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# **Between crisis and transition: the Italian automotive industry at a crossroads**

*The economic and employment impacts of the failed  
transition and strategies to revitalise the sector*

**BRIEFING PAPER**

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## Executive Summary

The global automotive market is accelerating towards electric mobility, redefining the competitive dynamics of the sector. The Italian industry is facing this transformation amid significant challenges, with a steady decline in production over the years (in 2024, 310,000 vehicles were produced, an 85% decrease compared to the historical peak in 1989). Further delays in adapting to this shift could severely undermine the sector's competitiveness, increasing the risk of marginalisation at both the European and global levels.

A new study commissioned by ECCO and T&E Italia to a group of professors and researchers from the Institute of Economics, Scuola Superiore Sant'Anna in Pisa and the Enrico Fermi Research Centre in Rome<sup>1</sup> analysed the economic and employment impacts on the national automotive industry of the failure to transition to electric mobility. According to the various scenarios analysed, the cost of inaction is estimated to result in a reduction of production value between 7.24 and 7.49 billion dollars<sup>2</sup> and a loss of 66,000 to 94,000 jobs, leading to an increase in unemployment benefit spending of up to 2 billion dollars over ten years.

To counter this trend and promote the sector's recovery, the study proposes a framework for coordinated industrial policies, structured along four key areas: mission, sector, technology and market. The following aspects are identified as priorities within this proposal:

- **Stimulating domestic demand for electric vehicles through** direct incentives, including an experimental social leasing scheme targeted at citizens and families experiencing mobility poverty, public procurement and indirect measures that influence taxation;
- **Incentivising investments in R&D activities**, encouraging public-private collaborations, particularly in cutting-edge technological areas such as batteries and material circularity;
- **Supporting industrial redevelopment** by promoting process innovation and adapting workforce skills;
- **Reducing energy costs** to align production costs with other European countries, complementing emergency measures with market regulatory interventions to decouple the price of renewable energy from that of gas.

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<sup>1</sup> Maria Enrica Virgillito, Scuola Superiore S. Anna, Pisa; Angelica Sbardella e Lorenzo Cresti, Enrico Fermi Research Centre, Rome

<sup>2</sup> All values calculated by the study are reported in USD

## The automotive industry crisis

The Italian automotive industry is currently facing the crucial challenge of transitioning to electric mobility within a context of prolonged decline in vehicle production (310,000 units in 2024, an 85% decrease compared to the peak of 2 million vehicles produced in 1989, Figure 1), with significant repercussions on related industries. The long-term trend towards downsizing national production plants, if not to closure, exacerbates the sector's structural weaknesses and undermines its competitiveness.

### Historical trend of production volumes in Italy

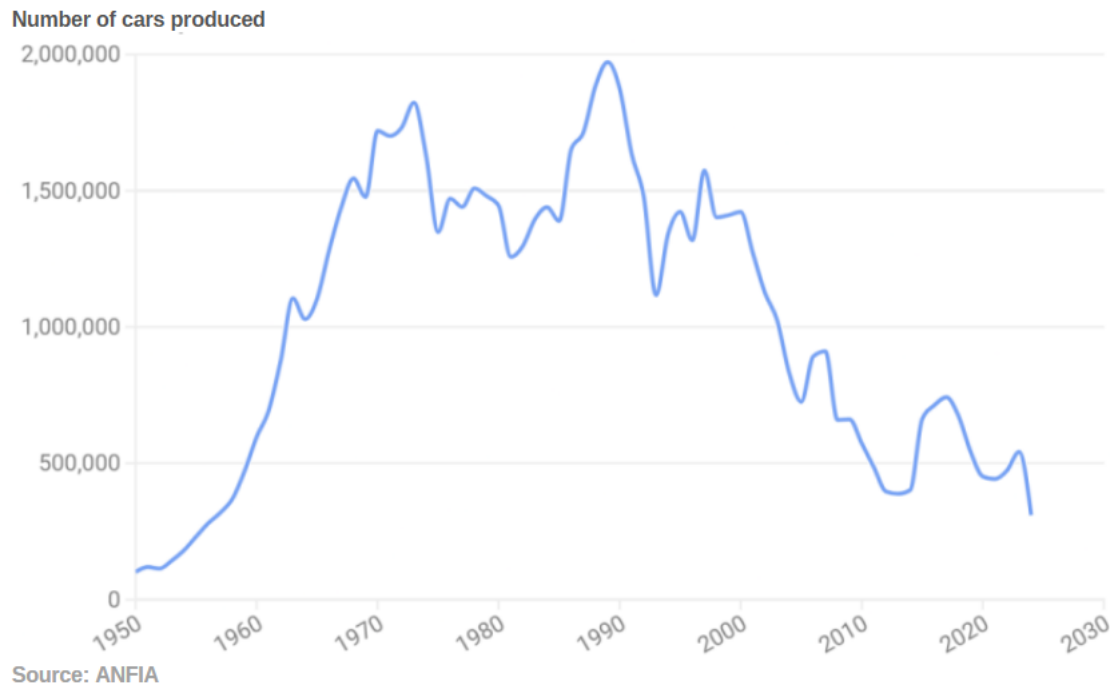


Figure 1.

With a European and global market increasingly oriented towards electric mobility [Bloomberg], the slow penetration of electric vehicles into the national market is also impacting production. Even in 2024, due to the lack of affordable models in the A and B segments, historically referred to as "economy cars," sales of battery electric vehicles in Italy were still at 4% of new registrations, far behind the double-digit figures seen in other major European markets [ECCO-ICCT-IMT]. In 2023, the production of electric vehicles amounted to only 78,000 units (14% of the total), a figure that, in the context of a heavy overall contraction in the sector's production, nearly halved in 2024 (45,000 units produced out of a total of around 310,000 cars, according to ANFIA projections). In this context, it is no coincidence that, despite being in a situation where Europe is struggling to keep up with the US and China, Italy remains the least attractive country for investments in the transition of the automotive sector to electric [T&E].

Given this situation, what could happen in the coming years if no new policies are introduced to revitalise a sector that has long been crucial to the national economy? Without a clear shift in industrial strategy, what is the outlook for the Italian automotive industry in European and global competition in the transition to electric mobility?

ECCO and T&E Italia posed these questions to Maria Enrica Virgillito from the Scuola Superiore S. Anna in Pisa, and to Angelica Sbardella and Lorenzo Cresti from the Enrico Fermi Research Centre in Rome, to measure the "cost of inaction" between now and the end of the decade, in other words, the impacts on industry, employment, the national economy and public spending in the absence of transition and revitalisation policies. The aim was also to understand how to counteract this phenomenon. The researchers developed a scenario analysis (using a simulated input-output model) of the costs of failing to transition, complemented by a structured policy approach for the sector, summarised in the study 'The Automotive Industry and the Transition to Electric Mobility in Italy'.

## Employment risks and associated costs for the state

Based on the OECD's Input-Output (I-O) tables, which outline the economic relationships between the automotive industry and the sectors involved in the production supply chains (such as mechanical and electronic components, software, raw materials, textiles, etc.), the study evaluates the cumulative economic and employment impacts of inaction in the Italian automotive industry, that is, the failure to transition to electric mobility, between 2021 and 2030. In the absence of revitalisation policies, the researchers predict that car production will continue its downward trajectory. Consequently, employment will decline both in the automotive sector (direct sector) and in the rest of the production supply chain (indirect sectors). Year after year, the loss of jobs and, consequently, of purchasing power will negatively affect production in the following years, creating a regressive economic cycle.

The study quantifies the effects in three possible scenarios, depending on the market's ability to absorb workers made redundant from the automotive sector. The greater the number of employees who find work in other sectors, the lower the loss of purchasing power and production. Among those who are not reabsorbed into the labour market, a part resorts to the redundancy scheme (*Cassa Integrazione Guadagni, CIG*), while the rest remain unemployed (assuming a structural unemployment rate of 5%). The distribution of workers in these three categories determines the final levels of car production and consumption, and—along with them—the added value (i.e., the automotive sector's contribution to the national economy), the number of employees in the sector and public spending to mitigate the employment crisis through CIG. The specifics of the three scenarios are summarised in Table 1.

### Three employment scenarios

Distribution of redundant workers from the automotive sector in the three scenarios

	High intervention scenario	Medium intervention scenario	Low intervention scenario
Workers re-employed elsewhere	15%	45%	65%
Workers in CIG	80%	50%	30%
Unemployed	5%	5%	5%

Data extracted from: Cresti, Sbardella, Virgilito (2025).

Table 1.

In the most conservative scenario ("Low intervention")<sup>3</sup>, it is assumed that 65% of the redundant workers will be re-employed in other sectors, 35% will access the redundancy scheme and 5% will remain unemployed. In this scenario, by 2030, a production value loss of \$7.24 billion and a car consumption loss of \$4.42 billion is recorded (-56% compared to 2020). The total number of workers lost is 66,400, of which 24,600 are directly employed in the automotive sector (-65% compared to direct employment in 2020) and 41,800 in the rest of the supply chain (-54% compared to indirect employment in 2020). Over the course of 10 years, the cost to the State of covering 20,000 workers under the redundancy scheme would be \$510 million. The employment and public finance impacts associated with the redundancy scheme in the three scenarios are shown in Figure 2.

<sup>3</sup> 'Intervention' refers to the role of the state in implementing policies to mitigate the impact on employment.

## Employment and public finance impacts of the crisis in the absence of policies for the transition to electric cars

Workers in the short-time work scheme (left) and the public spending required to support them (right). Cumulative data for the three scenarios analysed in the study.

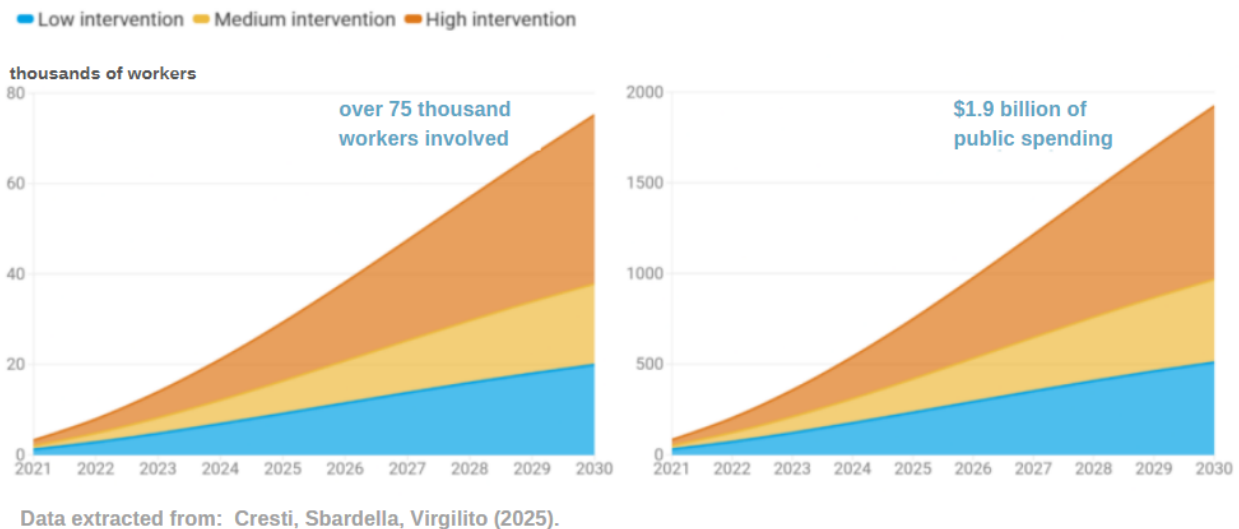
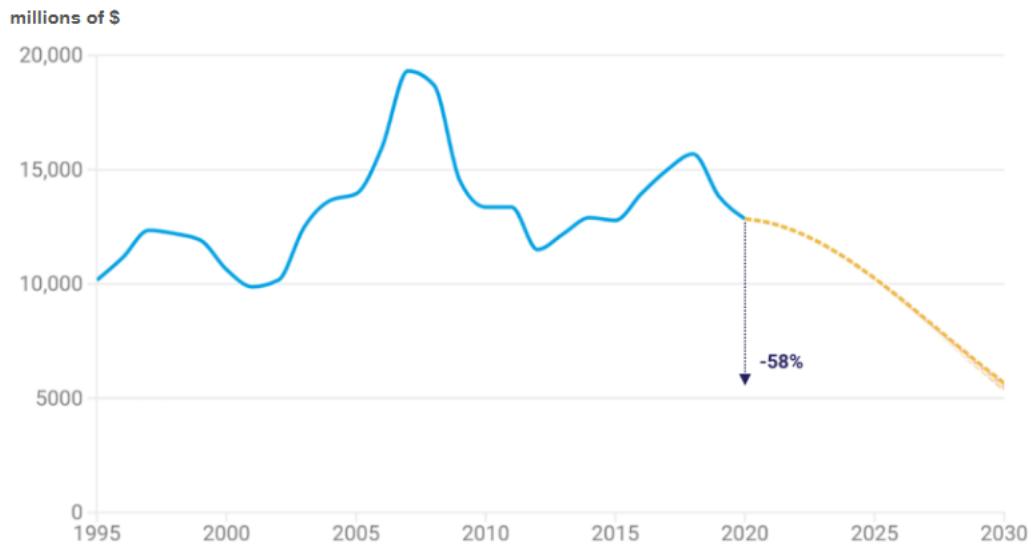


Figure 2.

The situation is different in the case where other sectors are only able to absorb a minimal share (15%) of the workers made redundant by the automotive sector (“High intervention” scenario). In this scenario, car production (-\$7.49 billion) and consumption (-\$4.66 billion) fall by 58% (Figure 3), with an estimated job loss of over 94,000. The almost 30,000 fewer direct employees represent a 77.6% reduction compared to the 38,100 in 2020 and risk marking a point of no return for Italy’s capacity to produce cars and related components. Additionally, the 64,400 workers lost across the rest of the supply chain could put pressure on sectors which, until now, have shown greater resilience and industrial strength. In this scenario, the redundancy scheme would cover 75,000 workers, at a total cost of nearly \$2 billion, roughly four times the amount projected under the more conservative scenario. To give a sense of the impact this scenario would have on public finances: in 2022, total welfare spending to support unemployed people (across all sectors, not just automotive) amounted to 1 billion euros.

### Historical trend in the value of car production and projections for 2030 in the absence of policies for the transition to electric vehicles



Data extracted from: Cresti, Sbardella, Virgilito (2025).

Figure 3.

The third scenario explored in the study ("Medium intervention"), which is intermediate compared to the two previously described, sees 45% of workers leaving the automotive sector and being absorbed elsewhere; 5% remaining unemployed; and the remaining 50% covered by the redundancy scheme. While the loss of production and consumption is very similar to that in the other scenarios, the employment and state cost figures are closer to those in the first scenario, which shows more limited impacts, though still of significant relevance. The total number of job losses is 75,600, of which 26,400 are direct (70% less than the 2020 figure) and 49,200 are indirect (63% less than the 2020 figure). The redundancy scheme covers a total of 38,000 workers, with an impact on public finances of around \$1 billion.



## Impacts on employment

Workers involved in the production of cars, direct or indirect (data in thousands)

	High intervention scenario	Medium intervention scenario	Low intervention scenario
2020	116.6	116.6	116.6
2030	22.6	41	50.4
Total loss	94.0	75.6	66.4
Loss %	80.6%	64.8%	56.9%

Data extracted from: Cresti, Sbardella, Virgilito (2025).

Table 2.

The lost added value is similar across all three scenarios, with values ranging from \$5.16 billion to \$5.3 billion, a 60% decrease compared to 2020. In other words, the contribution of the entire automotive production chain to national GDP could fall to less than half by 2030.

## Transition policies

In light of the potential decline of the automotive sector and the critical challenges this would pose for the national system, economists from the Scuola Superiore Sant'Anna in Pisa and the Enrico Fermi Research Centre in Rome propose a framework within which to develop public support measures aimed at reversing this trend. The researchers' proposal is to implement an integrated industrial policy plan, structured around four key pillars: mission, sector, technology and market, within a governance framework that ensures the involvement of all stakeholders.

Within the scope of **mission-oriented policies**, the Green Deal's goal of decarbonising mobility is pursued through the development of cutting-edge scientific and technological knowledge aimed at achieving long-term strategic objectives. This involves ensuring effective public support and investment in research and development (R&D) for **advanced enabling technologies**, particularly next-generation batteries that are more efficient, sustainable and circular. Along this pathway, it is essential to ensure the involvement of universities and public and private research centres, and to foster the development of interdisciplinary skills. According to the researchers, this intervention should be overseen by a dedicated national agency tasked with coordinating investment and industrial policy, in cooperation with the Government and the European Commission.

Furthermore, within the mission policy framework, policies to **stimulate demand** for the development and consolidation of the domestic market play a crucial role. The government can act as a key contractor through instruments such as **green public procurement** or **social leasing** schemes for the purchase of electric vehicles, both of which represent effective tools to stimulate large-scale, coordinated demand. Social leasing initiatives also help make the technology accessible to lower and middle-income segments of the population experiencing "mobility poverty."

In the scheme of vertical sectoral policies proposed by the researchers, scientific progress is translated into concrete industrial applications. In this context, for the automotive sector, it is

essential to invest in **training and reskilling** for workers and technicians, involving both manufacturers and suppliers (so-called supply chain training). From a long-term perspective, vocational schools, universities, regional authorities, trade unions and associations could coordinate to establish dedicated training programmes. Vertical policies should also support R&D within private companies, encouraging collaboration with national agencies to create **shared platforms for innovation and industrialisation of new technologies**. Public support for businesses should be made conditional on specific criteria, including the preservation of employment levels, adherence to **quality standards** in industrial relations, the adoption of **environmental sustainability** strategies and measures to prevent delocalisation.

**Horizontal sectoral policies**, by contrast, focus on the diffusion and adoption of technologies rather than their development, intervening across various sectors and stakeholders. These policies aim to strengthen the capacity of private companies and technological clusters, also by promoting territorial and sectoral alliances. A key component is **managerial and entrepreneurial training**, which can support small and medium-sized enterprises (SMEs) in strengthening complex internal capabilities and enhancing their ability to adapt to market transformations. **Fiscal incentive measures for investment** in digital and automated technologies, such as Industry 4.0, have proven effective and should be further extended. However, while such initiatives facilitate access to innovation for already well-structured companies, it is equally important to support businesses that are behind in terms of technological adoption. The objective is to build a solid and resilient Italian supply chain for electric mobility, capable of reducing dependence on foreign suppliers and strengthening national competitiveness. Responsibility for implementing these policies lies with the Ministries of Economy and Finance, and of Economic Development, within the framework of relevant European initiatives. Furthermore, according to the researchers, the active involvement of industry associations and trade unions is essential for identifying sectoral needs and overcoming key barriers. These actors can provide an overview of the production chain structure and facilitate the adoption of new technologies, processes and collaborative models among sector stakeholders.

**Market regulation policies** aim to govern the functioning of markets, with a particular focus on the cost of raw materials and energy. An effective industrial policy framework should address energy costs in coordination with the national energy strategy. A key measure in this regard is the decoupling of renewable energy prices from those of natural gas, or the creation of separate markets for renewable and non-renewable energy sources. This would promote greater price stability and reduce production cost volatility for businesses in the sector. At the same time, the energy strategy should increase investment in renewable energy, including emerging technologies, for storage and balancing consumption and production, such as demand-response systems, in order to strengthen supply and prevent bottlenecks in the energy transition.

## Priority actions

Within the framework of European policies for the sector, steering the development of the national automotive industry towards large-scale production of electric vehicles for the mass market is an indispensable step, offering positive socio-economic impacts across the entire production ecosystem. Otherwise, given the dynamics of global competition, there is a risk of a structural loss of production capacity, with unsustainable economic and employment consequences.

Based on the analysis presented in the study, ECCO and T&E consider it a priority to establish a coherent set of policies and support measures, both direct and indirect, for the consumption of zero-emission vehicles. This is particularly important given the role of domestic demand in encouraging productive investment within Italy. Among these measures, a **social leasing** scheme for electric vehicles aimed at citizens affected by mobility poverty could be introduced experimentally as part of the **Social Climate Plan**, financed through a share of the revenues from ETS 2 auctions, as provided for under current regulation. Additional resources to stimulate demand for electric vehicles, through purchase incentives aimed at a broader market, could be recovered through structural reforms of **environmentally harmful subsidies**.

As for **company car fleets**, which account for over 40% of new vehicle registrations in Italy each year, completing the reform introduced in the 2025 Budget Law, by gradually reducing and ultimately eliminating tax breaks for non-electric vehicles, would free up substantial resources to be allocated to stimulus policies for the domestic market. Alongside policies to incentivise demand, introducing **reward points** that consider the carbon footprint, energy efficiency and local production content of incentivised electric vehicles, for instance, by adapting the French **Ecoscore** model, could also have a significant positive impact on productive investments.

Further **measures to indirectly stimulate demand** could focus on **vehicle taxation**, using greenhouse gas emissions as a regulatory benchmark and ensuring a tax differential capable of stimulating the demand for electric vehicles. It is also vital to establish the enabling conditions for the transition to electric mobility, intervening on the one hand to **strengthen the public charging infrastructure** and on the other to make the **cost of charging** more advantageous for consumers, through an **energy taxation** reform that reduces the weight of fiscal and parafiscal charges on charging tariffs, as well as incentivising **the share of renewable electricity** used in transport, for example through the system of Certificates of Release for Consumption (*Certificati di Immissione in Consumo, CIC*).

To strengthen industrial competitiveness, it is crucial to combine **fiscal incentives for research and development** with measures that **promote collaboration between companies and institutions**, while also supporting product industrialisation and the expansion of domestic production capacity. To attract private risk capital and stimulate new investments, it is strategic to introduce **direct incentive policies for production units**, for example in the development of key industrial supply chains such as that of **batteries** – from cell production to material recycling – that represent an opportunity to strengthen productive autonomy and reduce dependence on foreign suppliers. **Energy costs** remain a determining factor for business competitiveness. To reduce the cost gap with other countries, emergency measures must be accompanied by structural reforms for **decoupling gas and renewable energy prices**, guaranteeing greater stability and predictability for companies.

The European CO<sub>2</sub> reduction targets for the transport sector are the most effective policy on which to build industrial policies to attract investment in electric mobility and plan the transition. Italy should fully support these objectives, thereby ensuring regulatory stability and investment certainty for the industry, setting aside calls to revise the regulation on standards with reference to technological neutrality and biofuels, which risk weakening or delaying the transition.

The study 'The Automotive Industry and the Transition to Electric Mobility in Italy', by Maria Enrica Virgillito of the Institute of Economics, Scuola Superiore Sant'Anna, Pisa, and Lorenzo Cresti and Angelica Sbardella of the Enrico Fermi Research Centre in Rome can be found [here](#).