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Brief

The Tartar Steppe of Italian Growth: Strategies for Renewal in a Slowing Europe

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Abstract

Italy's economy has been characterized by a long-standing malaise marked by low growth, stagnant productivity, and high public debt. In recent years, these weaknesses have been compounded by declining real wages, the underutilization and outward migration of skilled labor, widening territorial disparities, and a rise in income and wealth inequality. The country's productive structure remains concentrated in traditional sectors, dominated by small firms, and underrepresented in strategic industries with high potential for productivity gains. Drawing on macroeconomic and sectoral evidence, this policy brief assesses Italy's current position and outlines the measures needed to reverse these trends. It argues for an industrial strategy that combines state–market complementarities, long-term coordination, and polycentric governance, supported by policies to halt real wage decline and reduce inequality, with the aim of rebuilding productive capacity and ensuring broadly shared prosperity.

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Introduction

Italy's long-standing economic malaise—marked by persistently low growth, stagnant productivity, and high public debt—has deepened in recent years as new structural weaknesses have emerged. Declining real wages, the persistent underutilization and outward migration of skilled labor, widening territorial disparities, and a recent rise in both income and wealth inequality now define Italy's trajectory, setting it apart from other large Eurozone economies. The country's productive system remains heavily concentrated in traditional sectors, with a disproportionate share of small firms and insufficient presence in the strategic industries most likely to drive future productivity gains. Although many of these challenges also confront other European economies, Italy's position is more fragile. Despite maintaining a large and export-oriented industrial base, its productivity gap has widened, and employment has increasingly shifted towards low-productivity service sectors such as tourism.

This policy brief draws on macroeconomic and sectoral evidence to assess Italy's current position and to identify the policy measures needed to reverse these trends, rebuild productive capacity, and promote broadly shared prosperity. Addressing Italy's structural weaknesses requires an industrial strategy that leverages state-market complementarities, fosters long-term coordination among diverse actors, and is supported by complementary measures to halt the decline in real wages and reduce inequality.

01

Italy is still struggling under the heavy burden of its public debt

After a period during which the government debt to GDP ratio was stable at around 130% the Italian economy (see Figure 1) faced an unprecedented downturn due to the Covid-19 pandemic, prompting the government to prioritize the health emergency, sustaining the economy, and improving social welfare. The result has been a rapid deterioration of the government net lending and a surge in debt-to-GDP ratio by about 20 percentage points, reaching 154.5% of GDP in 2020. This spike sparked renewed worries over Italy's debt, already under scrutiny due to long-lasting concerns about its sustainability (IMF 2020). In the post-pandemic period, Italy rebounded vigorously and has avoided economic scarring (IMF 2022). The recovery was accompanied by a significant reduction in the debt-to-GDP ratio during the two years following the pandemic. Nevertheless, by 2024, government debt still stood at 135.3% of GDP, the highest in comparison to other European economies of similar size.

Although government debt ratios and net lending rose in all European countries during the pandemic, the impact was particularly severe in Italy, where they have compounded an already fragile fiscal position. Figure 2 helps to make some projections on the vulnerabilities of Italy's fiscal position. On the one hand, the average maturity of public debt has been stable at about 7 years. This is relatively good and close to the one of Germany and to the OECD average (OECD 2025). On the other hand, the average cost of debt, which

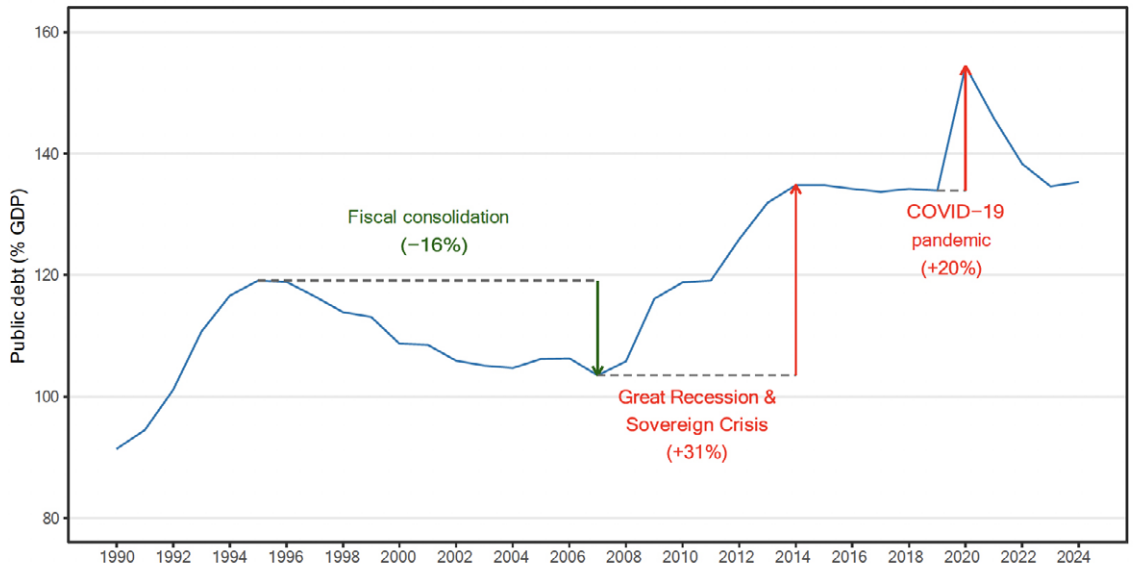


Figure 1: Evolution of the government-debt-to-GDP ratio in Italy. Source: AMECO.

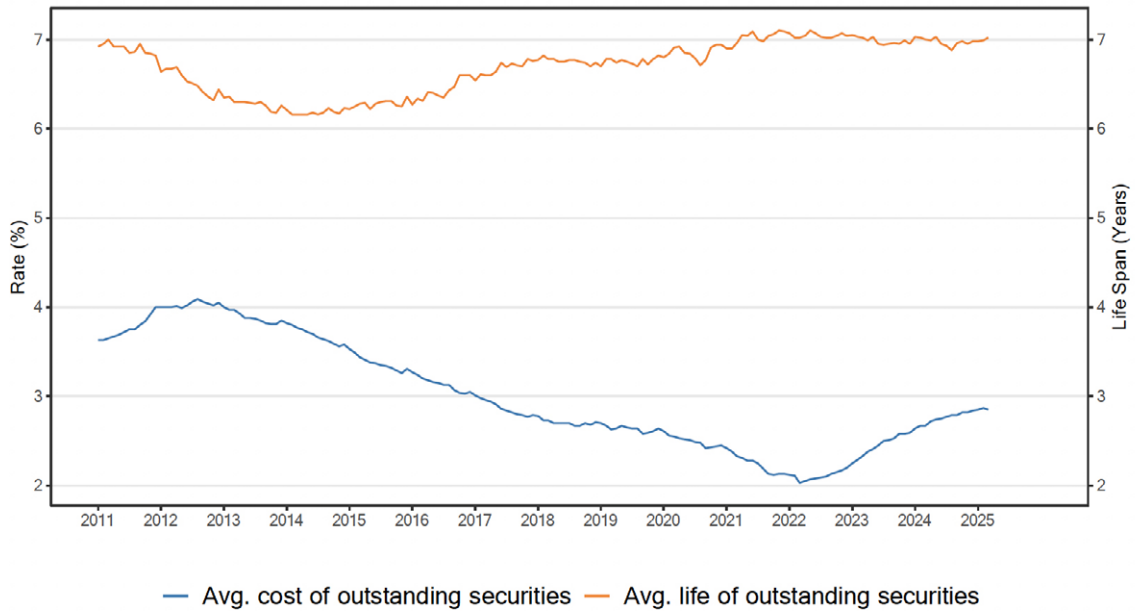


Figure 2: Average cost of outstanding debt (left scale) and average life of outstanding government debt (right scale) for Italy. Source: Banca d'Italia, 2025 Financial Stability Report.

Statement 1

Italy's public debt rose sharply during the pandemic and, despite a significant post-Covid decline, remains the highest among large EU economies. Borrowing costs are rising, and the share of debt held by the Eurosystem is shrinking in favor of foreign investors. This growing reliance on external financing increases Italy's vulnerability to market pressures and potential self-fulfilling debt crises.

declined steadily between 2012 and 2022, is now rising again following the gradual phase-out of the ECB's quantitative easing programs (APP and PEPP)[1]. Additionally, recent shifts in the distribution of debt across holder categories indicate that Italy is slowly reverting to a pre-2010 pattern: the share of debt held by the Eurosystem is being replaced by holdings of foreign investors (see Banca d'Italia 2025) and this despite efforts by successive Italian governments to boost the share of public debt held by domestic households[2]. A debt structure increasingly reliant on foreign private investors exposes Italy more acutely to snowball effects triggered by financial market dynamics and raises the risk of self-fulfilling spirals (Calvo 1988, Broner et al. 2014), such as those that unfolded during the Sovereign Debt Crisis.

[1] In mid-2025, French and Italian government bond yields drew level, with French five-year yields briefly exceeding Italian ones (see, e.g., Financial Times 2025). This inversion reflects worsening perceptions of French fiscal stability rather than a fundamental improvement in Italy's credit profile.

[2] See, for example, the issuance of so-called "BTP Italia"—a long-term, inflation-indexed bond targeted at retail investors: https://www.dt.mef.gov.it/en/debito_pubblico/titoli_di_stato/quali_sono_titoli/btp_italia/index.html?__element=head

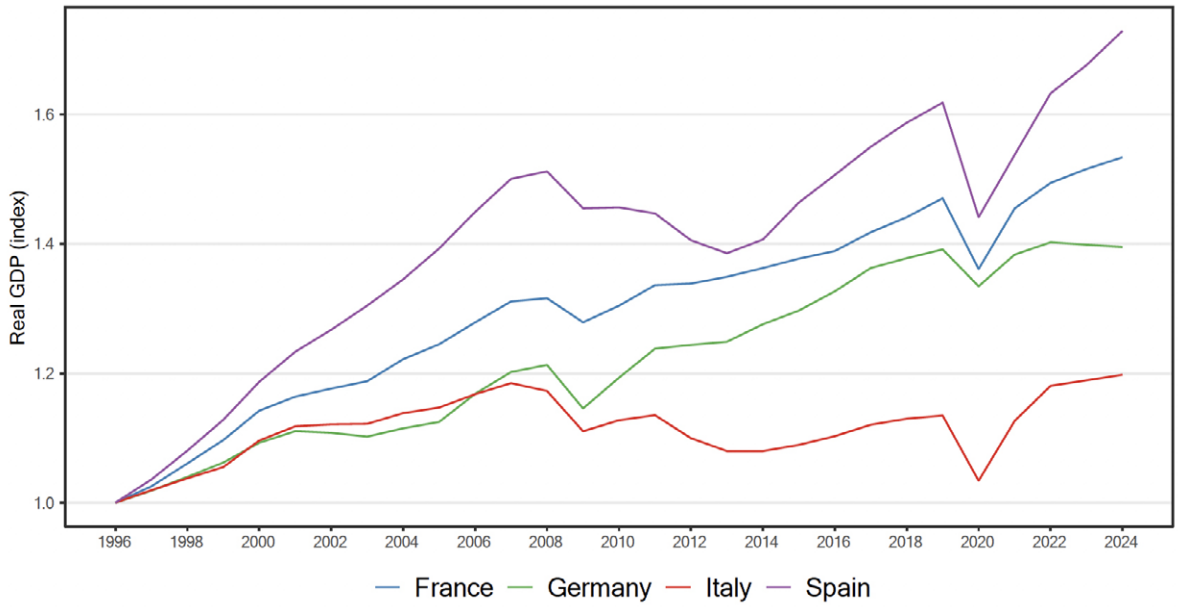
02

Why Italy's debt remains high: Crises and structural low growth

Italy's high public debt has deep historical roots (see Antonin et al. 2019), yet its persistently high level in recent decades cannot be attributed to fiscal indiscipline.

Country	1995-1999	2000-2004	2005-2009	2010-2014	2015-2019	2020-2024
Austria	0.22	1.12	-0.15	0.55	1.02	-3.63
Belgium	5.91	5.42	1.70	-0.16	0.70	-3.36
Finland	3.26	5.56	2.66	-0.02	-0.32	-2.22
France	0.83	-0.17	-1.86	-2.64	-1.86	-4.00
Germany	-0.58	-0.35	1.06	1.56	1.60	-2.01
Greece	3.25	-0.61	-8.73	-2.09	3.34	-0.47
Ireland	5.19	0.71	-4.26	-4.13	0.38	-1.88
Italy	**5.36**	**1.94**	**0.42**	**2.01**	**1.36**	**-3.34**
Luxembourg	4.33	2.26	1.39	1.85	2.18	-0.27
Netherlands	2.27	0.90	0.21	-1.15	1.60	-0.92
Portugal	0.47	-2.45	-3.24	-2.40	1.52	1.35
Spain	1.66	1.78	-2.59	-4.31	-2.10	-1.97
Euro area (12 countries)	1.61	0.74	-0.57	-0.47	0.35	-2.54

(a) Structural primary balances of countries in the Euro Area as a fraction of GDP. Source: AMECO data and authors' calculations.



(b) Cumulative growth in real GDP in Italy, France, Germany, and Spain, scaled to 1 in the base year (1996). Source: Eurostat data and authors' calculations.

Figure 3: Structural fiscal positions and real GDP growth in selected Eurozone countries.

Table 3a shows that, with the exception of the Covid-19 pandemic period (2020–2024), Italian governments have consistently maintained substantial primary surpluses for more than two decades. However, these sustained consolidation efforts have been hindered by weak economic growth. Since the early 2000s, Italy's GDP growth has consistently lagged behind that of other major European economies, as shown in Figure 3b. This structural stagnation has limited the debt-reducing power of fiscal surpluses.

Moreover, Italy's debt trajectory has been profoundly affected by major economic shocks—most notably the Great Recession and the subsequent Eurozone Sovereign Debt Crisis. As shown in Figure 1, between 2008 and 2014, the debt-to-GDP ratio surged by 31 percentage points, nearly doubling the reduction achieved over the entire consolidation period from 1995 to 2007. These dynamics highlight how a combination of chronically low growth and large negative shocks has systematically undermined Italy's debt consolidation efforts.

Statement 2

Italy's persistently high public debt in relation to GDP is not the result of fiscal indiscipline, as governments have maintained substantial primary surpluses for most of the past two decades. Instead, weak economic growth has curtailed the debt-reducing impact of these surpluses. Repeated large shocks—especially the Great Recession and the Eurozone Sovereign Debt Crisis—have further reversed previous consolidation gains.

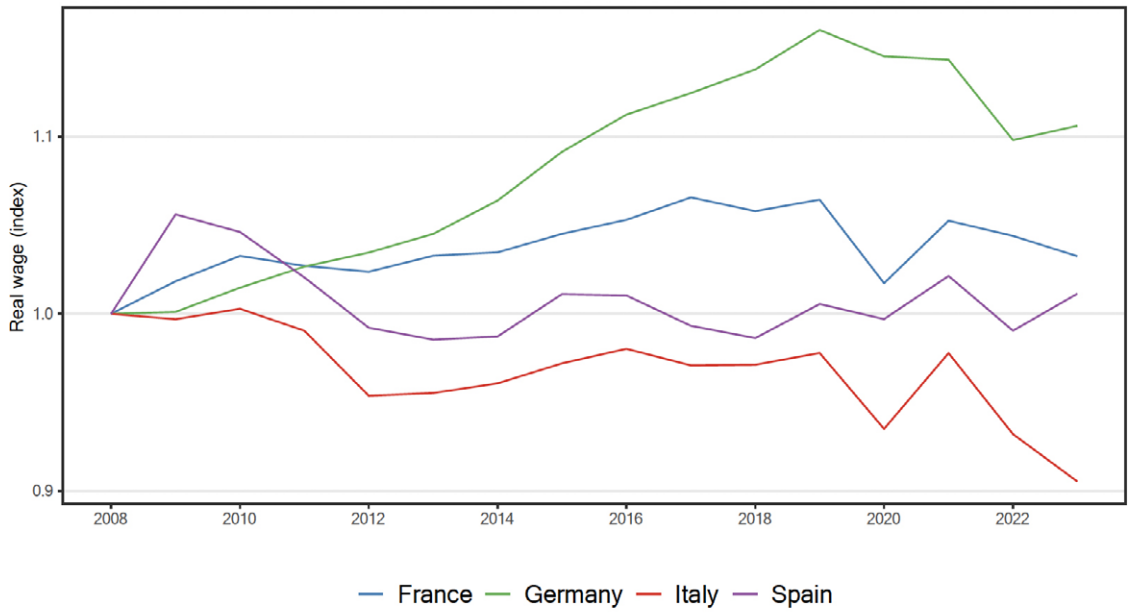


Figure 4: Cumulative growth of real wages in Italy, France, Germany, and Spain, indexed to 2008 = 1. Average full-time adjusted salary per employee deflated by HICP (all-items). Source: Eurostat data and authors' calculations.

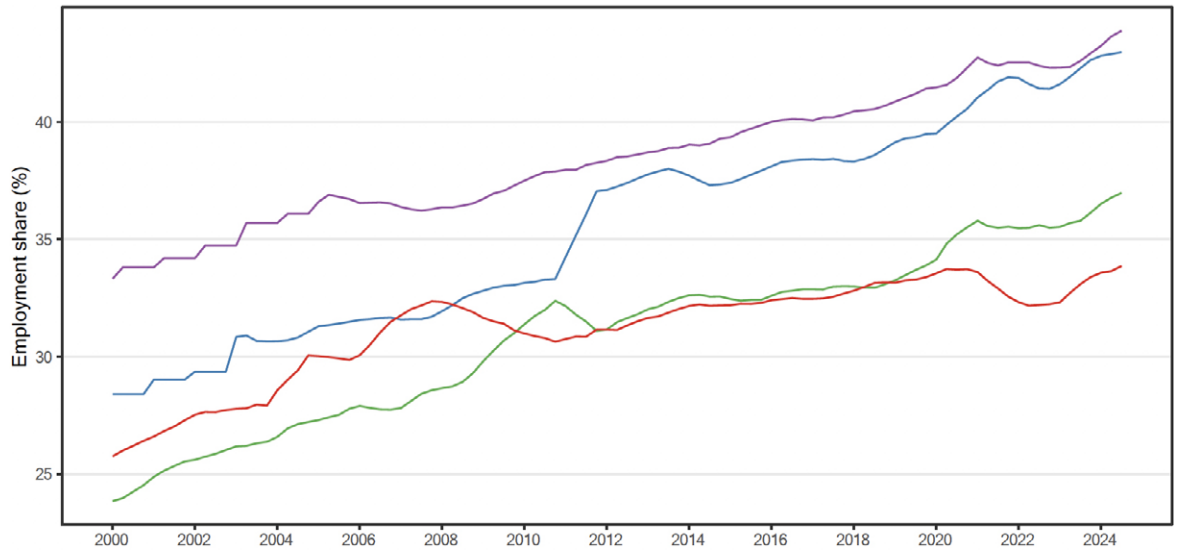
03

Further worrying trends: decreasing real wages, brain drain. . .

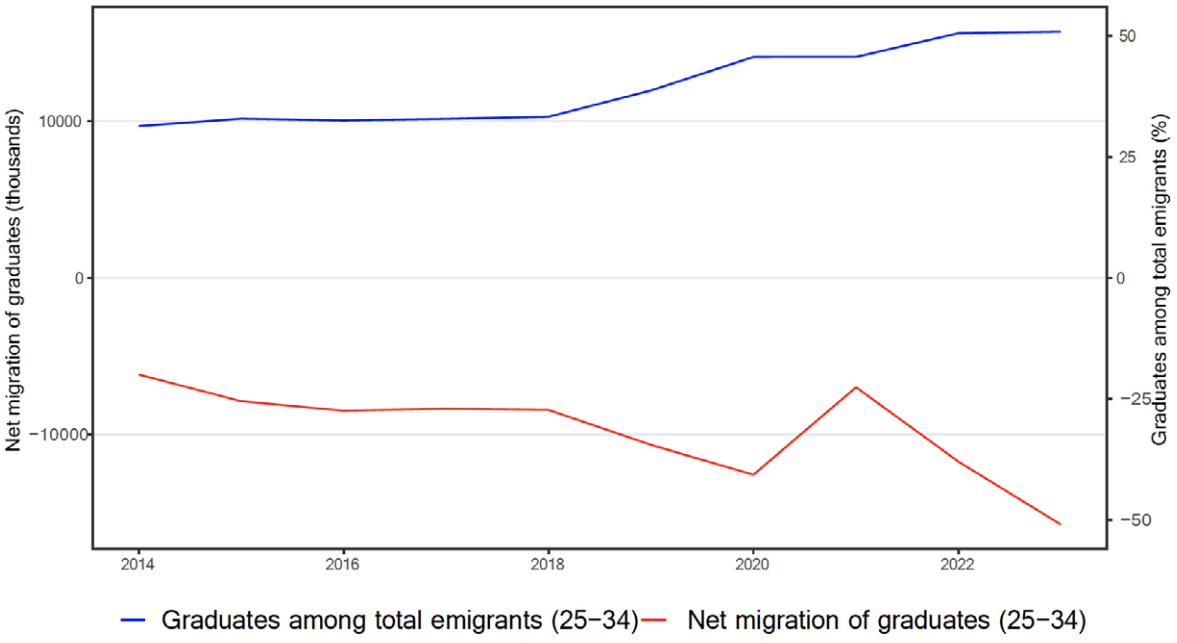
Italy faces another major structural challenge: the persistently low level of real wages. Among the largest OECD economies, Italy has recorded the steepest decline in real wages (see OECD 2024). Figure 4 shows that, since 2012, real wages have grown cumulatively much less in Italy and Spain than in France and Germany. This downward trend has further accelerated in Italy following the Covid-19 pandemic. In 2022, for example, real wage growth remained negative in Italy, while the other three major Eurozone economies experienced a modest recovery. The persistence of negative wage growth despite recent improvements in employment and unemployment (OECD 2024) points to a structural inability of the Italian labor market to generate high-quality jobs. This incapacity is particularly pronounced with regard to skilled workers. Figure 5a shows the evolution of the employment share of skilled workers (corresponding to ISCO groups 2 and 3: "professionals" and "technicians and associate professionals") in the four largest Eurozone economies. It is evident that skilled employment has grown much more slowly in Italy compared to Germany and France and, since 2020, has also fallen behind Spain. In the last quarter of 2024, the share of skilled workers in total employment was 33.9% in Italy, 10 percentage points lower than in Germany (43.9%) and 9.1 points lower than in France (43%).

This difficulty in finding adequate job opportunities, combined with stagnant or declining real wages, has led to a significant emigration of Italian graduates. Figure 5b shows that since 2014 Italy has experienced a persistent negative net migration of graduates. Moreover, the share of graduates among total Italian emigrants has steadily increased over time. In 2023, half of Italian expatriates aged between 25 and 34 held a bachelor's degree or higher.

Declining wages and the inability of the Italian productive system to generate skilled employment and the resulting brain drain, represent some of the clearest signs of talent misallocation—already identified by Antonin et al. (2019) as a key factor behind Italy's gloomy economic outlook. The roots of this phenomenon lie primarily in Italy's chronically weak productivity growth, the insufficient average size of its firms, and the structural bias of its economy towards traditional sectors. Nonetheless, certain institutional features of the labor market have also played a role in sustaining overall wage stagnation. In particular, Italy remains one of the few European countries without a statutory minimum wage, relying instead on sectoral collective agreements that cover most employees. However, this model has come under pressure due to the proliferation of "pirate" contracts



(a) Employment share of skilled workers. Skilled occupations correspond to ISCO groups 2 and 3 ("professionals" and "technicians and associate professionals"). Source: Istat, 2025 Annual Report.



(b) Net migration of graduates aged 25–34 (thousands, left scale) and graduates as a share of total expatriates aged 25–34 (right scale). Source: Istat, 2025 Annual Report.

Figure 5: Trends in skilled employment and skilled migration in Italy.

signed by non-representative unions, which undermine working conditions and foster wage dumping. Recent policy decisions have moved further away from the implementation of a statutory minimum wage (see e.g. CNEL 2023).

Statement 3

Italy has suffered the steepest real wage decline among major OECD economies, with wage growth remaining negative despite employment gains. Additionally, the Italian labor market displays a structural inability to create quality, skilled jobs, contributing to a sustained brain drain of graduates.

04

. . . And rising income, wealth, and regional inequalities

Since 2008, Italy has experienced a reversal in income inequality trends, with a rise in post-tax income inequality (measured by the ratio between the top 10% and the bottom 50% of the income distribution, see Figure 6a). As a result, inequality — which had been declining until 2008 — returned to the levels recorded at the beginning of the 2000s (See also Guzzardi et al. 2024). This trend reversal is not observed in the other major Eurozone countries, where income inequality has either remained stable (France, Spain) or decreased in recent years (Germany).

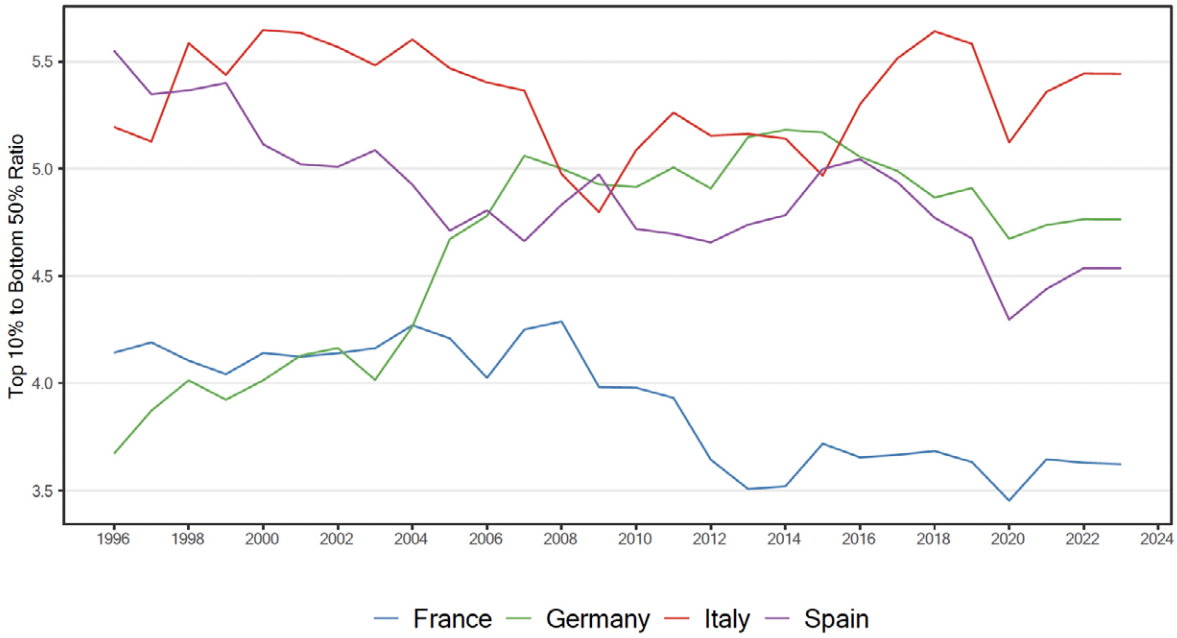
Italy's wealth concentration has also increased significantly. Italy now exhibits the highest private wealth-to-income ratio among the four largest Eurozone countries (see Table 1). In Italy, the stock of private wealth corresponds to nearly seven years of national income. By contrast, at 2024 levels, the stock of public debt amounts to roughly 1.3 years of national income.

The large stock of Italian private wealth relative to national income has often been cited as a factor of resilience, enabling the country to better absorb financial shocks (see e.g. Garcia-Macia 2021). However, this wealth is increasingly concentrated, reflecting a growing imbalance in its distribution. On this, Acciari et al. (2024) show that wealth inequality in Italy has risen since 1995, with the share of the richest 1% growing at the disadvantage of the poorest 50%. See also Figure 6b. Additionally, the share accruing to the richest 5,000 adults (the top 0.01%) almost tripled, rising from 1.8% to 5%.

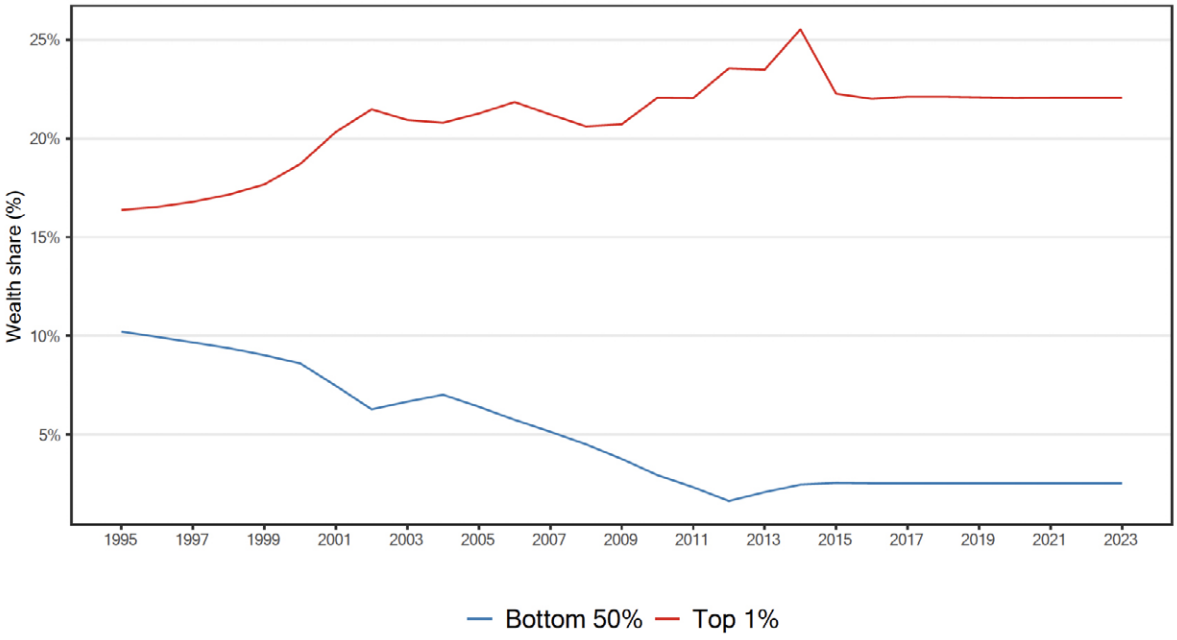
The works of Brandolini et al. (2018) and Cetrulo et al. (2023) highlight stagnating macroeconomic growth and increasing wage polarization in the labor market as key drivers of the aforementioned inequality trends. Regarding wealth inequality, Acciari et al. (2024) emphasize the role of rising saving rates among the richest households,

Country	1995-1999	2000-2004	2005-2009	2010-2014	2015-2019	2020-2023
France	3.28	3.85	5.05	5.36	5.54	6.21
Germany	3.82	3.95	4.00	4.25	5.26	6.50
Italy	**5.07**	**5.49**	**6.75**	**7.27**	**6.89**	**6.85**
Spain	4.51	5.52	7.18	6.81	6.48	6.76

Table 1: Ratio between net private wealth and national income in the four largest economies of the Eurozone. Source: WID database.



(a) Evolution of the top 10/bottom 50 income ratio (post-tax income). Source: WID database.



(b) Evolution of the wealth share of the richest 1% and the poorest 50%. Source: WID database.

Figure 6: Trends in income and wealth inequality in selected Eurozone countries.

along with equity price dynamics and wage polarization, while finding limited evidence of a significant impact from house price dynamics. Furthermore, they document that wealthy inheritors have faced a declining tax burden over the past two decades, due to policy changes that have eroded the progressivity of inheritance and gift taxation. This last point is also important in light of the work of Guzzardi et al. (2024), which shows that the Italian tax system is only mildly progressive up to the 95th percentile of the income distribution and becomes regressive for the top 5%. Moreover, it is regressive across the entire distribution when individuals are ranked by their net wealth.

Finally, Italy is also characterized by long-standing regional disparities. To this, Figure 7 indicates the presence of a 45% gap in income per capita between the South and the North of the country, while the gap is much smaller between Northern and Central regions. Interestingly, the figure also shows that regional income gaps have basically remained unchanged for almost three decades, indicating the complete absence of any sign of convergence. However, regional disparities are not limited to income. Worrying trends have also emerged in the provision of health care, following the constitutional reforms of 2021 and the regional fragmentation of several public services. Two recent articles in the medical review The Lancet (The Lancet 2025, Piscitelli et al. 2025) emphasize the systemic dysfunctions caused by the fragmentation of Italy's healthcare system into 21 different systems. The decentralisation has led to pronounced

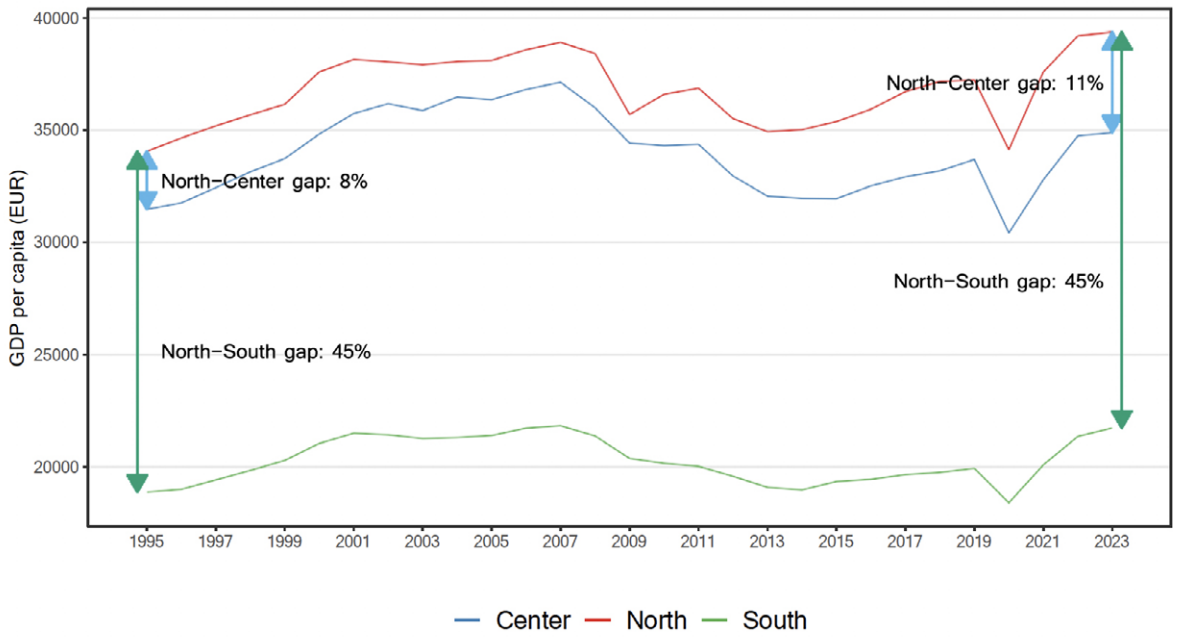


Figure 7: Evolution of income per capita gaps across Italian macro-regions. Chain values indexed to 2020. Source: Istat data and authors' calculations.

disparities in access to and quality of care across regions, with structural inefficiencies in data management playing a central role. The lack of a unified national electronic health record system, poor interoperability among regions, outdated digital infrastructures, and legal and bureaucratic barriers have undermined not only clinical effectiveness and patient equity, but also the country's capacity to conduct high-quality, multi-center medical research. One major consequence of this fragmentation is the substantial flow of patients–particularly from the under-resourced South to the better-equipped North–seeking access to higher-quality care. However, due to the lack of interoperable systems, hospitals in the receiving regions often cannot access patients' medical records, leading to repeated diagnostic tests, delays in treatment, and higher costs. Inter-regional healthcare mobility alone generates an estimated €3.3 billion in additional annual expenditure.

Statement 4

Since 2008, Italy has experienced rising income and wealth inequality, with wealth increasingly concentrated among the richest households and the tax system turning regressive at the top. These disparities are compounded by persistent regional gaps in income and public services, especially in healthcare, where decentralisation and poor digital integration have deepened inequalities in access and efficiency. Together, these trends undermine social cohesion and strain Italy's fiscal and institutional resilience.

05

A structural look at the drivers of Italy's low growth

Many Italy's problems discussed above originate from its stagnating growth in the last three decades. Bock et al. (2024) illustrate the effects of such a persistent low growth performance on Italian income gap with other countries, and with the United States in particular. Between 2000 and 2019 Italian GDP per capita fell from 81% to 64% of US GDP per capita, a fall of 17 percentage points, much bigger than in countries like Germany, France, or Spain. We now take a deeper look at the drivers of Italy's economic stagnation, first by performing a decomposition of income per capita, and then looking at the contribution of different sectors to productivity dynamics.

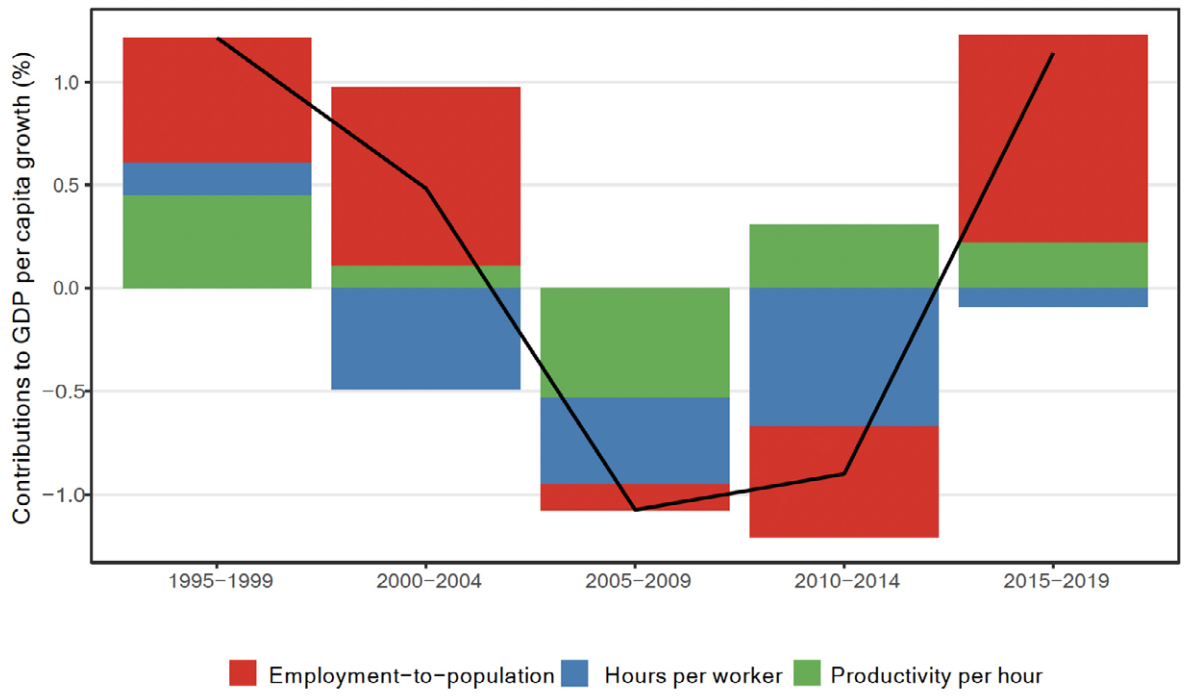


Figure 8: Drivers of income per capita growth in Italy. Source: EU KLEMS database and authors' calculations.

5.1 Decomposing Italy's income per capita growth

Similarly to Bock et al. (2024), we decompose GDP per capita $\left(\frac{Y}{P}\right)$ into three components: 1) productivity per hour worked $\left(\frac{Y}{H}\right)$, 2) average hours worked per employee $\left(\frac{H}{E}\right)$, 3) the ratio of employment over population $\left(\frac{E}{P}\right)$. See Equation 1 below:

$$\frac{Y}{P} = \frac{Y}{H} \times \frac{H}{E} \times \frac{E}{P} \quad (1)$$

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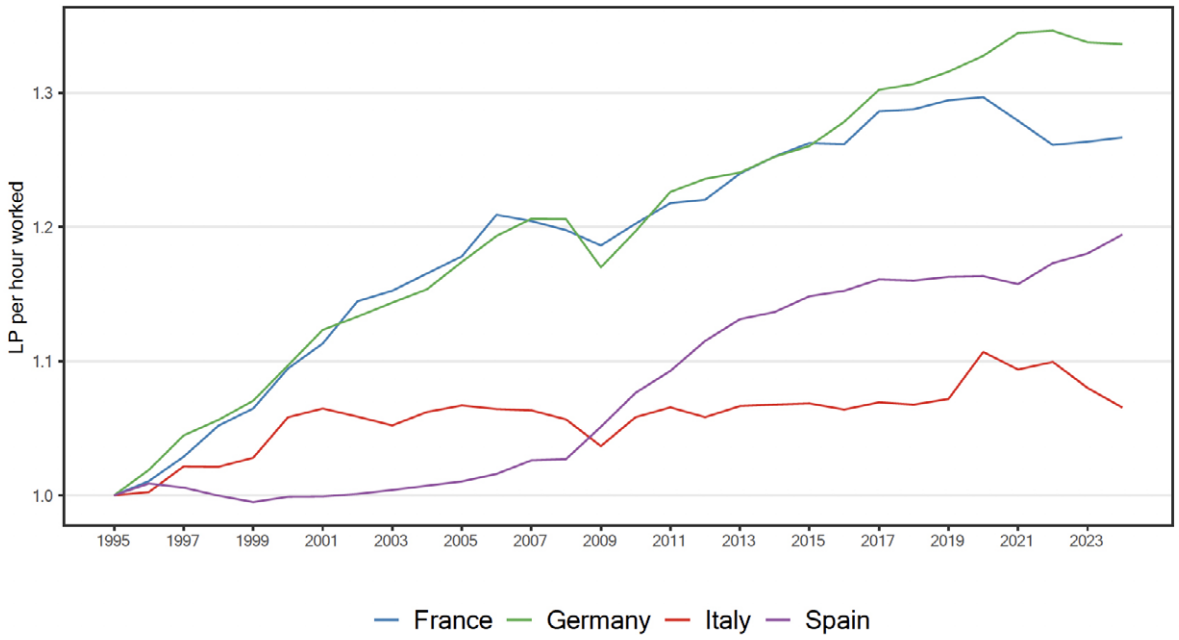
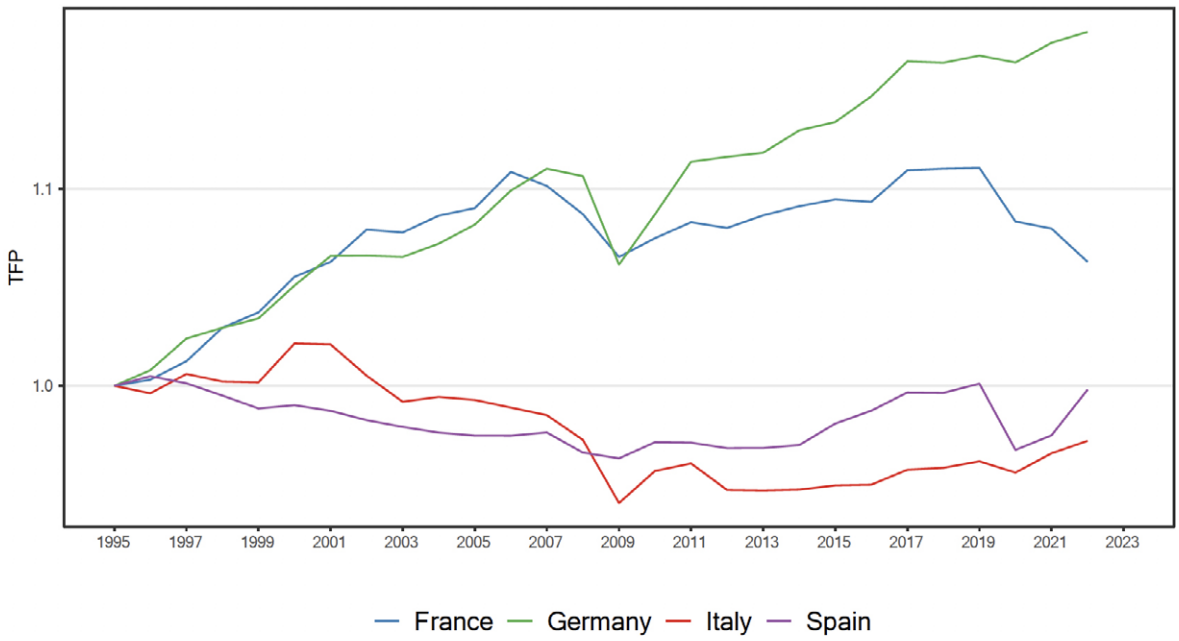


(a) Evolution of labor productivity in the four largest economies of the Eurozone. All indices are normalized at their 1995 values.



(b) Evolution of total factor productivity in the four largest economies of the Eurozone. All indices are normalized at their 1995 values.

Figure 9. Labor and total factor productivity in the four largest Eurozone economies. Source: OECD data and authors' calculations.

Figure 8 shows the contributions to income per capita growth of the different components highlighted by Equation 1. The figure shows that since the beginning of the 2000s, the contribution of labor productivity has been either negative (like in the period 2005-2009) or, in absolute terms, lower than the contributions from employment to population and from hours worked. These results are in line with those of Greco (2023) and Bock et al. (2024).

The latter study also identifies insufficient productivity growth as the main driver of the widening income gap between the United States and the European Union. It further emphasizes that Italy has been the worst performer in terms of productivity growth, at least among countries of comparable size. This underperformance is clearly illustrated in Figure 9a, which shows the evolution of labor productivity in the four main Eurozone economies. While labor productivity has increased in France, Germany and Spain, it has remained stagnant in Italy since the early 2000s. The picture becomes even more concerning when considering total factor productivity, whose cumulative growth has been negative over the same period. See Figure 9b. Notably, Spain followed a similar trajectory until 2009, but its total factor productivity has since rebounded, leaving Italy at the tail end among the largest European economies in terms of productivity growth.

Statement 5

Since the early 2000s, Italy's income per capita growth has relied mainly on increases in employment over population, while labor productivity has stagnated or declined. Total factor productivity has also recorded negative cumulative growth, leaving Italy last among large European economies. This persistent underperformance in productivity is a key driver of the country's widening gap with other large European countries.

5.2 An analysis of sectoral contributions to productivity growth

We dig deeper into the drivers of Italy's productivity performance, by studying its labor productivity growth gap with Germany—the country that recorded the highest productivity growth among the four largest Eurozone economies over the 2000–2019 period[3].

Figure 10 shows that the sectoral contributions to Italy's productivity growth gap with Germany are highly concentrated. Nearly 0.40 percentage points of the total 1.03-point gap originate from the *Manufacturing* sector, accounting for 38% of the total difference. An additional 0.23 percentage points (22%) stem from the

[3] The procedure we use to calculate sectoral contributions and to decompose them is detailed in Appendix A. The comparison between Italy and Germany is particularly meaningful in light of two key characteristics shared by these countries. First, unlike France and Spain, the manufacturing sector still plays a significant role in their economies. Second, both countries have historically had a strongly export-oriented productive structure.

Trade and Repair of Motor Vehicles sector. The *Agriculture, Forestry, and Fishing* sector contributes 0.11 percentage points (10%). The remaining 0.29 percentage points (28%) are distributed fairly evenly across several sectors, including services like *Information and Communication*, *Professional and Technical Activities*, *Administrative and Support services*, and, finally, *Construction*. Interestingly, the *Accommodation and Food Services* sector—which encompasses most tourism-related activities—had no measurable impact on Italy's productivity dynamics relative to Germany in the 2000-2019 period.

Next we examine more closely the sectoral drivers of productivity dynamics in Italy by further decomposing sectoral contributions using a shift-share analysis like in Bock et al. (2025). This method decomposes the overall change in productivity into three distinct components, each capturing a different channel through which sectors contribute to aggregate dynamics: (1) an intra-sectoral component, reflecting productivity growth within individual sectors; (2) an inter-sectoral component, capturing the effects of labor reallocation across sectors; and (3) a relative price component, accounting for

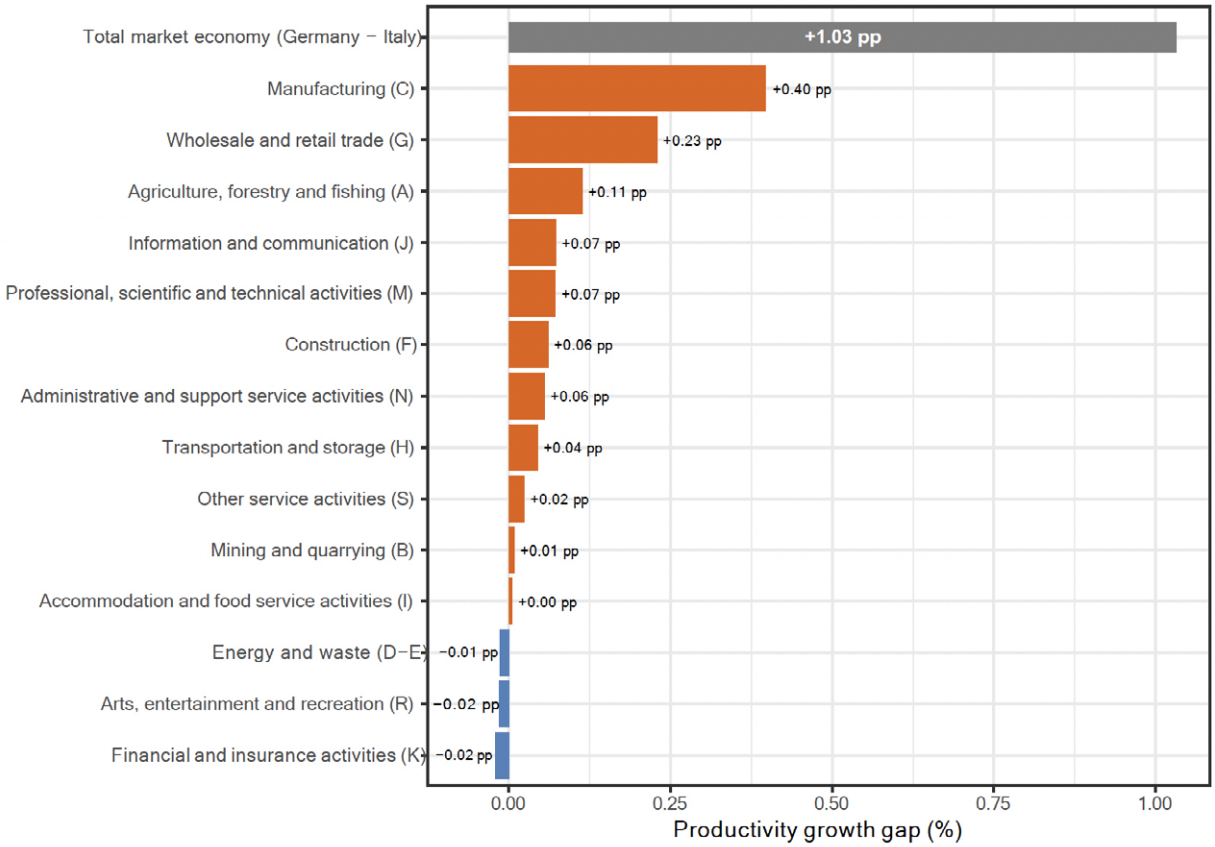


Figure 10: Sectoral breakdown of the productivity gap in the market sector between Germany and Italy over the period 2000-2019. Source: EU KLEMS&INTANPROD database and authors' calculations.

NACE sector	Within sector	Between sectors	Relative price	Total
Agriculture, forestry and fishing (A)	0.01 (1.0%)	0.01 (0.6%)	0.10 (9.4%)	0.11 (11.0%)
Mining and quarrying (B)	-0.00 (-0.3%)	-0.01 (-0.6%)	0.02 (1.7%)	0.01 (0.8%)
Manufacturing (C)	0.31 (29.7%)	0.17 (16.9%)	-0.08 (-8.2%)	0.40 (38.4%)
Energy and waste (D-E)	0.02 (2.2%)	-0.01 (-1.0%)	-0.03 (-2.6%)	-0.01 (-1.3%)
Construction (F)	0.10 (9.7%)	-0.05 (-4.9%)	0.01 (1.1%)	0.06 (5.9%)
Trade and repair of vehicles (G)	0.06 (5.5%)	0.02 (2.0%)	0.15 (14.7%)	0.23 (22.2%)
Transportation and storage (H)	0.04 (3.7%)	0.03 (3.1%)	-0.02 (-2.4%)	0.04 (4.3%)
Accommodation and food service activities (I)	0.12 (11.7%)	-0.13 (-12.5%)	0.01 (1.2%)	0.00 (0.5%)
Information and communication (J)	0.07 (6.9%)	0.06 (5.5%)	-0.05 (-5.3%)	0.07 (7.0%)
Financial and insurance activities (K)	-0.07 (-6.5%)	-0.04 (-3.8%)	0.09 (8.3%)	-0.02 (-2.0%)
Professional, scientific and technical activities (M)	0.01 (1.4%)	0.06 (5.5%)	0.00 (0.0%)	0.07 (6.9%)
Administrative and support service activities (N)	0.04 (4.1%)	-0.00 (-0.3%)	0.02 (1.5%)	0.06 (5.3%)
Arts, entertainment and recreation (R)	-0.02 (-1.6%)	0.01 (0.8%)	-0.01 (-0.6%)	-0.02 (-1.5%)
Other service activities (S)	0.03 (3.3%)	-0.03 (-3.2%)	0.02 (2.2%)	0.02 (2.3%)
Total Market Economy	**0.73 (70.8%)**	**0.08 (8.1%)**	**0.22 (21.1%)**	**1.03 (100.0%)**

Table 2. Shift-share decomposition of the productivity gap in the market sector between Germany and Italy over the period 2000-2019. Sectoral contributions to the productivity gap in the market sector are expressed as percentage points, while the values in parentheses represent the percentage contribution to the productivity gap in the market sector. Source: EU KLEMS data and authors' calculations.

the impact of sector-specific changes in relative prices[4]. Table 2 presents the results of our decomposition. The bulk of the *Manufacturing* sector's contribution to the Italy–Germany productivity growth gap (0.31 percentage points, nearly 30% of the total) stems from within-sector effects. At the same time, reallocation effects—reflecting a decline in the relative weight of Italian manufacturing compared to its German counterpart—also played a significant role, accounting for 0.17

[4] The procedure to build Table 2 is detailed in Appendix A. The same appendix also contains tables showing the sectoral contributions to productivity gains in Italy and Germany as well as their shift-share breakdown.

points (around 17% of the gap). These results do not imply that productivity did not increase within Italian manufacturing. On the contrary, the Table 3 in Appendix A shows that manufacturing recorded the second-largest within-sector contribution to Italy's overall labor productivity growth (after the *Trade and Repair of Vehicles* sector). However, productivity growth within Germany's manufacturing sector was substantially higher (see Table 4), which—when comparing the two countries—more than offset Italy's gains from reallocation and relative price movements.

In contrast, the contributions of other key sectors behind the Italy–Germany productivity gap—namely *Trade and Repair of Vehicles*, and *Agriculture, Forestry and Fishing*—originate primarily from relative price effects, rather than from within- or between-sector dynamics. The trade sector, similarly to manufacturing, experienced significant within-sector productivity growth in Italy (see again Table 3). Yet, the negative contribution from relative prices outweighed the within-sector and reallocation components. For *Agriculture, Forestry and Fishing*, within- and between-sector effects were of comparable magnitude across the two countries.

A negative contribution from relative prices is generally good news for consumers and welfare, as it indicates a decline in sector-specific prices relative to others. However, it also reduces the sector's contribution to aggregate labor productivity growth. In this regard, the relative price component in the trade sector is negative for both Italy and Germany (cf. Tables 3 and 4 in the appendix), reflecting falling relative prices—though the decline was more pronounced in Italy (-0.26 vs. -0.11 percentage points).

The pattern differs for *Agriculture, Forestry and Fishing*: while relative prices fell in Italy (-0.0578), they increased in Germany (0.04). For other key sectors, the *Construction* sector's contribution, like that of manufacturing, is mainly driven by within-sector effects—specifically, lower productivity growth in Italian construction compared to its German counterpart.

The sectors of *Administrative and Support Service Activities* and *Information and Communication* show notable positive reallocation effects. Labor reallocation benefited these sectors—reflecting the broader trend toward service-based

Statement 6

Italy's productivity gap with Germany is heavily concentrated in a few sec- tors—particularly manufacturing, trade, and agriculture—driven mainly by lower within-sector productivity growth in manufacturing and adverse rela- tive price effects in trade. While some service sectors benefit from positive labor reallocation, these gains are insufficient to offset weaknesses in key productive industries. Overall, the sectoral pattern reveals structural imbal- ances, with labor often shifting toward low-productivity activities such as tourism despite declining productivity.

economies in advanced countries—although to a lesser extent in Italy. Interestingly, the relative price effect is negative in the *Information and Communication* sector but positive in administrative and support activities, suggesting steeper price declines in Italy in the former and milder ones in the latter.

Finally, the Accommodation and Food Service Activities sector shows a positive within-sector contribution (0.12) entirely offset by a negative reallocation effect (- 0.13). This pattern indicates that, in this sector, productivity growth in Italy was lower than in Germany, thereby widening the bilateral productivity gap, while reallocation effects partially mitigated it. As shown in Tables 3 and 4 in the Appendix, productivity growth was indeed negative in Italy but positive in Germany. At the same time, the sector's labor share increased in Italy, suggesting that tourism-related activities absorbed more workers despite experiencing declining productivity[5].

5.3 Strengths and weaknesses of the Italian productive system

The above findings on sectoral productivity dynamics align with the analysis of the strengths and weaknesses of the Italian productive structure already discussed in Antonin et al. (2019) and more recently documented by Bock et al. (2024) and Bock et al. (2025)[6]. On the one hand, Italy has undergone a relatively slower process of deindustrialization than in other European countries. As of 2021, it remains the Eurozone country with the highest share of employment in the manufacturing sector (see Figure 11a). Moreover, Italy's productive structure—like Germany's—has historically been strongly export-oriented. As a result, with the exception of the years between 2006 and 2011, Italy has consistently maintained a positive trade balance (see Figure 11b). Beyond its manufacturing and export strengths, Italy benefits from a lower exposure to geopolitical supply disruptions than countries such as Germany. The 2022 energy crisis illustrated how Germany's heavy reliance on Russian pipeline gas amplified the adverse effects of gas shocks on industrial output (Colombo & Toni 2025). Similar patterns of import dependence are evident in other commodities, including wheat and certain critical raw materials, where Germany's supply chains are more concentrated and thus more susceptible to geopolitical risks (OECD 2022)[7].

On the other hand, the Italian productive system is characterized by a disproportionately high number of small firms compared to other large Eurozone economies (see Istat 2023, Bock et al. 2025). This excess of small firms limits the potential to exploit economies of scale

[5] Interestingly, this sector, together with Administrative and Support Service Activities, exhibits the strongest reallocation effects in Italy. Moreover, the increase in its labor share was substantially greater than in Germany.

[6] In addition to the aforementioned works, there is a growing literature investigating the causes of Italy's sluggish productivity growth. See, for example, Greco (2023), Bugamelli et al. (2018), Dosi et al. (2012), and Calligaris et al. (2018).

[7] These vulnerabilities have weighed on Germany's sluggish recovery from the last 2022 adverse supply shock. Despite a relatively mild contraction in the winter 2022-2023, the economy has since remained in a state of near-stagnation, with GDP growth hovering around zero.

Statement 7

Italy's productive structure combines notable strengths—such as a large manufacturing base, strong export orientation, and relatively low exposure to certain geopolitical supply risks—with persistent structural weaknesses. These include an overrepresentation of small firms, a bias toward traditional low- value-added sectors, and limited specialization in emerging technologies. Productivity growth remains below that of Germany in key sectors, with employment shifting from high-productivity manufacturing toward low-productivity services, reflecting an acute form of Baumol's disease.

and hampers investment in research and development, thereby placing significant constraints on productivity[8]. In addition, both Bugamelli et al. (2018) and Bock et al. (2025) show that the Italian industrial structure is skewed toward traditional, low value-added, and low-productivity sectors, generating also a low labor demand for skilled workers. The latter study also analyses national patenting activity in strategic technologies[9], finding that Italy shows relatively high patenting intensity in technologies such as renewable energy, advanced materials, and space technologies. However, like other major Eurozone economies, it lacks a strong presence in emerging technologies such as artificial intelligence, quantum computing, and cybersecurity.

The results discussed in the previous section further underscore important characteristics of Italy's productive structure, particularly for productivity dynamics. Overall, they suggest that the manufacturing sector remains Italy's main productivity engine, alongside services related to wholesale and retail trade. However, productivity growth in these sectors has been lower than in Germany. Furthermore, the market economy has experienced a negative reallocation effect, as employment has shifted away from high-productivity industries toward service sectors—especially those linked to tourism—which have recorded comparatively low productivity growth.

While labour reallocation toward services is a common trend in advanced economies, the Italian case suggests a more acute form of Baumol's disease (Baumol 1967), in which productivity grows slowly in sectors with high growth potential (such as manufacturing) while labour increasingly concentrates in low-productivity activities (notably tourism-related services)[10].

[8] See also Bartelsman et al. (2013), which document a strong positive correlation between firm size and productivity in the US and several European countries.

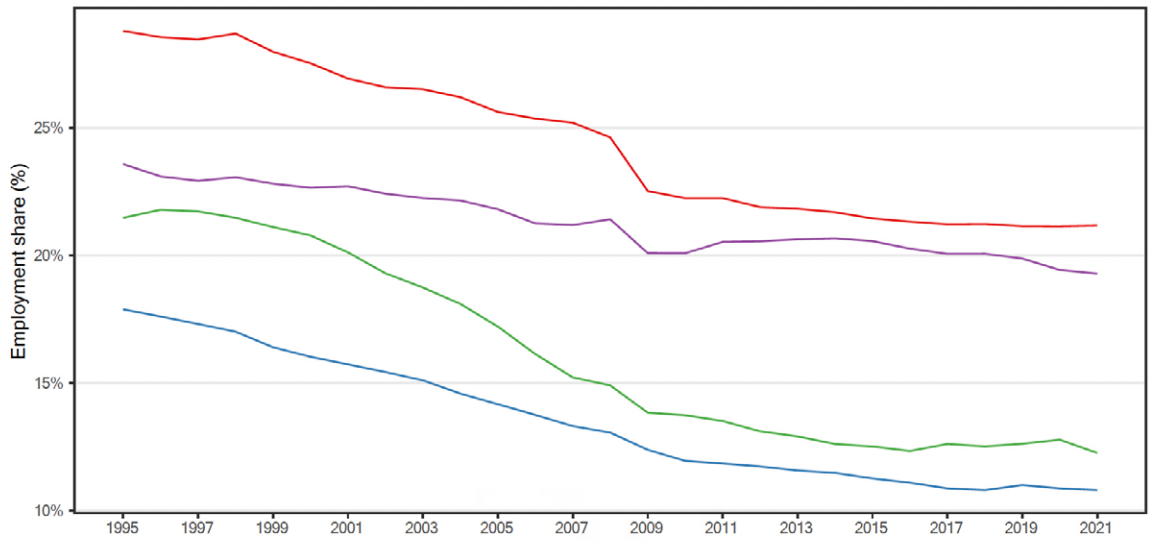
[9] In Bock et al. (2025), strategic technologies are defined as those associated with high future productivity gains and likely to shape national competitiveness.

[10] In this respect, it is instructive to compare Italy's experience with that of the United States, where recent productivity growth has largely originated in service sectors that successfully accumulated productivity gains through intensive adoption of information and communication technologies (see e.g. Bloom et al. 2012, Sandbu 2024, Bock et al. 2024).

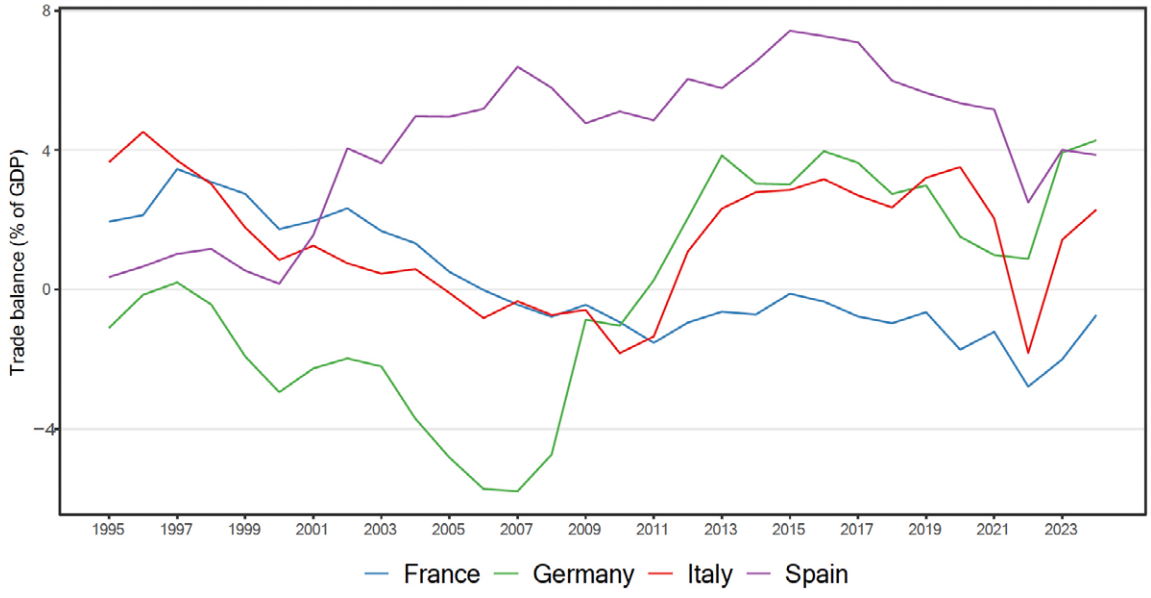
06

Taking stocks: Italy's chronic crisis in a slowing Europe

The preceding analysis sheds new light on the long-standing symptoms of Italy's chronic economic malaise, while also identifying potential areas for policy intervention. At the time of writing, Italy continues to exhibit persistently low growth in both income and productivity, with a long-standing core symptom:



(a) Evolution of the share of employment in Manufacturing in the four largest Eurozone economies. Source: EU KLEMS database and authors' calculations.



(b) Trade balance as a fraction of GDP in the four largest Eurozone economies. Source: OECD data.

Figure 11: Manufacturing employment and trade balance in the four largest Euro- zone economies.

1) a high public debt-to-GDP ratio.

However, new and troubling symptoms have either emerged or intensified. These include:

2) a decline in real wages—and, consequently, in household purchasing power;

3) the persistent North–South divide, exacerbated by recent reforms that have fragmented key public service provisions, with effects acutely felt during the Covid-19 pandemic

4) rising income and wealth inequality.

While the first three symptoms remain serious, the last is particularly concerning for several reasons[11]. First, this rise in inequality is unique to Italy among the large continental Eurozone economies, which share many institutional characteristics but have seen post-tax income inequality either decrease or remain stable. Second, the increase in inequality affects post-tax income, indicating a declining redistributive capacity of the Italian tax system. Third, unlike in countries such as the United States (see Timbeau 2025, for a recent account), income and wealth inequality in Italy have increased despite stagnant growth.

Yet, in comparative terms, Italy still retains a large export-oriented industrial base—more so than France and Spain—and is less exposed than Germany to certain external supply shocks, particularly those related to energy. As shown in Section 5.2, the manufacturing sector remains (not surprisingly) the main engine of productivity gains in Italy, alongside trade services. However, these gains have been significantly lower than those observed in German manufacturing.

Moreover, Italy's productive structure remains overly concentrated in traditional sectors where cost competitiveness dominates. It is largely absent—like other large European countries—from strategic sectors where future productivity gains are expected to be highest. Italy is also characterized, more than its peers, by a disproportionate reliance on small firms[12]. Finally, employment trends reveal a gradual

[11] We do not include in our list the aging of the Italian population and the low fertility rate (see Istat 2025, for a recent exposition of Italian trends in aging and fertility), which are often cited as additional major causes of Italy's economic malaise. Our reasoning is that these demographic trends appear to be consequences, rather than causes, of the main economic symptoms discussed above. On the one hand, Italy's welfare state and public healthcare system—despite the worrying rise in regional disparities highlighted in Section 4—has, like in other continental European countries, contributed to a secular increase in life expectancy. On the other hand, three decades of stagnant economic growth, declining real wages, and rising inequality have undermined the prospects of younger generations. These adverse economic conditions have inevitably had an impact on Italy's fertility rates.

[12] See Antonin et al. (2019) and Onida (2021) for a discussion of the factors explaining the nanism of Italian firms.

shift toward low-productivity services, particularly in tourism-related activities.

The comparison with broader European trends is crucial. Structural weaknesses such as insufficient firm scale and limited presence in strategic sectors have been recently identified as major contributors to the widening productivity and income gap with the United States (see Draghi 2024, Bock et al. 2024, 2025). Italy's industrial base has long been weakened by chronic underinvestment in technological capabilities and by fragmented, largely "horizontal" policy interventions that have failed to stimulate sustained investment and production capacity (see Pianta 1996, Lucchese et al. 2016).

Framing Italy's economic situation within the European Union thus highlights the extent to which its fate is intertwined with that of the Union as a whole.

07

Policy recommendations

Policy measures tackling Italy's long-standing growth challenges must be consistent with broader efforts to revitalize the European industrial base, while addressing the country's specific structural weaknesses. Six years ago, Antonin et al. (2019) identified four key reform areas: (1) excluding public investment from EU structural deficit rules; (2) linking investment to industrial policy, particularly through mission-oriented programs; (3) introducing a statutory minimum wage; and (4) advancing the banking union. These proposals remain highly relevant today. In particular, recommendations (2) and (4) have gained renewed traction in recent European-level discussions on boosting competitiveness and productivity (see Draghi 2024, Bergeaud 2024). In the sections that follow, we revisit some of these proposals in light of recent developments, and introduce additional measures that respond to new structural trends highlighted earlier.

7.1 Revisiting industrial policies in the Italian context

Reigniting long-term growth in Italy requires a rethinking of industrial policy. The successive crises since the early 2000s have exposed the limits of relying solely on competitive markets and minimal public intervention. As Pianta (2014) argues, Europe's shift since the 1980s toward market-driven policies—centered on deregulation and competition rather than strategic coordination—has weakened Italy's industrial base, leaving the country with fewer instruments to foster innovation and rebuild productive capacity.

The long-standing belief in the self-correcting efficiency of markets has given way to recognition of the need for more active public involvement. Yet a strategy based entirely on state-led industrial planning also risks an inefficient allocation of resources due to informational constraints. We believe that an effective industrial strategy—for both Europe and Italy—must avoid these extremes (see Gaffard & Napoletano 2025). It should instead pragmatically acknowledge the complementarities between the state and the market, focusing on long-term coordination and collective learning.

Such a strategy must rest on the premise that building new productive capacities and renewing the industrial system requires time—especially in a context of uncertainty—and that both successes and failures are inherent to this process. Even projects that ultimately fail can, over their lifetime, generate valuable learning and technological spillovers. It must also recognize that in the renewal of an industrial base, barriers to firm growth often stem from sunk costs—investments that must be made upfront without any

guarantee of future returns, which are themselves uncertain. Firms struggle to manage the time required to develop new capacities due to uncertainty around technologies and markets, a lack of long-term financing, limited visibility on future demand, and the competitive advantage enjoyed by early movers, whether domestic or foreign (see Amendola & Gaffard 2006).

In this context, an effective industrial strategy must be able to guide knowledge accumulation and market creation, including through public investment (Cimoli et al. 2009, Mazzucato et al. 2015, Mazzucato 2021). This is particularly relevant for Italy, where the productive system remains overly anchored in traditional sectors and where small and medium-sized enterprises underinvest in innovation. At the same time, such a strategy must also leverage the experimental role of markets— as arenas in which new products, processes, and organizational forms are tested, and where firms, as the main repositories of technological capabilities, operate.

A core challenge of this strategy is to establish multi-level embedded autonomy, built on iterative collaboration between the government and firms (Juhász et al. 2024), as well as among: investors and managers (in corporate finance and governance), firms and trade unions (in labor relations), firms and local authorities (in infrastructure and territorial planning). It is essential to recognize that the coordination of industrial transformation cannot be accomplished by any single actor—public or private. Instead, it requires a model of polycentric governance (Ostrom 2010) defined as a system in which multiple decision-making centres—governments, public agencies, firms, financial actors, local authorities, and social partners—operate with a degree of autonomy while engaging within a framework of shared rules and mutual learning. This model, especially suited to complex and uncertain environments, enhances the system's capacity to experiment, adapt, and disseminate effective solutions. As such, it constitutes a critical institutional condition for the success of any industrial strategy.

Two areas where the above approach may prove useful in the Italian context are firm financing and innovation policy. Italian firms often struggle to grow and innovate due to a shortage of financial institutions willing to fund high-risk projects, as well as an overreliance on traditional bank lending. This has contributed to the widening innovation gap between Europe and the US (Draghi 2024), and to the small scale and low dynamism of many Italian companies, especially those that are family-owned and reluctant to open to external investors or professional managers (Onida 2021). The core issue, however, is not whether firms rely on banks or markets, but rather the time horizon of those who provide capital. As shown by Mayer (2013), short-termist market financing can undermine long-term investment strategies. What matters is building mechanisms that promote "patient capital", such as linking shareholder rights to the duration of ownership or requiring funds to dedicate a portion of their portfolios to innovative ventures[13].

[13] See also Guerini et al. (2022), who argue that long-

At the same time, traditional bank-based finance can still play a critical role if it allows firms to scale up without losing ownership control or being exposed to short-term pressures. This can help secure liquidity during innovation cycles and strengthen the balance between managerial commitment and accountability (Mayer 2013, Gaffard & Napoletano 2025).

As far as innovation policy is concerned, public investment—also in Italy—is undeniably required to steer technological change toward transforming the country's productive system and reigniting its innovation potential (Cerniglia & Saraceno 2024). However, the key issue is not only how much is spent, but how effectively it is deployed. Italy's recent experience with the National Recovery and Resilience Plan (NRRP)—whose benefits remain uncertain despite the large volume of funds committed—is a case in point (see Boeri & Perotti 2023, Viesti 2023, for two critical reviews of Italy's experience with the NRRP). It is essential that such investment be strategically directed to support firms while minimizing misjudgments regarding the quality of emerging technologies and markets. This calls for a progressive, learning-oriented approach to innovation policy. Rather than attempting to pick future champions, public support should play a catalytic role—helping both large and small firms acquire new technological capabilities and create new markets. The goal is to stimulate demand and to strengthen the credibility of long-term expectations for businesses and investors, based on recognition of complementarity between the state and the market. A promising avenue is to channel public funding through dedicated agencies operating under "mission-oriented" programs, drawing lessons in this respect from the U.S. ARPA as well as Germany's Fraunhofer Institutes, both of which are grounded in continuous, iterative collaboration with universities and the private sector (Mazzucato & Semieniuk 2017, Fuest et al. 2024, Gaffard & Napoletano 2025).

term ownership structures and incentive schemes favouring real investment over financial operations are key drivers of innovation and competition.

7.2 Complementary policies curbing wages fall and mitigating inequality

Industrial policies aimed at renewing Italy's industrial base and scaling up the size of its firms are a key lever for countering the adverse wage and inequality trends discussed in Sections 3 and 4. By boosting productivity and creating better-paid, high-skilled occupations—particularly for younger workers—these policies could also help stem the migration of human capital.

At the same time, complementary measures are needed to halt the decline in wages and the rise in inequality. One such measure is the introduction of a statutory minimum wage, or alternatively, the extension of collectively bargained wage floors to the entire workforce without downward sectoral distinctions (see e.g. Dosi & Virgillito 2024). In the Italian context, this could generate multiple positive effects. First, it would mitigate the erosion of purchasing power among workers at the bottom of the wage

distribution, thereby supporting domestic demand. Second, it could raise productivity by promoting the exit of low-productivity firms and encouraging the reallocation of workers towards higher-productivity, higher-wage firms; and by incentivizing productivity-enhancing behavior within firms (see Clemens 2021, Dustmann et al. 2022). Moreover, a minimum wage would help narrow the North–South divide, as low-wage employment is disproportionately concentrated in the South.

The main political objection to a statutory minimum wage is that it would weaken the role of unions in collective bargaining (see Luccisano 2023, for an overview of recent debates). However, a minimum wage should be seen as complementary to collective bargaining rather than as a substitute: it would set a universal wage floor, reinforcing unions' role by allowing negotiations to focus on improvements beyond the legal minimum (Dosi & Virgillito 2024).

In parallel, Italy needs reforms to its fiscal system not only to restore its progressivity and redistributive capacity, but also to generate additional resources that can be deployed to finance urgent public spending priorities — including the investments needed to renew the country's industrial base. In this regard, the work of Dalle Luche et al. (2024) uses new Bank of Italy estimates compared to Guzzardi et al. (2024) and show that the Italian tax system is already regressive from the top 7% of the income distribution upwards: in this segment, effective tax rates begin to fall, reaching just 32.5% for the top 0.1%. This effect is amplified by the fact that the wealthiest taxpayers earn significantly higher returns on capital — around 5% annually, compared to 2–3% for the majority of the population — and that such income, taxed at proportional rates and often separately from labor income, reduces their overall tax burden.

To address this distortion, the authors develop a tax reform simulation based on the optimal taxation model developed by Saez & Stantcheva (2018). The three main scenarios they consider are: 1) A unified taxation of labor and capital with optimal rates; 2) Differentiated but optimal rates for labor and capital; and 3) a targeted intervention on capital income alone.

In all cases, the effective tax rate for the wealthiest taxpayers would rise —up to 60% for the top 0.1% — generating substantial benefits: additional revenues between 5.4% and 7.12% of total tax receipts, alongside marked improvements in progressivity and inequality reduction. A complementary step would be to tax not only income flows but also the stock of wealth, for example through a targeted wealth tax on large fortunes. This approach aligns with the international debate, including recent discussions at the G20 on a global minimum tax for the wealthiest (see e.g. Zucman 2024).

Beyond income and wealth taxation, Italy should also revise its taxation of inter-generational wealth transfers. Legislative changes since 2000, notably the abolition of the inheritance tax in 2001 and its reintroduction in 2006 with far more generous exemptions, have eroded the progressivity of wealth transfer taxation.

High exemption thresholds and broad exclusions — for private pensions, life insurance, government bonds, and family businesses — mean that a substantial share of inherited wealth escapes taxation altogether (see Acciari et al. 2024).

Without reform, the intergenerational drivers of wealth inequality are likely to intensify. Strengthening the redistributive role of inheritance and gift taxation could slow this process. Policy options include lowering exemption thresholds, reducing preferential treatment for specific asset classes, and integrating gifts and bequests into a lifetime cumulative tax base to curb avoidance. Enhancing the coverage and transparency of wealth data — via better use of cadastral records, financial registries, and international information exchange — would further improve monitoring and enforcement.

08

Conclusions: A waiting continent and its weakest outpost

Borrowing a literary analogy, Europe increasingly resembles the *Fortezza Bastiani* in Dino Buzzati's famous novel "The Tartar Steppe": a continent standing guard over the memory of its past grandeur, awaiting either an external threat or an internal awakening to reignite its economic and political momentum. Despite undeniable civil and social achievements that place today's Europe at the forefront of human civilization, productivity is stagnating, innovation is slowing, and global dynamics are shifting decisively elsewhere. Within this static fortress, Italy—given its still considerable economic size—emerges as the most fragile outpost: rich in history, beauty, and culture, yet worn down by decades of weak growth, brain drain, and an industrial base struggling to adapt to technological change. If Europe as a whole is trapped in inertia, Italy risks becoming its most visible symbol: a nation defending the legacy of the past with pride, yet eroded by its own immobility—guarding a fortress whose purpose has long since faded. Escaping this Tartar Steppe syndrome requires industrial strategies that leverage state–market complementarities, foster long-term commitments among all actors, and are grounded in multi-level embedded autonomy and polycentric governance, where public and private actors collaborate iteratively within shared rules, enabling the system to adapt, learn, and build new productive capacities over time. Complementary policies to halt the decline in real wages and curb income and wealth inequalities are equally essential to sustain this transformation.

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Appendix A

Sectoral decomposition of productivity gains

We now present in detail the procedure that was used in Section 5.2 to calculate sectoral contributions to productivity growth and to decompose them. Our approach follows closely the one in Bock et al. (2025). We quantify the contribution of each sector to aggregate productivity growth by expressing aggregate productivity, $\mathbf{y}$, as the sum of sectoral productivities, $\mathbf{y_i}$, weighted by their respective share of hours worked, $\mathbf{s_i}$, and by their relative prices, $\mathbf{p_i}$:

$$y = \sum_{i=1}^{N} s_i \, p_i \, y_i \qquad (2)$$

where we consider the ***N*** sectors within the market economy ($i \in 1, \ldots, N$).

The total productivity gain of the tradable sector is thus obtained exactly by summing the sectoral contributions:

$$\frac{\Delta y}{y} = \frac{\sum_{i=1}^{N} s_i \, p_i \, y_i}{y} \qquad (3)$$

It is then possible to decompose these productivity gains into three terms:

1. Intra-sectoral (within) contribution that captures the productivity growth spe- cific to each sector.
2. Inter-sectoral (between) contribution, changes in the allocation of hours worked between sectors.
3. Relative price contribution that reflects the differentiated evolution of relative prices between sectors.

$$\frac{\Delta y}{y} = \sum_{i=1}^{N} \left(\frac{(\bar{s}_i \, \bar{p}_i \, \Delta y_i)}{y} \right) + \left(\frac{(\bar{y}_i \, \bar{p}_i \, \Delta s_i)}{y} \right) + \left(\frac{(\bar{y}_i \, \bar{s}_i \, \Delta p_i)}{y} \right) \qquad (4)$$

With $\bar{x} = \frac{x_t + x_{t-1}}{2}$ and $\Delta x = x_t - x_{t-1}$.

Figure 10 presents the sectoral breakdown of the labor productivity gap in the tradable sector between Germany and Italy over the period 2000-2019. For each country, sectoral contributions are computed using Equation (2). The figure reports the difference between the mean annual sectoral contributions of Germany and the corresponding values for Italy.

Furthermore, Table 4 reports the sectoral decomposition of the labor productiv- ity gap for the three terms in the tradable sector between Germany and Italy over the period 2000-2019, distinguishing the three components defined in Equation (4). The reported values correspond to the difference between the annual contributions for Germany and the corresponding values for Italy for each sector and component. Table 3 and Table 4 present the decompositions for Italy and Germany, respectively.

Variables and data sources.

- Labor productivity of sector *i* y_i is measured as value added per hour worked. Specifically, we use gross value added at constant prices (*VA_Q*) divided by total hours worked (*H_EMP*).
- The share of sector *i* in total hours worked s_i is *H_EMP* in sector i divided by total *H_EMP* in the market economy.
- Relative prices p_i are defined as the ratio of the sectoral gross value added price index (*VA_PI*) to the aggregate price index for the market economy.

All variables are taken from the EU KLEMS&INTANPROD database, release 2025. See Bontadini et al. (2023) for more details.

NACE sector	Within sector	Between sectors	Relative price	Total
Agriculture, forestry and fishing (A)	0.0335 (11.9%)	-0.0770 (-27.3%)	-0.0578 (-20.5%)	-0.1012 (-35.8%)
Mining and quarrying (B)	0.0089 (3.1%)	-0.0092 (-3.3%)	-0.0124 (-4.4%)	-0.0127 (-4.5%)
Manufacturing (C)	0.2299 (81.5%)	-0.2849 (-100.9%)	-0.0239 (-8.5%)	-0.0789 (-27.9%)
Energy and waste (D-E)	-0.0255 (-9.0%)	0.0065 (2.3%)	0.0376 (13.3%)	0.0186 (6.6%)
Construction (F)	-0.1162 (-41.1%)	-0.0202 (-7.2%)	0.1261 (44.7%)	-0.0102 (-3.6%)
Trade and repair of vehicles (G)	0.4475 (158.5%)	-0.1170 (-41.5%)	-0.2643 (-93.6%)	0.0661 (23.4%)
Transportation and storage (H)	0.0351 (12.4%)	0.0068 (2.4%)	0.0232 (8.2%)	0.0652 (23.1%)
Accommodation and food service activities (I)	-0.0937 (-33.2%)	0.1325 (46.9%)	0.0528 (18.7%)	0.0916 (32.4%)
Information and communication (J)	0.0651 (23.0%)	0.0231 (8.2%)	-0.0723 (-25.6%)	0.0159 (5.6%)
Financial and insurance activities (K)	0.0495 (17.5%)	-0.0160 (-5.7%)	-0.0012 (-0.4%)	0.0324 (11.5%)
Professional, scientific and technical activities (M)	-0.0998 (-35.4%)	0.1080 (38.3%)	0.0240 (8.5%)	0.0322 (11.4%)
Administrative and support service activities (N)	-0.0607 (-21.5%)	0.1644 (58.2%)	0.0277 (9.8%)	0.1313 (46.5%)
Arts, entertainment and recreation (R)	0.0001 (0.0%)	0.0096 (3.4%)	0.0244 (8.7%)	0.0341 (12.1%)
Other service activities (S)	-0.0398 (-14.1%)	0.0250 (8.9%)	0.0127 (4.5%)	-0.0021 (-0.8%)
Total Market Economy	**0.4339 (153.7%)**	**-0.0484 (-17.1%)**	**-0.1032 (-36.6%)**	**0.2823 (100.0%)**

Table 3. Shift-share decomposition of labor productivity growth in Italy's tradable sector over the period 2000-2019. Sectoral contributions are expressed as percentage points, while values in parentheses represent the percentage contribution to total productivity growth in the tradable sector. Source: EU KLEMS data and authors' calculations.

NACE sector	Within sector	Between sectors	Relative price	Total
Agriculture, forestry and fishing (A)	0.0433 (3.3%)	-0.0707 (-5.4%)	0.0394 (3.0%)	0.0121 (0.9%)
Mining and quarrying (B)	0.0057 (0.4%)	-0.0154 (-1.2%)	0.0055 (0.4%)	-0.0042 (-0.3%)
Manufacturing (C)	0.5361 (40.8%)	-0.1102 (-8.4%)	-0.1083 (-8.2%)	0.3176 (24.2%)
Energy and waste (D-E)	-0.0025 (-0.2%)	-0.0037 (-0.3%)	0.0109 (0.8%)	0.0047 (0.4%)
Construction (F)	-0.0158 (-1.2%)	-0.0708 (-5.4%)	0.1373 (10.5%)	0.0507 (3.9%)
Trade and repair of vehicles (G)	0.5038 (38.3%)	-0.0959 (-7.3%)	-0.1126 (-8.6%)	0.2953 (22.5%)
Transportation and storage (H)	0.0731 (5.6%)	0.0384 (2.9%)	-0.0015 (-0.1%)	0.1101 (8.4%)
Accommodation and food service activities (I)	0.0272 (2.1%)	0.0038 (0.3%)	0.0655 (5.0%)	0.0964 (7.3%)
Information and communication (J)	0.1362 (10.4%)	0.0796 (6.1%)	-0.1272 (-9.7%)	0.0886 (6.7%)
Financial and insurance activities (K)	-0.0177 (-1.3%)	-0.0552 (-4.2%)	0.0844 (6.4%)	0.0115 (0.9%)
Professional, scientific and technical activities (M)	-0.0849 (-6.5%)	0.1644 (12.5%)	0.0243 (1.8%)	0.1038 (7.9%)
Administrative and support service activities (N)	-0.0184 (-1.4%)	0.1613 (12.3%)	0.0435 (3.3%)	0.1864 (14.2%)
Arts, entertainment and recreation (R)	-0.0165 (-1.3%)	0.0178 (1.4%)	0.0178 (1.4%)	0.0191 (1.5%)
Other service activities (S)	-0.0056 (-0.4%)	-0.0081 (-0.6%)	0.0355 (2.7%)	0.0218 (1.7%)
Total Market Economy	**1.1640 (88.6%)**	**0.0353 (2.7%)**	**0.1146 (8.7%)**	**1.3138 (100.0%)**

Table 4. Shift-share decomposition of labor productivity growth in Germany's tradable sector over the period 2000-2019. Source: EU KLEMS data and authors' calculations.

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