

10<sup>th</sup> FSR Annual Conference  
*Infrastructure Investment Challenges:  
Reconciling Competition, Decarbonisation And Digitalisation*  
10<sup>th</sup> - 11<sup>th</sup> JUNE 2021  
Florence School of Regulation

**European strategy on sustainable and smart mobility:  
what will be the role of economic regulation?**

**By Maria Luisa De Maio\*, Ivana Paniccia\*, Iolanda Vitiello\***

10<sup>th</sup> June 2021

*Object of the paper: comparison of three significant Recovery Plans to highlight economic regulatory issues*

\* Regulatory Authority for Transport, Turin, Italy

*The views expressed are purely those of the authors and may not in any circumstances be regarded as stating an official position of the belonging institution*

# Recovery and Resilience Plans aimed to foster decarbonisation and digitalisation targets

**Impacts** generated by transport require a **transformation** to decrease emissions and congestion. **Pandemic crisis accelerated trends** towards more **safe, sustainable, accessible and resilient** transport systems.

In order to obtain funds from NextGenerationEU (€ 750 billion, RRF: € 672.5 billion, € 360 billion in loans and € 312.5 billion in grants), each MS developed a **Recovery and Resilience Plan with reforms and projects** to be implemented up to 2026. Funds' release occurs after **achieving milestones and targets** clearly identified in the plans and the relative assessment of a satisfying fulfilment by EC.

| Member State | RRP<br>€ billion | RRF<br>€ billion |              | Green Transition      | Digital transition    |
|--------------|------------------|------------------|--------------|-----------------------|-----------------------|
|              |                  | <i>Grants</i>    | <i>loans</i> | <i>(at least 37%)</i> | <i>(at least 20%)</i> |
| Italy        | 191.5            | 68.9             | 122.6        | 40%                   | 27%                   |
| Spain        | 69.5             | 69.5             | (n.a. yet)   | 39%                   | 29%                   |
| France       | 100.0            | 41.0             |              | 50%                   | 25%                   |

- Results measurability
- Pressing roadmap
- Ambitious but credible and detailed plans
- Feasibility, accountability and monitorability

# Recovery and Resilience Plans: a focus on transport and mobility

## Public transport

- ⑩ France, that recently **approved a law for mobility (2019)**, focuses on **greening everyday mobility** (plan for bicycles, increasing the use of rail mode around big cities)
- ⑩ Spain, that started a **project of law for sustainable mobility and transport financing (2020)**, focuses on **an action plan for safe, sustainable and connected mobility** (low emission zones, fleet modernisation, projects for public transport)
- ⑩ Italy focuses on **renewal of fleets** (5,540 low emission buses, 53 electric trains), increasing bicycling, developing mass rapid transit, also by **reforming** procedures for projects evaluation

## Railway

- ⑩ Italy focuses on **developing high speed (H-S) rail** in less served regions (25 € bn)
- ⑩ Spain focuses on **infrastructures for European corridors and regional/local railways**
- ⑩ France focuses on **increasing/improving rail services** in less served areas, linking to cities

## Electric Infrastr.

- ⑩ Italy 7,500 recharging points on freeways and 13,750 in urban centres
- ⑩ Spain 80,000 – 110,000 recharging points
- ⑩ France 100 million € for recharging points (should be about 5,000 points)

## Hydrogen Infrastr.

- ⑩ France and Spain mainly focus on **low carbon/green hydrogen** (respectively €bn 2 and 1.5)
- ⑩ Italy invests on not only green hydrogen for 3.19 € billion (fuelling stations: 40 for wheeled vehicles, 9 for rail transport)

*Difficult comparison: lack of a common template for spending categories classification, identifying contribution in green and digital challenges*

# Economic regulation for digitalisation and decarbonisation

## targets in RRP (transport) 1/2

- **OBJECTIVE:** introducing Demand/Supply sides incentives (avoid/shift/improve) where markets failures apply to promote efficiency/effectiveness of transport/mobility systems and overall reduction of carbon footprint
- Regulation of conditions of access to infrastructure (networks, facilities, plants and rolling stocks):
  - allocation of space or rules for their use

*The promotion of "everyday" and connected mobility (France and Spain RRP) or electric recharging (F, I, S) result in a competing use of public space between different modes/users that requires mechanisms for its rational use, like a fare system based on the pay-as-you-use concept; related revenues may contribute to finance roads design and new allocation of urban space, considering all mobility needs; combined with an awarding system based on "avoided" emissions produced because of choosing green vehicles*
  - access/use fees, tolls

*access/use fees and tolls may be priced selectively to promote "green" modes/vehicles/rolling stocks, capturing negative/positive externalities (separate tariffs for classes of noise or air pollution, discounted tolls for hydrogen trains) or network effects; when public finance occur (i.e. for H-S rail in Italian RRP) a cap on tolls or final prices may be considered, as well as a "fair" return on invested capital (to be arranged, if any, with additional premiums on it :i.e. "super-WACC"))*
- Regulation of prices, tariffs, and quality of final services

*information and transparency on environmental impact for greater awareness of users (sunshine regulation); tariff regulation (internalization of negative environmental externalities): price-cap (adding a Q component linked to achievement of qualitative performance indicators); cost reflective criteria of pricing including environmental footprint*
- Regulation of terms of use/access of data in MaaS

*Contrasting discriminatory or foreclosure practices eventually adopted by platforms' coordinators against public/collective mobility; favouring data disclosure in a perspective of public reporting or social marketing on environmental footprint related to alternative transport choices*

# Economic regulation for digitalisation and decarbonisation targets in RRP (transport) 2/2

## Ø Regulation of entry, for franchise markets, and public service contracts (PSCs)

*green public procurement, with awarding criteria or mandatory requirements for bidders based on environmental aspects (rolling stock with better performance for emissions, industrial processes and service planning with lower environmental impact): => promotion of more sustainable (also financially) mobility modes/projects; yardstick competition to improve performance indicators (i.e. load factor, increase of nr of passengers, emission rates, energy efficiency), reward systems, penalties;*

## ➤ Multimodal public service obligations (PSOs) based on environmental footprint

- *adopting a **multimodal perspective for imposing PSOs**, by avoiding overlapping/duplication of compensated modal alternatives*
- *imposing PSOs only on the **most efficient and sustainable alternative available on each route**, identified considering the **environmental footprint**,*
- *defining **mandatory rules to assess intermodal and intramodal substitutes** (quantitative performance indicators) before imposing a PSO on a service*
  - *ongoing discussion in France about the suppression of domestic flights if by railway the same trip may be covered in a prefixed amount of time - "Loi Climat et Résilience")*
  - *to be considered substitution between other modes also (as in Italy, Art regulation n° 48/2017 considering railway and road transport substitutability)*
- *stronger methodology for the **identification of PSOs**, based on an objective analysis of demand needs and on the observation of users' travel profiles, by verifying the market failure as a prerequisite for the application of PSOs to be extended to all modes of transport ideally "combined" in one or (probably) more travel patterns.*

# Final remarks/Further developments

- ❑ RRP may benefit from a complementary/corroborating **regulatory framework** introducing:
  - ❑ Incentives/priority rules/discounts/bans/caps/penalties and monitoring based on measurable performance (output or outcome) indicators to be added to RRP indicators and milestones
  - ❑ Transparency to facilitate public control by citizens and services/infrastructures users
- ❑ **The different regulatory tools** available to maximise allocative and productive efficiency should **be used in a coordinated and consistent way** in order to avoid risks:
  - ❑ to over-incentivise some “green” modes of transport with respect to others
  - ❑ to invest public money in oversized infrastructures or services that will be used in a sub-optimal way, also because overlapping with existing alternative ones
    - ❑ => accurate analysis of demand needs of mobility and a systematic monitoring of (projected) infrastructures/services performance to be measured by indicators related to demand changes (variation of passengers, modal shift)
    - ❑ => implementing a predictive use of on-line data (big data) or specific surveys (stated-preferences methods) to capture the evolving travel patterns related to ongoing social and economic changes (also COVID-19) and to EU’s long-term climate targets
  - ❑ creating advantages for some operators or artificial barriers to exit/entry for others.
- ❑ **Towards a data driven, output-based model of regulation** based on cost-benefit analysis methods for investment decisions and performance monitoring in infrastructure and services?

*thanks for your attention*