

CLIMATE JOBS IN THE LOCAL PUBLIC TRANSPORT

EXPLORATORY STUDY OF THE ITALIAN CONTEXT

POE 7TH ANNUAL WORKSHOP

DEMOCRATIC PLANNING AND LABOUR ALLIANCES BEYOND GROWTH

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[...] climate-related employment is that aimed at mitigating of global warming, i.e. the reduction of CO₂-equivalent emission volumes (Ytterstad, 2021); [...] It is a matter of translating the priorities dictated by climate change into concrete objectives, elaborating the industrial policies necessary to achieve them and evaluating the related employment effects.

Climate Jobs Campaigns

- ▶ promoted by FFF Italy
- ▶ included in the international platform of global climate jobs campaigns (South Africa, Portugal and the United Kingdom)
- ▶ job activation estimates for the ecological transition
- ▶ to show how democratic public-driven planning can lead to a mutual reinforcement between employment and climate policy

Climate Jobs Group

Interdisciplinary group of researchers (sociologists, economists and engineers) who engage with the approach developed during the drafting of the first ex-GKN industrial plan: *putting research at the service of the social and environmental struggles and industrial crisis*

- ▶ *Universal Basic Services (UBS)* strengthening the welfare state by guaranteeing services considered basic for collective well-being (such as mobility)
- ▶ *socially useful production* in the wake of the Lucas Plan

Motivation

- ▶ combining the element of *essentiality of the mobility service* with that of *strategic production*
- ▶ short-sighted national approach to the renewal of the circulating LPT fleet: massive import from abroad

Why do we focus on the public mobility sector?

- ▶ fulfills the mobility needs of the lower and middle classes
- ▶ bus sector is strategic for the development of skills and production capabilities necessary for the ecological transition
- ▶ further develops the reflections that emerged with the ex-GKN dispute on the need to reconvert factories belonging to the automotive industry towards public and sustainable mobility productions

SECTORAL PATTERNS AT NATIONAL LEVEL

National Mobility Behaviors and Emissions

- ▶ with almost 40 million cars and just over 100,000 buses, Italy is among the most motorised countries in Europe (Pendolaria, 2024)
- ▶ private car mobility produces about 70% of total road vehicle emissions and 61% of total transport emissions (Bienati et al., 2023)
- ▶ 77,6% of Italians' trips take place on an urban scale within a distance range of 2 to 10 km (Di Mambro et al., 2023)
- ▶ transport is the largest sector by emissions in Italy and the only one that has increased them overall since the first international climate agreements (Transport & Environment, 2019); transport contributes 1/5 of total CO₂ emissions (IEA 2023, Greenhouse Gas Emissions from Energy)

Production, Registration, and Usage of Buses

Year	Buses Produced in Italy	Buses Registered in Italy	Buses Used for LPT
1980	6945	/	/
1990	6460	/	/
2000	3163	/	/
2010	1065	/	/
2015	765	2381	950
2017	390	3427	1416
2019	148	4375	2221
2022	271	3221	1999

Table: Production, Registration, and Usage of Buses. *Source:* our elaboration based on ANFIA data.

International Trade of Buses

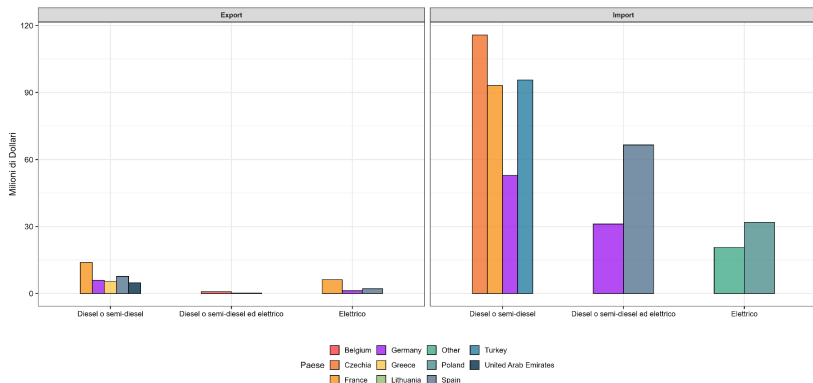


Figure: 2021 exports and imports of buses in Italy broken down by type of vehicle and country of origin. *Source:* our elaboration on UN Comtrade data.

Import flows are clearly higher than those of exports (around ten times) and that in both cases diesel or semi-diesel buses represent the main trade category.

Employment in Local Public Transport

Year	Bus Service Employment	Buses per 10,000 Inhabitants
2005	85518	7.82
2010	86526	7.67
2014	84458	7.57
2018	81038	7.27
2021	81715	7.55

Table: Bus Service Employment and Buses per 10,000 Inhabitants.

Source: our elaboration based on Ministry of Transport data

FIRM-LEVEL ANALYSIS
&
EMPLOYMENT MULTIPLIERS

Employment Multipliers

$$\text{Multiplier}_{i,t} = \frac{\text{Employees}_{i,t}}{\text{Output}_{i,t}}$$

The employment multiplier

1. shows how many workers are activated to produce one unit of a certain good;
2. records how many workers are activated to produce one million euros of a certain asset (total value of production in millions)

Employment, Output, and Multiplier for Bus Producers

Anno	2020			2022		
Azienda	Occupati	Output (migliaia di euro)	Moltiplicatore	Occupati	Output (migliaia di euro)	Moltiplicatore
IVECO	5.839	4.357,445	1,34	6.068	7.239,219	0,84
IIA	453	155,136	2,92	578	39,518	14,62
RAMPINI	106	25,221	4,20	99	27,141	3,64
TECNOBUS	n.d.	n.d.	n.d.	13	1,955	6,64

Figure: Employees, Output, and Multiplier in 2020 and 2022 for four identified companies. *Source:* Our elaboration based on AIDA data.

Bus Production: Employees Activated

Target: PRODUCTION OF 1,000 BUSES FOR THE LPT!

Based on Industria Italiana Autobus, we assume that each bus is worth approximately EUR 0.52 million, then

$$\left\{ \begin{array}{l} \text{TotalOutput} = 155.136 \text{ (IIA nel 2020)} + 27.141 \text{ (Rampini nel 2022)} + \\ 1.955 \text{ (Tecnobus nel 2022)} = 184.232 \text{ milioni di euro} \\ \text{Employees} = 453 \text{ (IIA nel 2020)} + 99 \text{ (Rampini nel 2022)} + \\ 13 \text{ (Tecnobus nel 2022)} = 565 \\ \text{Moltiplicatore} = \frac{565}{184.232} \approx 3,1 \end{array} \right.$$

The production of each bus activates 3 employees, so by producing 1,000 buses we activate: $1.6 \times 1000 = 1600$ workers. Considering 565 already active employees (although some of them at risk of redundancy due to the crisis in IIA), **an additional 1035 climate jobs would be created in bus production** in Italy.

Employment, Output, and Multiplier for LPT Companies

Gestore	Occupati	Output (migliaia di euro)	Moltiplicatore
ATM	9.516	978.751	9,72
TPER	2.025	219.377	9,23
GTT	4.089	421.281	9,7
ANM	1.880	194.678	9,65
AMT-GE	2.882	218.385	13,2
AMT-BA	757	50.069	15,12

Figure: Employment, output and labour multipliers for selected transport services companies in 2022. *Source:* our elaboration on AIDA/ORBIS data

LPT Service: Employees Activated

Target: INCREASE THE LEVEL OF SERVICES PROVIDED BY 20%!

we assume a linear relationship between the increase in the total value of production (output) and an increase in the number of employees needed to meet it

$$\left\{ \begin{array}{l} \text{TotalOutput} = 2.082.541 \text{ million di euro} \\ \text{Employees} = 21.149 \\ \text{Multiplicatore} = \frac{21.149}{2.082.541} \approx 10,16 \end{array} \right.$$

1 million output activates about 10 operators. Considering the 20% increase target just described, corresponding to 416.5 million (2.082,5 million \times 20%), we obtain the **activation of approximately 4232 new jobs.**

With reference to the production and service delivery companies studied,

1. the production of 1,000 buses
2. the increase of the LPT service by 20%

Activity	New Climate Jobs
Bus Production	1035
LPT Service	4231

Table: Summary of activated climate work by type of activity. *Source:* Our elaboration on AIDA/ORBIS and Exiobase data.

Policy Implications and Conclusion - I

1. *Strategic Fund* at MIMIT with the function of reactivating the production of public vehicles and its value chain in Italy: involvement of State-Regions Conference, the representatives of the social partners, representatives of consumers, commuters and civil society organisations according to the criteria of representation and transparency guaranteed by the European protocols;
2. *Restoration of the Marcora Law* by extending the right of preemption to companies in high-emission sectors and in the need to ecological reconversion to prevent industrial crises;

Policy Implications and Conclusion - II

3. Use public procurement (i) supports demand and efficient scales of production for national companies, (ii) promotes greater environmental sustainability, decent working conditions, and processes of innovation through specific clauses in the purchase contracts (avoid paradoxical epilogue of IIA);

To achieve a *just* ecological transition, we need to bring together the demands of ecological and labour struggles. The *labour versus environment* dilemma has to be overcome through the democratic planning of industrial policy

THANK YOU FOR THE ATTENTION!

Firms in Ateco 4931 and 5221

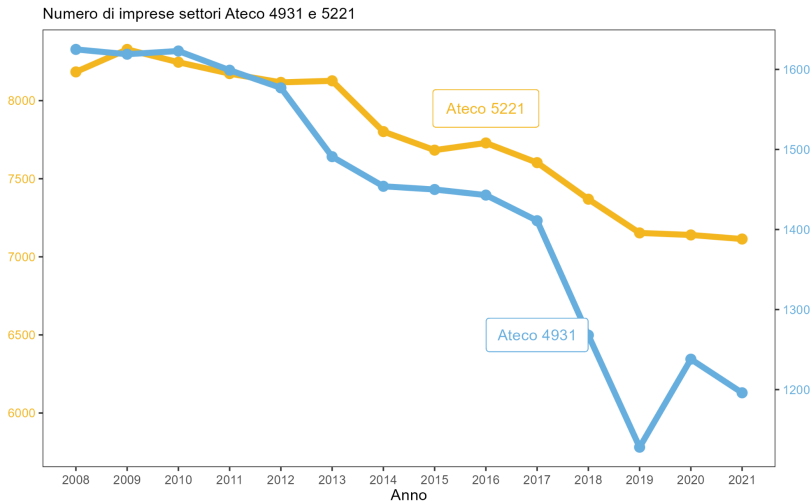


Figure: Dynamics of the number of LPT companies (i) 4931: land passenger transport in urban and suburban areas; (ii) 5221: land transport service activities. *Source:* our elaboration on Istat data

Employment in Ateco 4931 and 5221

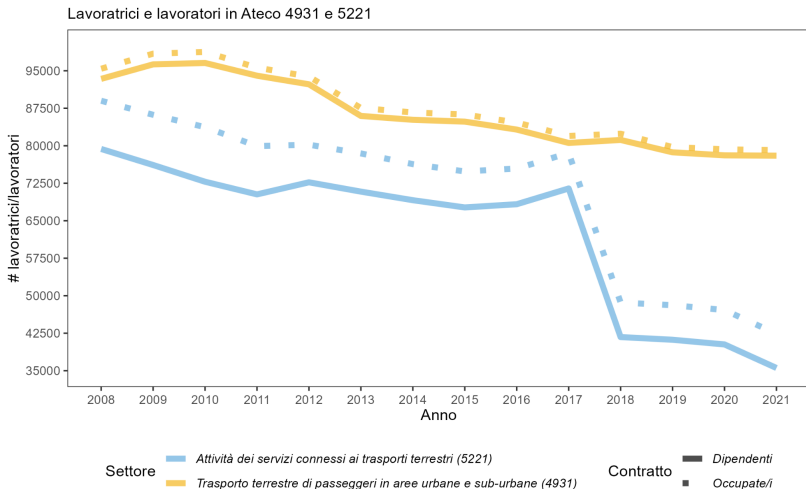


Figure: Employment dynamics in the LPT service (yellow line) and related services activities (light blue line). Source: our elaboration on Istat data

Bus Production - Employment

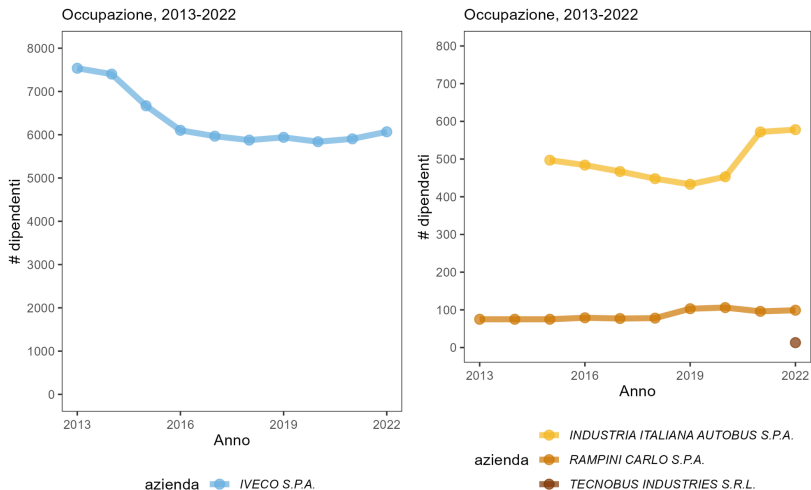


Figure: Employment for the four companies under analysis, 2013-2022.

Source: own elaboration based on AIDA

Bus Production - TPV

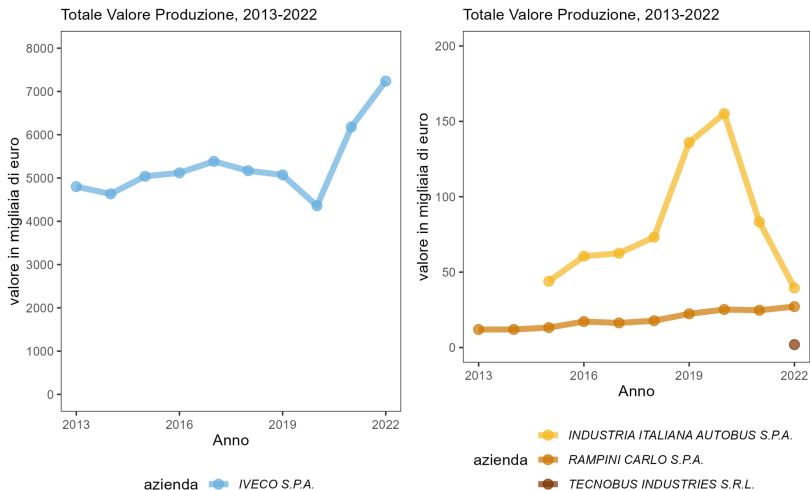


Figure: Total production value for the four companies under analysis, 2013-2022. Source: own elaboration based on AIDA

TPL - Employment

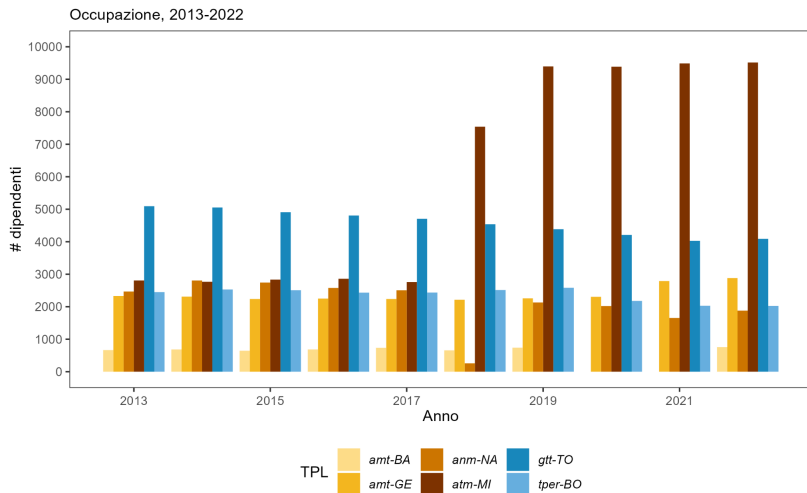


Figure: Number of employees in LPT over the period 2013-2022. Source: our elaboration on AIDA/ORBIS data.

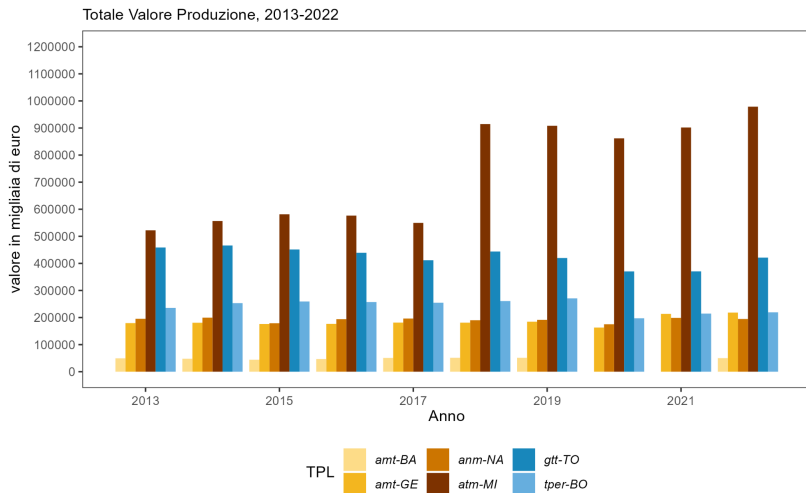
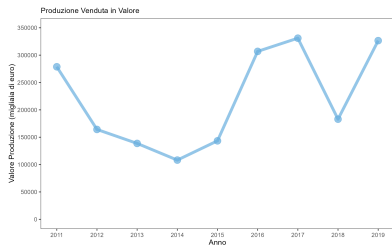
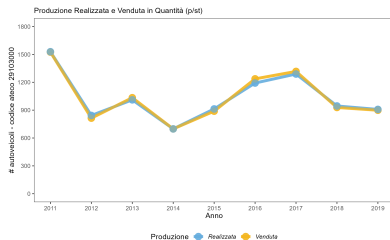


Figure: Total value of production (thousands of euros) over the period 2013-2022. *Source:* our elaboration on AIDA/ORBIS data.

Productive Patterns



(a) Sales Over Time



(b) Quantities Produced

Figure: Source: ISTAT, Ateco 29103000, *manufacture of motor vehicles for the transport of ten or more persons.*

Public Policies and Funding

- ▶ NRRP resources for the *Green Transition* + Mission 7 of Repower-EU ~ investments for regional railways and renewal of zero-emission train fleets & subsidizing the development of international leadership and R&D leadership in the field of electric buses” **2.905 billion** for 3,000 zero-emission buses and the respective production chain;
- ▶ National Strategic Plan for Sustainable Mobility (2019) *Fondo Mezzi* **250 million per year** (2020-2033) + 1.287 billion to metropolitan cities municipalities > 100,000 inhabitants (2021) for alternative fueled buses and related infrastructures;
- ▶ Sustainable Mobility Strategy Fund: "Fit for 55" - **2 billion** 2023-2034;
- ▶ LPT Fund (2013): the Budget Law 2024 allocates **5.18 billion** for 2024, **5.22 billion** for 2025 and **5.27 billion** for 2026