	/	16.7	M1C1
Culture and Tourism	1.47	P.5 RSO 6.7	1.9	M1C3

Social Inclusion and Cohesion in Urban Areas	0.716	P.6 (Urban areas) RSO 4.6 and 9.6	60.7	M5C2 M5C3
Research and Innovation in University and School	7	P.1 SO 1.1.5	364.6	M4C1 M4C2
Health	3.3		165.3	M6C1 M6C2

#### 4.2.4 Siena

In the ERDF reprogramming period, the province of Siena spent 13 million euros. The province of Siena spent 50 euro per citizen in 2021-2023 ERDF, fully within the average of the regional value (49.42). The spending performance was certainly better in the NRRP, where 3236.92 euro was spent per citizen, above the regional value of 2638 euro. Looking at the trend of ERDF and NRRP shows a similar dynamic: the most funded domain is School Research and Education, with 160.1 million spent in NRRP and 5.15 in research and innovation in University in 2021-2023 ERDF. The result appears consistent with Siena's performance in the Education and Training domain (BesT 2023). Indeed, the province has the highest indicators in "continuing education" "number of people moving on to university" and "level of numerical and literacy literacy", positioning it as a province with high investment in education and training. The environment domain is also the most funded both by NRRP and ERDF. Strong disinvestment is evident in digitalization and tourism culture, which were not reprogrammed in the ERDF and received significantly less spending in the NRRP. Siena has the highest diffusion index of agritourism farms (ISTAT, BesT Toscana, 2023) with a declining indicator performance in the 2019-2021 period. This data highlights a territorial need in this domain that, however, has not found a policy response.

Table 21: Siena NRRP and ERDF expenditure, author's own elaboration based on [openpnrr.it](https://openpnrr.it) and [opencohesion.gov.it](https://opencohesion.gov.it)

Siena NRRP and ERDF expenditure 2021-2023 (million, euros)				
	ERDF	Priority ad RSO financed	NRRP	Missions

Environment sustainability and energy efficiency	3.34	P.4 RSO 4.1	465.8	M2C2 M2C4 M2C5
SMEs Competitiveness	2.68	P.3 SO 3.1; 3.4	19.1	M2C1 M1C2
Digitalization	/	P.1 RSO 1.1	13	M1C1
Culture and Tourism	/		6.7	M1C3
Social Inclusion and Cohesion	2.01	P.6 (Urban areas) RSO 4.6 and 9.6	44.3	M5C2 M5C3
Research and Innovation in University and School	4.48	P.1 SO 1.1.5	160.1	M4C1 M4C2
Health	0.469	P.1 RSO 1.6	89.9	M6C1 M6C2

#### 4.2.5 Arezzo

The Province of Arezzo had a very positive expenditure performance in the ERDF, ranking after Florence and Pisa in terms of per capita allocation with 54.44 euro per citizen. Its per capita performance in the NRRP (2519 euro per inhabitant) was less brilliant, but still just below the average (2638 euro). Some comments can be made on ERDF and NRRP expenditure. The province has invested the most ERDF and NRRP resources in the field of environment and energy efficiency. The Province of Arezzo presents all the indicators in the highest wealth classes in the field of the environment, which does not reveal any territorial need in this policy area. Looking at the position of the province withing territorial indicator of well-being it could be noted that the province is placed in the average in all policy areas, thus do not revealing significant territorial needs. However, the spending dynamic of ERDF and NRRP seems to follow a demarcation strategy. Beyond the field of environment, overfinanced from both instruments, ERDF focused more on SMEs competitiveness, which on the contrary did not

foresee a significant spent from NRRP. This latter, on the contrary, financed policy areas such as tourism and culture, which has received the largest number of NRRP resources in relation to the other provinces being very poorly funded by the ERDF. The same dynamic can be seen in the field of social inclusion and cohesion, which was not reprogrammed in the ERDF, while in the NRRP it attracted the largest number of resources after Florence.

Table 22: Arezzo NRRP and ERDF expenditure, autor's own elaboration based on [openpnrr.it](http://openpnrr.it) and [opencohesion.gov.it](http://opencohesion.gov.it)

Arezzo NRRP and ERDF expenditure 2021-2023 (million, euros)				
	ERDF	Priority ad RSO financed	NRRP	Missions
Environmental sustainability and energy efficiency	9.20	P.4 RSO 4.1;4.6	496.8	M2C2 M2C4 M2C5
SMEs Competitiveness	4.67	P.3 RSO 3.1; 3.4;	15.2	M2C1 M1C2
Digitalisation	/		13.3	M1C1
Culture and Tourism	0.570	P.5 RSO 6.7	26.1	M1C3
Social Inclusion and Cohesion	/	/	62	M5C2 M5C3
Research and Innovation and School	1.85	P.1 RSO 1.1.5	120	M4C1 M4C2
Health	1.8	P.1 RSO 1.6	63.5	M6C1 M6C2

#### 4.2.6 Lucca

The province of Lucca benefited from a total of 80.88 million euros for the ERDF 2014-2020. Reprogramming from 2020 to 2023 provided 15.21 million euros allocated to the province. The province of Lucca had a per capita expenditure for ERDF of 39.83 euro, 10 euro below the regional value. In the NRRP, on the other hand, it spent 2202 euro per citizen, about 400 euro less than the regional average value. The first element to highlight is that the province attracted ERDF resources from all domains between Priority 1 and Priority 6. This may partially indicate

that the province has good spending capacity across multiple domains. According to the BEST report (Istat, Toscana,2023) Lucca is a province that has almost all indicators in the regional average, yet it is the province with the highest number of areas exposed to landslide risk. This territorial need is consistent with the highest NRRP expenditure at the regional level in the field of environment ( 514 million, the province that after Florence spent the most). The environment and energy efficiency domain was also the most financed by the 2021-2023 ERDF.

On the contrary, it is shown a low investment in both ERDF and NRRP in the SMEs competitiveness field, considering that Lucca has the highest number of local units per 1000 inhabitants after Prato, Florence and Pisa.

Moreover, Lucca is one of the provinces that has attracted fewer resources in the health domain. (27.5 million). by also not reprogramming ERDF in the e-health investments.

Table 23:: Lucca NRRP and ERDF expenditure. Autor's own elaboration based on [openpnrr.it](http://openpnrr.it) and [opencohesion.gov.it](http://opencohesion.gov.it)

Lucca NRRP and ERDF 2021-2023 (million, euros)				
	ERDF	Priority ad SO financed	NRRP	
Environmental sustainability and energy efficiency	6.17	P.4 RSO 4.1	514.8	M2C2 M2C4 M2C5
SMEs Competitiveness	2.5	P.3 RSO 3.1; 3.4	11.9	M2C1 M1C2
Digitalisation	0.499	P.2 RSO 2.3	12.8	M1C1
Culture and Tourism	1.28	P.5 RSO 6.7	6.6	M1C3
Research and Innovation in University and School	3.0	P.1 RSO 1.1.5	114.3	M4C1 M4C2
Social Inclusion and Cohesion	1.74	P.6 RSO 4.1 9.6 (Only Urban Areas)	77.6	M5C2 M5C3

Health	/		27.5	M6C1 M6C2
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#### 4.2.7 Massa Carrara

The province of Massa Carrara got 34.38 million from the ERDF 2014-2020 about 2.9 percent of the total ERDF, with the reprogramming of 6.27 million in the years 2021-2023. The province of Massa Carrara had a per capita expenditure for ERDF of 33.5 euro, well below the regional value. (49.42) In the NRRP, on the other hand, it spent 1807.08 euro per citizen, placing last among all the Tuscan provinces and spending 800 euro less per citizen than the regional average value. Regarding the most funded domains, there is a twofold investment (in both ERDF and NRRP) in the environment domain, which is consistent with what the Best 2023 report shows in the indicators related to the environment domain. Indeed, Massa Carrara has the lowest value at the regional level for water network dispersion, which can partly explain the joint effort of both instruments in this policy area. Concerning the SME's competitiveness domain the expenditure in the policy area seems to not respond to the territorial need of the productive fabric: Massa Carrara has 14.8 enterprises per square meter (ISTAT. 2020), a much higher value than Arezzo, Siena and Grosseto. However, the latter three cities seem to have attracted more resources to this policy area concerning their need. A final reading should be made within the digitalization and health domains. The field of digitalization was not reprogrammed in the ERDF and attracted only 5 million euros from NRRP. The same dynamic occurs in the health domain, financed only from NRRP, presenting one of the lowest expenditure at regional level (23.8 million). Mission M1C1 (digitisation and innovation in public administrations) presents structural difficulties in less urbanised provinces such as Massa Carrara. Such low expenditure (5 million) risks widening the disparities in terms of development with the more urbanised provinces, such as Pisa and Lucca, which spent 16.7 and 12.8 million euros respectively, and even more so with the metropolitan city of Florence, which spent 75.2 million euros in the same policy area. Similarly, mission 6 of the NRRP funds investments that aim to strengthen proximal networks in the medical domain, including through telemedicine and infrastructure-type investments. Massa Carrara in addition to configuring itself as an area on the fringes of urbanization, also presents the highest value of hospital emigration to other regions. (BesT. Istat. 2023).

Table 24.: Massa Carrara NRRP and ERDF expenditure. Autor's own elaboration based on [openpnrr.it](http://openpnrr.it) and [opencohesion.gov.it](http://opencohesion.gov.it)

Massa Carrara NRRP and ERDF 2021-2023 (million, euros)				
	ERDF	Priority and SO financed	NRRP	
Environmental sustainability and energy efficiency	4.2	P.4 RSO 4.1 4.6	82.8	M2C2 M2C4 M2C5
SMEs Competitiveness	1.33	P.3 RSO 3.1; 3.4 Ax. I RSO 1.1	9.1	M2C1 M1C2
Digitalisation	/		5.9	M1C1
Culture and Tourism	/		1.2	M1C3
Social Inclusion and Cohesion	/		50.3	M5C2 M5C3
Research and Innovation in University and School	0.643	P.1 RSO 1.1.5	83.4	M4C1 M4C2
Health	/		23.8	M6C1 M6C2

#### 4.2.8 Pistoia

The province of Pistoia attracted 43.52 million from ERDF 2014 2020. with reprogramming of 5.34 million euros. From the ERDF performance. especially about reprogramming. it can be seen that the province had difficulties in spending since it received the lowest share in reprogramming, after Grosseto. Pistoia in the ERDF 2021 2023 reprogramming spent EUR 18.4 per citizen, placing it well below the regional average value (49.42). The expenditure performance is better in the NRRP where the per capita expenditure is 2451.21 euro, 200 euro below the regional average value (2638). Looking instead at the policy areas of intervention, some elements can be highlighted: the area of social inclusion and cohesion in urban areas was highly underfinanced in ERDF reprogramming. According to the BesT report, Pistoia has the

lowest value in the security domain to unreported fatal crimes (BesT Istat.2023), showing a territorial need for social inclusion and cohesion. However, the policy area was financed by the NRRP with a considerable expenditure in relation to the other provinces at the regional level (55.1 million). Expenditure in SMES competitiveness was supported in the ERDF as the largest investment in reprogramming, but spending in the same policy area in the NRRP only reached EUR 11.2 million. The dynamics highlighted here show a predominant use of the NRRP compared to the ERDF. In addition, the most heavily funded policy areas were 'environmental sustainability and energy efficiency' following a clear regional trend, and the “social inclusion and cohesion” area. All other policy areas reveal some of the lowest NRRP spending at regional level.

Table 25.: Pistoia NRRP and ERDF expenditure. Autor's own elaboration based on [opnepnrr.it](http://opnepnrr.it) and [opnecohesion.gov.it](http://opnecohesion.gov.it)

Pistoia NRRP and ERDF expenditure 2021-2023 (million, euros)				
	ERDF	Priority ad RSO financed	NRRP	
Environmental sustainability and energy efficiency	1.24	P.4 RSO 4.1 4.6	482.4	M2C2 M2C4 M2C5
Digitalisation	/		9	M1C1
SMEs Competitiveness	3.75	P.3 RSO 3.1; 3.4	11.2	M2C1 M1C2
Culture and Tourism	/	P.4 RSO 6.7	8.7	M1C3
Social Inclusion and Cohesion	0.339	P.6 (Urban areas) RSO 4.1 and 9.6	55.1	M5C2 M5C3
Research and Innovation and School	2.05	P.1 RSO 1.5	67.7	M4C1 M4C2
Health	/		38.5	M6C1 M6C2



#### 4.2.9 Prato

In the 2014-2020 ERDF, Prato spent 57.46 million euros, out of which 8,73 in the reprogramming period 2021-2023. Prato's per capita expenditure in the 2021-2023 ERDF was EUR 33.71 compared to a regional average of EUR 49.42. The per capita expenditure in the NRRP 2021-2023 was instead 2490 euro, 150 euro below the regional average value.

Regarding the ERDF, it should be noted that resources were reprogrammed on Environmental Sustainability, Social Inclusion and Cohesion in Urban Areas, and Research and Innovation. Expenditure in social inclusion and cohesion is -after the province of Florence- the highest share within regional level (3 million euros). This result is in line with the province's territorial need for social inclusion in urban areas. As highlighted by the BesT report, Prato is the province with the lowest indicators in terms of reports of robbery and voluntary homicide. For the latter indicator, Prato in 2021 had a voluntary homicide rate of 1.5 per 100.000 inhabitants, exceeding three times the average Italian value. Further ERDF spending concerns the SMEs competitiveness area, which is consistent with Prato's nature as an industrial district, and the Environmental sustainability and energy efficiency area. Regarding NRRP, the province of Prato attracted the least number of resources for the school and education domain. According to the BesT report, the province of Prato ranks last among the provinces for 3 out of 8 indicators pertaining to the education and training domain: in particular children who use the daycare center, people with at least a high school diploma and college graduates. Furthermore, the digitisation area spent only EUR 3 million, and the 'health' area EUR 23.5 million. Such a low expenditure in these two key areas for territorial cohesion, in a peripheral territory with structural difficulties highlighted by the territorial welfare indicators, is a warning sentinel to be taken into account when looking at the territorial allocation of redistributive policies.

Table 26: Prato NRRP and ERDF expenditure. Autor's own elaboration based on [openpnrr.it](http://openpnrr.it) and [opencohesion.gov.it](http://opencohesion.gov.it)

Prato NRRP and ERDF 2021 2023 (million,euros)				
	ERDF	Priority ad SO financed	NRRP	
Environmental sustainability and energy efficiency	3	P.4 RSO 4.1;4.6	457	M2C2 M2C4 M2C5
Digitalisation	/	P.1 RSO 1.1	3.1	M1C1

SMEs Competitiveness	2.24	P.3 RSO 3.1; 3.4	14.1	M2C1 M1C2
Culture and Tourism	/		2.9	M1C3
Social Inclusion and Cohesion	3.05	P.6 (Urban areas) RSO 4.1 and 9.6	49.4	M5C2 M5C3
Research and Innovation and School	0.427	P.1 RSO 1.1.5;	49.3	M4C1 M4C2
Health	/		23.5	M6C1 M6C2

#### 4.2.10 Livorno

Livorno spent 48.16 million euros in the 2014-2020 ERDF, 4.12% of the total ERDF. In the 2021-2023 ERDF reprogramming period, the province spent 9.9 million. The ERDF 2021 2023 per capita allocation was of 30.83, 29 euros below the regional average. In the NRRP, on the other hand, the spending performance was much better: 2575.46 euro per citizen, just below the regional average (2638 euros). Livorno's spending dynamics meant that the NRRP was mainly used at the expense of the ERDF. The latter was reprogrammed in almost all policy areas, but none significantly. In contrast, the NRRP had a good expenditure performance in the fields of environmental sustainability and energy efficiency, SMEs competitiveness, School and University and Health. The higher expenditure in the environment domain can be explained by the fact that the province of Livorno contains the largest number of protected areas in the region (Istat, BesT Toscana, 2023). On the contrary, the significant NRRP expenditure in SMEs competitiveness appears consistent with the territorial need related to the policy area: Livorno presents the lowest patenting index at the regional level after Grosseto.

Table 27: Livorno NRRP and ERDF expenditure. Autor's own elaboration based on [openpnrr.it](https://openpnrr.it) and [opencohesion.gov.it](https://opencohesion.gov.it)

Livorno NRRP and ERDF 2021-2023 (million, euros)				
	ERDF	Priority ad SO financed	NRRP	

Environmental sustainability and energy efficiency	2.90	P.4 RSO 4.1;4.6	459.9	M2C2 M2C4 M2C5
SMEs Competitiveness	1.20	P.3 RSO 3.1; 3.4 Ax I RSO1.1	102.5	M2C1 M1C2
Digitalisation	/		8.8	M1C1
Culture and Tourism	1.69	P.6 RSO 6.7	8.2	M1C3
Social Inclusion and Cohesion	1.77	P.6 (Urban areas) RSO 4.1 and 9.6	26.2	M5C2 M5C3
Research and Innovation and School	2.32	P.1 RSO 1.1.5;	88.8	M4C1 M4C2
Health	/		41.6	M6C1 M6C2
Other if any				

#### 4.2.11 Grosseto

Grosseto received 13.85 million euros from the 2014 2020 ERDF, about 1.19 percent of the total ERDF, the lowest value in the entire Tuscan region. Reprogramming 2021 2023 foresaw only 3 million euros allocated and reprogramming in only 3 out of 7 Priority. The per capita expenditure of the ERDF 2021 2023 was 14.19 euro per citizen. Grosseto was the province that spent the least on ERDF reprogramming, with a difference of 25 points less than the regional average value. The performance in the NRRP expenditure was much more better, with a per capita of EUR 2882.87, above the regional average value. This high value was affected by the large expenditure in the area of environmental sustainability and energy efficiency, which, however, was found to be homogeneous across the region. Looking at both instruments expenditure, it is very clear that the NRRP was preferred to the ERDF.

The ERDF result is quite disorienting considering that Grosseto is the worst performing province in terms of fair and sustainable well-being. The province has the highest number of

NEETs at the regional level and the lowest levels of students reaching university. Similarly, the province has the lowest number of employed people in the region, so it reveals a need for Social Inclusion and Cohesion and School and University infrastructure upgrading. Policy response in the two areas was weak in both ERDF and NRRP, in which expenditure is the lowest within the region. However, one element to be positively noted is the ability to attract resources in the NRRP environmental sustainability and energy efficiency area. 391,8 million appears consistent with the province's territorial need in the policy field. Indeed, Grosseto has the lowest value of differentiated waste collection in urban areas and the lowest availability of urban green space in the province.

Table 28: Grosseto NRRP and ERDF expenditure. Autor's own elaboration based on [openpnrr.it](http://openpnrr.it) and [opencohesion.gov.it](http://opencohesion.gov.it)

Grosseto NRRP and ERDF 2021-2023 (million. Euros)				
	ERDF	Priority ad SO financed	NRRP	Missions
Environmental sustainability and energy efficiency	1.51	P.4 RSO 4.1	391.8	M2C2 M2C4 M2C5
SMEs Competitiveness	1.40	P.3 RSO 3.1; 3.4	8.1	M2C1 M1C2
Digitalisation			8.8	M1C1
Culture and Tourism	/	/	4.3	M1C3
Social Inclusion and Cohesion	/	/	18.4	M5C2 M5C3
Research and Innovation in University and School	0.153	P.1 RSO 1.1.5	57.2	M4C1 M4C2
Health			27	M6C1 M6C2

#### 4.2.12 Findings from the descriptive analysis

The experience of Tuscany presents a different picture from that of Campania. but one that nonetheless presents conditions that need to be properly addressed.

Firstly, the difference in size between the ERDF and the NRRP is considerable. The NRRP is in some cases more than ten times the size of the ERDF per policy area and it was therefore not difficult to find that some provinces focused their investments entirely on the NRRP and less on the ERDF (Pistoia, Prato, Grosseto and Livorno).

In some cases, such as in the case of the social inclusion and cohesion priority, the fact that the ERDF only targeted interventions in urban areas and the NRRP did not have this kind of territorial connotation certainly allowed for a clearer demarcation between interventions.

Finally, the comparison between groups of provinces, divided according to characteristics such as size, performance on indicators of equitable and sustainable well-being, and productive specialisation has made it possible to better identify and present the dynamics that can be observed.

Firstly, the ERDF, like the NRRP, concentrated 52% of its resources on the capital province of Florence. This percentage cannot be explained by a population density that would justify such an imbalance, nor by a higher GDP of the province compared to the other nine. Tuscany has 10 provinces with different and at the same time leading production systems (Prato, Pistoia, Lucca, Siena). Moreover, the ERDF and the NRRP should pursue the same objectives of cohesion, providing a homogeneous response on the regional territory and targeting territorial needs. Compared to the other provinces, other types of observations can be made.

**Siena and Arezzo** performed well in both the ERDF and the NRRP, attracting funding, particularly in the 'most dynamic' sectors. For example, Siena had the best results at the regional level for the school and education indicators (BesT), and the school and education sector received more funding than the other sectors from both the ERDF and the NRRP. The same dynamic was observed in the case of Arezzo in the environmental sector.

Pisa and Lucca show a similar dynamic: a good performance in reprogramming and spending in the ERDF 2021-2023 and a poor capacity to attract resources in the NRRP in the areas where territorial needs have been identified. For example, Pisa was one of the provinces that attracted fewer resources in Mission 2 of the NRRP (environment) in which territorial needs have been identified, while many resources were attracted in School, University and Research and Health, in which Pisa presents the best values in terms of performance at regional level (Istat, BesT Toscana, 2023). Lucca, on the other hand, although it had ERDF reprogramming in all the

priorities, did not spend enough resources in the field of SME competitiveness, both from the ERDF and the NRRP, despite having the third largest production system in Tuscany (in terms of local units).

On the contrary, Pistoia, Prato, Grosseto, Massa Carrara and Livorno invested more in the NRRP and less in the ERDF reprogramming. Finally, Massa Carrara, Grosseto and Prato present the most critical picture. The three provinces put all their eggs in the NRRP basket, as evidenced by the low expenditure of the ERDF. Apart from the environment sector, which has seen high spending throughout the region, the provinces have not spent enough on the NRRP to compete with the rest of the regional territory, nor have they managed to spend significantly concerning their territorial needs (insufficient for Prato in the case of schools and education; for SMEs competitiveness in the province of Massa Carrara; and in all the policy areas except for environment in the case of Grosseto province).

In summary, the findings from the descriptive analysis are as follows:

1. The ERDF allocated in the 2021-2023 reprogramming was not territorially homogeneous, with half of the resources (52%) concentrated in the province of Florence.
2. Regional disparities in NRRP expenditure are impressive: To cite just a few examples, Florence spent 843 million euros in the years 2021-2023 in Social Inclusion and Cohesion, while Grosseto spent 18.4 million. The same province spent 75.2 million in digitalisation and innovation of public administrations, while Prato spent 3.2 million. All the provinces spent an average of EUR 477 million on environmental sustainability and energy efficiency, while Massa Carrara spent only EUR 82 million.
3. Some provinces have attracted resources from both funds in the leading sectors (Siena, Arezzo, Pisa, Florence), resulting in a concentration of resources in sectors that are already highly competitive at the regional level;
4. Other provinces have invested in one or the other instrument, (mostly in NRRP) although the areas that have attracted the most resources are not always those where there was an identified territorial need;
5. The provinces with the greatest socio-economic difficulties (Pistoia, Massa Carrara, Prato and Grosseto) have been losers in both funds, attracting insufficient resources, on the one hand, to catch up with the other provinces and on the other to respond to a wider range of territorial challenges.

## 4.3 Connecting quantitative and qualitative findings: discussing results

### 4.3.1 ERDF and NRRP: which integration is possible?

In this section, it will be discussed how quantitative findings relate to qualitative findings to confirm or not the hypothesis formulated so far. Specifically, each sub-hypothesis will be explored through qualitative and quantitative analysis and the answers will contribute to confirming or not confirming Hypothesis 1.

*Subhypothesis 1.1: The multiplication of available resources and their timing will lead to a displacement effect and may affect the absorption capacity of the ERDF and/or the NRRP.*

The response of the regional interviewee on the integration capacity between the ERDF and the NRRP was long and clear. Tuscany, as a "more developed" region, has been used to managing small ERDFs over the years, always below 1 billion euros, spread over 10 provinces (in 7 years plus 3). The experience of the ERDF in Tuscany in the 2014-2020 cycle and in the last reprogramming in September 2020 has been positive, both in terms of its absorption capacity and its projection on the territories. The programming of the ERDF is characterised by an experience of consultation between local authorities, regional authorities, socio-economic actors and other relevant stakeholders. The calls for tenders launched by the region are tailored to a territorial response and, although the Covid-19 epidemic crisis weakened the socio-economic productive fabric in the last reprogramming, the call for "innovation in businesses" received a large and even unexpected response. The arrival of the NRRP first of all crowded out the public policy "market" by putting billions and billions of euros on the table, allowing local authorities to finance projects with public money that they would not have been able to finance before. This led to a displacement effect in 2022 and 2023 of projects that local authorities would have funded in the past through the ERDF, but which were now funded through the NRRP. According to the local authority interviewee, the NRRP restored the centrality of the municipalities, which were able to 'catch this runaway train' by financing what they already had in the belly of the administration.

*SubH1.2: The NRRP and the ERDF work either in parallel, funding the same policy areas, or alternatively, through a demarcation of policy areas (the ERDF funds some, the NRRP others).*

The interviewee from the region pointed out that when the ERDF calls were being prepared for 2021-2022, local authorities replied: *'I would like to postpone your calls because I have an NRRP projects on the same intervention'*. In other words, local authorities could participate in one fund or the other, also because the NRRP and the ERDF had the same thematic reference areas. The interviewee from the region also concluded that the fact that local authorities now only invest in the NRRP and not in the ERDF weakens the absorption capacity of the ERDF 2021-2027 and slows down its normal functioning. Finding n.4 of the descriptive analysis also confirms the trend of local authorities investing in one fund or the other. Grosseto, Livorno, Prato, Pistoia and Massa Carrara invested more in the NRRP and less in the ERDF, while Pisa and Lucca performed better in the ERDF and less in the NRRP. As argued by the interviewee from the region, this is because the municipalities do not have the capacity to participate in both funds. There is no time to participate in two calls for proposals with different procedures and tight deadlines, often funding the same policy interventions. These findings lead to the confirmation of the first research hypothesis regarding Tuscany:

*H1: The antithetical governance, procedures and rules of the RRF and the ERDF 2014-2020, despite similar substantive priorities, do not allow for an effective integration of the two instruments and will lead to a suboptimal allocation of resources.*

In order to better investigate research hypothesis number 1, the complementarity and demarcation strategies between the ERDF and the NRRP were examined during the interviews. In reprogramming queue 14-20 (the one from 2020 to 2023) **there was no demarcation or complementarity strategy**. This was because the ERDF was reprogrammed in September 2020 by blocking actions funded until the end of 2023. **This meant that the start of the NRRP at the end of 2021 ran "in parallel" with the ERDF**, without any real coordination. It was only with the regional resolution of 18 July 2022 that a regional committee for the integration and complementarity of national and EU policies was set up to ensure that there were no double-funded interventions. Around 2021-2027, both the regional and local authority respondents confirmed that the NRRP and the ERDF will follow a principle of demarcation of interventions, thus continuing a "parallel" approach. When discussing possible complementary or synergistic actions between the instruments, **both respondents pointed out that there could be no scope for integration between the two instruments. This is due to several elements: different regulatory procedures, a different role of the region in the NRRP, which changes from "managing authority" to "beneficiary", and finally the timing of the NRRP.** The latter



provides an incentive for local authorities to transfer all their projects to the NRRP and eventually, if they remain incomplete in the period after 2026, to re-finance them with the ERDF.

#### **4.3.2 Do not harm cohesion: when distributive policies are based on administrative capacity rather than territorial needs.**

The second research hypothesis assesses the extent to which RRF and ERDF are based on administrative capacity rather than territorial needs. Two sub-hypotheses were formulated to answer this question.

*H2.1 NRRP and ERDF may be allocated according to 'territorial endowments', including the presence of universities, research centres and innovative companies in key sectors (energy/environment) or (third sector/NGOs). This territorial endowment can attract resources in spite of territorial needs, widening the gap between less dynamic areas and more dynamic ones.*

Findings 1,2,3 from the descriptive analysis confirm sub-hypothesis 2.1. in which NRRP resources are allocated according to a territorial endowment principle, favouring more dynamic sectors located in the most economically attractive provinces over territorial needs. Indeed, Firenze, Siena and Pisa spent the largest share of NRRP and ERDF per capita compared to the other provinces, with a gap of 200 to 800 euros above the average, which is much more visible in the NRRP. The dynamic observed in the quantitative analysis is not only that the most economically dynamic provinces are those that attract the most resources from both the ERDF and the NRRP. It is also observed that within these provinces the sector in the province which has a competitive advantage is able to attract most resources.

When the respondent of the local authorities answered the question of whether the NRRP was evenly allocated among the territories, the answer was clear. *"Let's take into consideration the 'Borghi call", which made available 2 million euros per village to renovate 18 villages in Tuscany. We can see that the municipalities chosen were those that were able to write the best projects. The demand was large, we asked the State to respond to it with more fund,. but we received no reply. The NRRP responds to a logic of capability because there is a lot of money available and only a few municipalities can grab it. The municipalities that already had projects in the pipeline and that submitted the best projects in terms of quality won the funds. Eighty municipalities participated in the tender. but only 18 of them were selected."*

Considering the uneven territorial response to ERDF calls, the regional respondent added “*ERDF responses to calls reflect structural dualisms. Florence and Pisa are the provinces that attract the most resources. The universities Normale (Pisa) and Sant'anna are centres of excellence, and calls for innovation in universities are won by them. It is also necessary to reflect on the fact that the ERDF is not an accessible instrument to use, there are barriers to entry, which compromise the participation of territories that are less well-endowed in these terms (universities, research centres, innovative companies).*” Both respondents then pointed out some solutions that were being considered in the steering committee of the next programming cycle 2021-2027 to overcome this observed disparity, both in the ERDF and the PNRR. The solutions could be considered only at the regional level (ERDF) since NRRP is managed at the central level. The respondent of local authorities reported that there is a desire to ensure that municipalities that fail to attract PNRR resources can access the ERDF. “*We told the municipalities that did not win the boroughs call, to keep the projects and submit them in the ERDF if there will be similar calls, or for municipalities affected by the internal areas, to submit these projects in the Inner Areas National Strategy.*”

The region's respondent also pointed out that in the ERDF 2021-2027, to stem territorial disparities, **an effectiveness reserve will be provided for mountain and coastal territories, which have more territorial needs than the others (Grosseto, Livorno, Massa Carrara, Lucca, Pistoia, Prato).**

*H2.2 Local authorities with low planning capacity and/or inadequate financial resources will not participate in the RRF beyond their territorial needs. (quantitative, qualitative)*

Finding 4 of the descriptive analysis partially answers this hypothesis. It does not reveal why territories with less capacity participated less in the NRRP and the ERDF, but by mapping the per capita expenditure of both funds, it can already be seen that the **territories with the highest territorial needs and the greatest socio-economic difficulties were the big losers of the NRRP and also had less ERDF reprogramming in the 2021-2023 period.** When asked to explain why a territorial need was not matched by participation in the NRRP, the respondent from the local authorities pointed out that “*some municipalities do not participate in all calls because they are not sure they can guarantee the sustainability of the interventions over time*”. The NRRP finances the infrastructure work, but then it is the municipality, with its own resources, that must provide for the maintenance of the work, and its final destination. For example, commenting on the non-participation of Prato and Pistoia in the call for tenders on kindergarten, the local authority respondent pointed out “*kindergartens for local*

*administrations are a bloodbath. The rates at which they are made available are low for citizens, which means that the cost is all on the municipal administration's back. For municipalities with scarce resources, choosing between a kindergarten and another infrastructural intervention, also considering that there is a trend towards childlessness, makes them lean towards another infrastructural intervention."*

To strengthen the capacity of municipalities, for example, Anci Toscana has launched an NRRP support desk that allows municipalities to be helped in the planning phase. Anci also gives this support to set up territorial strategies within the National Strategy for Inner Areas(ERDF). However, as pointed out by the respondent, *"cohesion and NRRP funds do not exhaust all the needs that local authorities have, and therefore do not always respond to territorial needs that are broad and that are not limited to works but also to their maintenance"*.

Confirmation of sub-hypotheses 2.1 and 2.2 lead to corroborating the hypothesis 2 for the case study of the Tuscany region:

*H2: Administrative capacity plays a central role in guaranteeing policy effectiveness. RRF by being based on this mechanism and not on regional needs will produce a distorted geography that will reflect the administrative capacity geography and not territorial needs. thus increasing disparities between north and south. cities and other areas.*

## 5. Discussing results: main findings

### 5.1 Discussing results related to Hypothesis 1: NRRP and ERDF, which integration is possible on the ground?

This section presents a comparative analysis of the results from the two case studies. The methodological choice of having selected a Convergence objective region and a "More developed" region has made it possible to carry out a comparative analysis that horizontally takes into account the "capacity" of the sub-regional authorities, considering the different degrees of development in relation to the European average. This capacity is expressed above all in the management of various redistributive public policies with the ultimate aim of bringing about regional convergence, an objective shared also in the Italian NRRP.

Subhypothesis 1.1 *“The multiplication of available resources and their timing will lead to a displacement effect and may affect the absorption capacity of the ERDF and/or the NRRP”*

The size of the Campania ERDF was originally EUR 4 billion, while the Tuscany ERDF was EUR 778 million. Campania, like many other southern Italian regions, had an ERDF 2014-2020 absorption capacity of 70%, a dynamic that is passed on from one programming cycle to the next. The region is already historically unable to absorb such a concentration of funds; moreover, the numerous exogenous shocks that have occurred since 2020 have slowed down the region's expenditure.

Tuscany on the other hand, had an excellent ERDF absorption capacity in the 2014-2020 cycle (110%). These two starting conditions serve to understand the ground on which the NRRP was placed and probably the dynamics it triggered in light of certain structural dynamics of the regions themselves.

In both regions, qualitative findings show that there has been a crowding-out effect between the ERDF and the NRRP and this effect has had and continues to have different spillovers. **Firstly, both regions reveal that the NRRP is shifting local authorities more towards the latter by not participating in the ERDF. In essence, there is a competition effect taking place.** The respondent of the Campania local authorities pointed out that some new elements of novelty make the NRRP more attractive for municipalities. These include: the reduction in payment times, the possibility of hiring staff for the NRRP (albeit on a temporary basis and until 2026),

and the possibility of promoting training and refresher courses for local authority staff. All these elements were necessary and missing in the previous ERDF. In Tuscany, on the other hand, a respondent from the local authorities pointed out that at the moment their focus is on the NRRP, which represents an unprecedented financial opportunity and puts far greater resources than the ERDF.

The displacement effect has occurred both at the policy level and in the specific case of Campania also at the market level.

**Displacement at the policy level occurs because NRRP is actually slowing down the normal operation of the ERDF as confirmed in both the Campania and Tuscany cases.**

This could aggravate the absorption capacity of the ERDF in Campania, which already has obvious structural problems, and weaken a functioning instrument, the ERDF, in the region of Tuscany.

Furthermore, there is also a market displacement effect in Campania. As pointed out in the example given by the regional respondent, the huge expenditure that has occurred in the region in the area of energy efficiency in both the ERDF and the NRRP in 2022 has led to a demand for energy efficiency work that has far exceeded the supply of companies willing to carry out such work.

According to the qualitative findings from both case studies, there is a feeling that **this dynamic could lead to the ERDF becoming a 'servant' instrument to the RRF in the coming years.**

The weakening of the ERDF compared to the RRF according to the Campania region is also evident in the disinvestment the government is making in ensuring an adequate level of 'complementarity of national funds'. This is particularly true with respect to the resources of the Development and Cohesion Fund, which have not yet been released for the Campania region, leading it to experience a major financial and liquidity crisis. In order to answer sub-hypothesis 1.1 organically, it can be said that there is a displacement effect of the NRRP on the ERDF that occurs in both regions. In Campania, the effects also occur at the market level with a large expenditure of resources in the same sector that has not been absorbed by a market ready for this 'liquidity injection'.

Sub-hypothesis 1.2: *The NRRP and the ERDF work either in parallel, funding the same policy areas, or alternatively, through a demarcation of policy areas (the ERDF funds some, the NRRP others).*

Considering sub-hypothesis 1.2 the descriptive analysis confirms that all provinces used the instruments either in parallel, where both funds financed the same policy objectives, or alternatively (where either one instrument or the other was used). **It is interesting to note that in both regions the provinces with the highest indicators at the regional level in the fair and sustainable wellbeing classes were those that used both funds in a "parallel" manner. (Benevento, Salerno, Siena, Arezzo, Florence, Lucca, Pisa). On the other hand, the provinces that already started from the analysis of territorial needs as more disadvantaged have used either one fund or another, in an alternative manner.** This is the case of Naples and Caserta, as well as Pistoia, Grosseto, Livorno and Prato. In the case of the Tuscan provinces, this 'alternative' use is even more evident in provinces which have spent very few resources from ERDF 2021-2023 reprogramming, which in many cases did not exceed a total of EUR 5 million. **In other words, the provinces that use either the ERDF or the NRRP are the most disadvantaged and therefore access either one part of the resources or the other. On the other hand, the more dynamic provinces manage to exploit the opportunities provided by both funds.** The quantitative analysis showed that if a form of integration and coordination could exist, it was only for those provinces that used the NRRP and the ERDF in parallel, i.e. financing policy areas with both instruments. The qualitative results show that no integration was possible in the years 2021-2023 for several reasons: **the novelty of the instrument and its different functioning meant that there was a metabolization time at the regional and sub-regional level that did not immediately allow a competition effect to be seen and prevented. Moreover, changing the governance has definitely undermined every possible integration at regional level. In addition, the need to spend the NRRP, which has an unprecedented magnitude, prompts the government to demand from local authorities that the NRRP be absorbed, effectively putting the ERDF on the backburner.**

The confirmation of sub-hypothesis 1 and sup-hypothesis 2 lead to the confirmation of hypothesis 1 for both regions analysed here. Thus, the antithetical governance, procedures and rules of the RRF and the ERDF 2014-2020 (in its 2021-2023 reprogramming) despite similar thematic priorities do not allow an effective integration of the instruments and lead to a suboptimal allocation of resources. The sub-optimality of resources is confirmed by the fact that local authorities are unable, except for those with the best administrative capacities, to make use of all the resources made available by the two funds, since no concrete upstream coordination has been foreseen. **At the territorial level, depriving the regions of their coordination role has meant laying the tracks for another train (NRRP), which has a different programming at central level and has no contact with the ERDF except in terms of policy objectives. This finding suggests that the NRRP is not complementing the redistributive policies already in place, but in many cases is 'replacing' them.**

## **5.2 Discussing results concerning Hypothesis 2: when administrative capacity counts more than territorial needs**

Sub-hypothesis 2.1 questions whether the resources go to the provinces with a more vibrant production fabric rather than responding to identified territorial needs. The ERDF has regional convergence as its ultimate goal, so it should target resources primarily where territorial needs exist. The programming, implementation and monitoring of the ERDF are presided over by a steering committee that includes regional authorities, local authorities and the evaluation team so that the fund is managed collectively across the territory. The NRRP, on the other hand, has a ministerial management, in which the national state through the ministers in charge of the different policy areas produce calls to which the local authorities respond. Although the NRRP is supposed to respect the 'do not harm cohesion' principle, there is no provision at the territorial (regional or sub-regional) level that operationalises this principle. The only shrewdness has been to allocate 40 per cent of the resources to southern Italy, but this does not guarantee that within regions there is a focus on ensuring that resources go where they are needed.

**What emerges from the descriptive analysis, and is confirmed by the interviews conducted, is that both the ERDF and the NRRP channel resources to those provinces**

**with the highest territorial endowment.** Territorial endowment means a combination of tangible assets, such as the presence of innovative companies, dynamic universities, research centres, NGOs in the territory, and intangible assets, such as an ability to participate in calls for tenders and to capture resources. Within these provinces, there are policy areas that are heavily overfunded by both funds, but which do not present particular territorial needs. (Benevento, Salerno, Florence, Pisa, Siena, Naples are example of that). What can be observed is that if in the NRRP this dynamic reinforces and seals the existing territorial disparities, this does not happen in the same way in the ERDF. To give some examples, Benevento in the NRRP took the largest share of resources allocated to the environment (about 894 million euro) despite being the province with the best values in the environment and energy indicators proposed by Istat (Best, Campania, 2023).

The province of Naples, which has the worst indicators in the environment and energy domains, and which also has a greater territorial extension than Benevento, received 720 million euros in the environment domain of the NRRP, about 120 million euros less.

Another example in the Tuscan case is the province of Prato. The province shows the lowest values at the regional level in the Education and Training indicators, highlighting a territorial need. However, the NRRP expenditure in this area in Prato was 49.3 million, the lowest at the regional level, against an expenditure of 364.6 million in Pisa and 354.5 in Florence. These latter have the best indicators at the regional level on education and training, so such a disparity in resources seems unreasonable and can only consolidate regional disparities instead of favouring convergence. **The same dynamic in many cases is also observed in the ERDF, but the latter has a territorial projection that does not allow for such an unequal distribution of resources.** For example, the ERDF provides for a regional evaluation team to monitor the implementation of the programme and to inform the policy maker in charge of programming (the region) of the uneven responses coming from the territory. It has been seen in the case studies that due to administrative capacity which plays a key role in participation in Cohesion policy such as the NRRP, both Campania and Tuscany regions have implemented 'solutions'. For example, the Campania region in the 2021-2023 ERDF reprogramming set up an internal task force to help local authorities plan, design and implement ERDF projects. The Tuscany region, on the other hand, in order to counter the observed phenomenon in which Florence, Pisa and Siena absorb all available resources, has planned a reserve of effectiveness for inland and coastal areas in ERDF 2021-2027, envisaging a territorial re-balancing in this sense. **In the**



same way, the multi-level governance that exists and has been consolidated in the regional territory, also makes it possible to build calls in the ERDF in which local authorities are able to participate, allowing a flexibility of timing and modalities that has the ultimate objective of promoting intervention in the territory. As one respondent from the Tuscan region pointed out, there are barriers to entry for the ERDF. But at the same time, there are also good practices that are being perfected over time in order to stem the perverse logic of hoarding funds from the most capable territories. Credit for this is certainly due to the role that evaluation plays in Cohesion policy. The CPR requires continuous monitoring and evaluation both within the region and 'independent', i.e. outsourced, at various stages of the policy's development. In the implementation phase, through annual reporting on the progress of the policy, through ex-post and thematic analysis. This evaluation informs the policy maker in the process by giving him/her the possibility to adjust the focus and reallocate resources to the region in a balanced way. This territorial projection and evaluation approach in the NRRP does not exist, making it in fact a 'cloudy' instrument, difficult to interpret and above all not 'reprogrammable' on some territories and not on others.

Looking at the differences in terms of per capita expenditure in both instruments (Table 23), it is immediately apparent that the NRRP is creating an asymmetric shock on the territories. This asymmetry occurs both by virtue of the magnitude of the NRRP, which makes the intra-regional disparities in terms of public spending even more marked, and by virtue of its spatially blind conformation, which allocates resources to the provinces and sectors that are already competitive.

A citizen of Benevento received EUR 3989 more in NRRP funds than a citizen of Naples in the years 2021-2023. This figure exceeds the Tuscan difference even more because the NRRP share is higher in southern Italian regions. **Consequently, this suggests that the regions of southern Italy are more at risk of definitively sealing existing intra-regional disparities, which the NRRP only exacerbates.** The table 29 (see p. 124) on per capita expenditure also informs us which provinces performed best in both ERDF and NRRP. Florence in the Tuscany region was an urban area that swallowed up many resources from both instruments, putting it in sharp contrast with all the other provinces. In Campania, on the other hand, Benevento and Avellino were the provinces that attracted the most resources from both instruments. As mentioned earlier, these are also the provinces that perform best in the analysis of fair and sustainable welfare indicators conducted by ISTAT. On the contrary, the provinces that had already been

identified as 'structurally most disadvantaged' and with 'welfare indicators in the lowest classes' in the introductory phase of the case studies also turned out to be the provinces that spent the least on both funds. (Prato, Massa Carrara, Grosseto, Pistoia for Tuscany, and Caserta and Naples for Campania). These disadvantaged provinces had low spending in many NRRP items despite the identified territorial needs and this partly reflected the second sub-hypothesis that local authorities with less capacity and financial resources would not participate in NRRPs despite the need. Comparing the results of the two regions on sub-hypothesis 2.2, what we obtain is a fairly clear answer, although not lacking in nuances of meaning.

Administrations with less financial strength and capacity may choose not to participate in the RRF for several reasons. Firstly, there is a **time constraint**, making the NRRP an unpredictable tool to be applied within tight timeframes, particularly with large projects. Secondly, there is a **capacity issue** concerning the development of projects that align with territorial needs. Often, less capable local authorities seek funding for projects that are administratively ready but lack a long-term local development strategy and context. As noted by a respondent from the Campania region, a territorial need may not always be addressed through policy action."

And lastly, for a question **of financial sustainability**: local authorities are not able to sustain the cost of maintaining interventions over time, and the issue is aggravated in southern Italy where a substantial part of these is already in a state of financial collapse. The region of Campania has raised a problem that was not raised by the region of Tuscany although it was expressly requested. Namely that the need for advances to local authorities that are unable to advance NRRP money is undermining regional finances. To some extent, this finding overcomes the assumption made that administrative capacity is the criterion by which the geography of the NRRP is based. It is not only administrative capacity that determines the allocation of the NRRP but an intersection of elements that determine the winning profile of the National Recovery and Resilience Plan: **medium to large territorial areas with strong administrative capacity, a vibrant economic fabric capable of absorbing resources, and with financial solidity to boot.** A further consideration must also be made. When the respondent of the local authority answered why there were no nursery schools in Prato, which has a territorial need for them, he stated that beyond financial sustainability there is also a strategic choice. Since these infrastructural interventions need to be maintained, the local authority is faced with a trade-off between different possible interventions in the area. In this sense, interventions that have a maintenance cost 'covered' by private sources are preferable to

interventions that have a maintenance cost totally borne by the public authority. Talking about the need to provide crèches in Prato, the respondent also added "the trend of the denatality makes us believe that there will be no demand for crèches in the future". In other words, the local authority's choice also goes towards the infrastructural intervention that may be more productive in the future, both in economic terms and in terms of territorial numerical demand. Thus a perverse dynamic is created whereby policy interventions do not respond to the present often interrelated territorial challenges but respond to market logic. The birth rate can also be explained by the difficult reconciliation of women's work and life times, and so the creation of a subsidised public crèche makes it possible to respond at the same time to several challenges: the demographic challenge, the low participation of women in the world of work and the social inclusion of the most disadvantaged groups. If the NRRP, which is a redistributive policy, is not reconciled with a political objective, the gap between those left behind and those who boarded this policy will be striking and not easily bridged.

Table 29: Assessing intra-regional disparities in terms of per capita expenditure:  
Tuscany and Campania 2021-2023. Author's own elaboration

Assessing intra-regional disparities in terms of per capita expenditure: Tuscany and Campania 2021-2023		
	Tuscany	Campania
NRRP	Highest per capita expenditure	
	Florence: 3340 euros	Benevento: 5702 euros
	Lowest per capita expenditure	
	Massa Carrara :1807 euros	Naples: 1713 euros
	Difference in euros for a citizen born in Florence and a citizen born in Massa Carrara: <b>1532 euros</b>	Difference in euros for a citizen born in Benevento and a citizen born in the Metropolitan City of Naples: <b>3989 euros</b>
ERDF	Highest per capita expenditure	
	Florence: 129 euros	Avellino: 131 euros
	Lowest per capita expenditure	
	Grosseto: 14 euros	Caserta: 33 euros
	Difference in euros for a citizen born in Florence and a citizen born in Grosseto: <b>115 euros</b>	Difference in euros for a citizen born in Avellino and a citizen born in Caserta: <b>98 euros</b>

## Conclusions

This section presents the comparative and final conclusions from the work that has been carried out. In the post-pandemic landscape, EU Member States are still facing a set of demographic, social, economic, and environmental challenges that have been compounded over time and exacerbated by the multiple crises that have followed after 2020 (not only the global epidemiological crisis, but also macroeconomic recession, energy crisis, climate crisis, geopolitical imbalances). These challenges required a prompt response from the European Union, which launched the Next Generation EU, of which the RRF is the key instrument. The RRF, which for each Member State takes the form of a National Recovery and Resilience Plan, did not fit on a blank canvas. On the contrary, it is embedded in a history of redistributive policies dominated by the European Union's Cohesion policy, which has existed and has been refined over the last thirty years as a result of evaluations and studies that have been undertaken to answer the crucial question of *how to promote regional convergence and even out differences between territories in terms of development*.

In other words, the RRF was launched in a European Union that was already pondering, and has done so for years, how to best stimulate growth without compromising equity. The “*do not harm cohesion*” principle, which should have been respected in the application of the NRRP, is a proof of the premises underpinning the instrument.

This study has investigated with a mixed methods approach how the ERDF and the NRRP were implemented in Italy in the years 2021-2023 through a case study of two regions: Campania and Tuscany. What emerged from this analysis is that firstly, although the integration and synergy of the two instruments is requested (RRF Regulation, art.28, 2021), this request is not reflected in the Italian case and specifically in the two regions analysed. The different governance, the size of the NRRP, and the tight spending timeframe have favoured a

competition effect between the ERDF and the NRRP and at the moment there is no real synergy between the two instruments. More 'capable' provinces have been using both instruments, while the less competent ones have been limited to just one of them. Intra-regional disparities are the obvious effect behind the mechanism of the NRRP and the ERDF fails - even if it wanted to - to stem this effect. What is observed is not only that the most capable provinces in the world post 2026 will be more digital and more ecological, but that the gaps in terms of development that are occurring are becoming unbridgeable, and this is due to the number of resources being allocated to some provinces and not to others, in a blind vision over the territorial vocations of each area. The NRRP lacks territorial projection, and the substantial amount of resources to be allocated within a short timeframe suggests that, in many cases, the financed interventions may result in 'cathedrals in the desert,' particularly in southern Italy. This is due to both the absence of a genuine development strategy into which the interventions could be integrated and the uncertainty regarding the sustainability of the interventions supported by local authorities over time. This will also depend on the political will of the national government to support the current expenditure of Italian municipalities. At the moment, this does not seem to be the political line taken, as expressed in Decree No. 19 of 2 March 2024, which provides for a cut in the current expenditure of municipalities for the years 2027 to 2029 (Anci 2024).

The insight from this research is that not only the ERDF and the NRRP are not contributing to reduce intra-regional disparities. Other important conclusions should also be highlighted.

**First and foremost, there is a desperate need to reconcile policy objectives with political action.** Redistributive policies must respond to the objective of promoting cohesion across territories to reduce the citizenship gap, otherwise they are just injections of money thrown at an uncontrolled market.

The ERDF is a tool that has been refined over time in the programming cycles and through the use of evaluation, adopting an increasingly territorial approach that is evident in the case of both Campania and Tuscany. **Indeed, the multi-level governance underlying the ERDF experience, and the external capacity of evaluation to identify errors and distortions and present them to the policy-maker, make the ERDF an interesting policy experience, to be Sustained, improved, and eventually reformed.**

This experience and capacity are, in many cases, a territorial endowment to build on, and - in the Italian case - this territorial tradition has been overlooked within the NRRP. Secondly, it has become evident that the NRRP lacks a homogeneous territorial projection. On the contrary,

the NRRP is financing a certain type of territory: medium-sized or large areas with a vibrant productive fabric and a good administrative capacity, both from local authorities and other private actors present in the area. **It is an instrument that fosters the growth of urban centers at the expense of the stagnation of peripheral regions.** For instance, the growth of Florence is sustained, whereas Naples experiences stagnation, despite both being pivotal urban areas within their respective regions, but with markedly different performances.

Florence, on the one hand, emerges as the dynamic and successful urban area that has successfully secured a large number of resources from both funds.

Naples, on the other hand, is configured as a large periphery, which despite the different and varied challenges it has to face remains trapped in the mechanisms of two such different instruments, failing to absorb enough resources and even to orient them with respect to territorial needs. This also leads us to further reflection: **redistributive policies should provide for an important identification ex-ante of territorial needs through a profiling of the territories where interventions are financed.** This exercise would serve to understand how interventions can be maximised to respond to challenges that are often 'intersectional' but also clash with material starting conditions that differ from territory to territory. Territorial profiling serves to understand not only the challenges present in the territory, but also what solutions are possible in light of the financial and administrative situation of local authorities. This task is often vaguely entrusted to the partnership principle: in the Common Provision Regulation governing ESI funds, the article 5 make it compulsory for each Member States to put in place an economic and social partnership in charge of identifying and combining regional objective with the objectives set by the Partnership Agreement. However, these places of consultation lack of a clear geographic dimension and this is reflected in the ERDF regional programmes in which very few times challenges are identified within specific territories (provinces or groups of municipalities).

In this sense, the approach to designing cohesion interventions should be different. Rather than developing interventions across the entire region solely based on identified challenges, ignoring the specificities of each territorial area, the approach should stem from the territorial framework.

In light of these considerations, questions that should be asked in the post-27 reform of distribution policies should take into account geographical, social, economic political and institutional elements in a single territorial framework.

The risk of not adopting this approach is that of having a country where disparities take on kaleidoscopic forms, replicating themselves between north and south, centre and periphery, strong city and weak city, inland area and island area. And this multiplication of citizenship injustice may have dramatic effects on the health of our democracy.

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## Annexes

### Gdpr forms

#### MODULO INFORMATIVO E DI CONSENSO ALLA PARTECIPAZIONE E AL TRATTAMENTO DEI DATI

#### DESCRIZIONE E SCOPI DELLA RICERCA

Gentile partecipante,

con il presente documento le chiediamo di fornire il suo consenso informato a partecipare alla ricerca “How RRF and ERDF 2014-2020 are contributing to reducing intra regional disparities? A comparative analysis of Campania and Toscana regions.” realizzata da Alessandra Buonaiuto con la supervisione della Professoressa Laura Polverari. L’obiettivo della ricerca è quello di indagare nelle annualità 2021-2023 come il dispositivo di Ripresa e Resilienza e il Fondo Europeo per lo sviluppo Regionale hanno contribuito a ridurre o meno le disparità intra-regionali in uno studio di caso su due regioni italiane: Campania e Toscana.

#### METODOLOGIA DI RICERCA

Durante la ricerca Le verrà chiesto di partecipare ad un’intervista audio-registrata sulla sua esperienza riguardo programmazione del FESR 2014 2020 e alla riprogrammazione FESR 2021-2023.

Le Sue risposte sono confidenziali e saranno trascritte e analizzate soltanto da Alessandra Buonaiuto nell’ambito della tesi di ricerca attualmente in corso presso l’Università di Padova. Nel caso di pubblicazione, non saranno condivisi dati personali che possano far risalire a Lei.

#### LUOGO E DURATA DELLA RICERCA

La ricerca viene svolta presso il Dipartimento di Scienze Politiche, Giuridiche e Studi Internazionali dell’Università di Padova e avrà una durata complessiva di 7 mesi (terminerà a Marzo 2023). La parte che prevede il Suo coinvolgimento riguarderà un’intervista individuale di circa 30-40 minuti.

#### RECAPITI

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#### CONSENSO ALLA PARTECIPAZIONE E AL TRATTAMENTO DEI DATI

La/Il sottoscritt\_ (COGNOME E NOME IN STAMPATELLO)

\_\_\_\_\_ acconsente

liberamente a partecipare allo studio dal titolo “How RRF and ERDF 2014-2020 are contributing to reducing intra regional disparities? A comparative analysis of Campania and Toscana regions”

La/il sottoscritt\_ dichiara:

1. Di essere a conoscenza che lo studio è in linea con le vigenti leggi D. Lgs 196/2003 e UE GDPR 679/2016 sulla protezione dei dati e di acconsentire al trattamento ed alla comunicazione dei dati personali, nei limiti, per le finalità e per la durata precisati dalle vigenti leggi (D. Lgs 196/2003 e UE GDPR 679/2016). Il responsabile della ricerca si impegna ad adempiere agli obblighi previsti dalla normativa vigente in termini di raccolta, trattamento e conservazione di dati sensibili.
2. Di essere consapevole di potersi ritirare dallo studio in qualunque momento, senza fornire spiegazioni, senza alcuna penalizzazione e ottenendo il non utilizzo dei dati.
3. Di essere consapevole che i dati saranno raccolti in forma confidenziale (nome/codice).
4. Di essere a conoscenza che i propri dati saranno utilizzati esclusivamente per scopi scientifici e statistici e con il mantenimento delle regole relative alla riservatezza.
5. Di sapere che una copia del presente modulo mi sarà consegnata dal ricercatore.
6. Di acconsentire alla videoregistrazione e/o audioregistrazione:

Sì

No



7. Di sapere che la protezione dei suoi dati è designata con Decreto del Direttore Generale 4451 del 19 dicembre 2017, in cui è stato nominato un Responsabile della Protezione dati, [privacy@unipd.it](mailto:privacy@unipd.it).

La/Il sottoscritt\_ (COGNOME E NOME IN STAMPATELLO)

\_\_\_\_\_ presa visione del presente modulo esprime il proprio consenso alla partecipazione e al trattamento dei propri dati personali.

Data \_\_\_\_\_

Firma leggibile \_\_\_\_\_

### **Checklist- regional authority interview**

1. What were the main implementation difficulties in the 2014-2020 cycle? Were these difficulties, if any, the same throughout the region?
2. What were the lessons learnt from this programming cycle and what are the elements of continuity with the new ERDF 2021 2027 programming cycle?
3. Why the ERDF specific objective (x) was not reprogrammed in this specific province?
4. How do you explain the low absorbtion capacity of this province in this ERDF policy area despite the territorial need identified?
5. Do you have experienced any displacement effects between NRRP and ERDF in the 2021-2023 period?
6. Which strategies have you found in the 2021-2023 period to coordinate ERDF and NRRP implementation and avoid overlapping or risk of double financing?
7. How would you define the coordination between the ERDF Managing Authority and the PNRR contact person?

- Of demarcation (the areas of application of the PNRR and the ERDF MA are defined ex ante so that there is no overlapping of project financing between the two instruments) Of complementarity (the two instruments contribute to financing common interventions)
- Other (please specify)

8. What effects has the arrival of the NRRP had on the region and on ERDF programming and implementation?

9. Which solutions have been identified to cope with the low absorbing capacity of provinces in ERDF?

## **Checklist - Local authority interview**

1. What are the lessons learnt by Campania's municipalities at the closure of the 2014-2020 ERDF programming cycle?
2. What were the main new elements of the NRRP introduced in the programming capacity of the municipalities?
3. What type of multi-level governance was put in place between the municipalities and the region to coordinate the implementation of the NRRP and ERDF both in the 2014-2020 cycle (in the 2021-2022-2023 reprogramming years) and in the 2021-2027 cycle?
4. Has the coordination between the PNRR and ERDF in the Campania region followed a logic of:
  - demarcation (the areas of application of the PNRR and the ERDF AdG are defined ex ante so that there is no overlap in project funding between the two instruments)
  - Complementarity (the two instruments concur to finance common interventions)

Other (specify)

Was this approach (demarcation and/or complementarity) defined already in 2021 when the PNRR was activated or only later in the 2021-2027 programming cycle?

5. Why did this specific province participate to a much lesser extent in missions 1 and 2 (ecological transition and digitalisation) of the PNRR than the other provinces?

6. Do the territorial needs of a province translate into an effective allocation of resources either through the ERDF or through the PNRR?

7. Have there been any competition/competition effects between PNRR and ERDF in the years 2022-2023 in the Campania region? And what effect have they had on local authorities?

8. What tools, if any, has ANCI, independently or in synergy with the Region, activated to support the administrative capacity of municipalities in participating in PNRR calls for proposals? If it has not activated any instruments, what action should be taken to enable local authorities to participate in PNRR calls for proposals?

## Declaration of originality

Il candidato dichiara che il presente lavoro è originale e non è già stato sottoposto, in tutto o in parte, per il conseguimento di un titolo accademico in altre Università italiane o straniere.

Il candidato dichiara altresì che tutti i materiali utilizzati durante la preparazione dell'elaborato sono stati indicati nel testo e nella sezione "Riferimenti bibliografici" e che le eventuali citazioni testuali sono individuabili attraverso l'esplicito richiamo alla pubblicazione originale.

The candidate declares that the present work is original and has not already been submitted, totally or in part, for the purposes of attaining an academic degree in other Italian or foreign universities.

The candidate also declares that all the materials used during the preparation of the thesis have been explicitly indicated in the text and in the section "Bibliographical references" and that any textual citations can be identified through an explicit reference to the original publication.

Student's signature

A handwritten signature in black ink, appearing to be the initials "AB", written over a horizontal line.