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Where has all the productivity gone? Italy's missing growth in the XXIst century: issues and pro-productivity policies

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Date:

December 2025

The Productivity Institute

Productivity Insights Paper No. 070

Pro-Productivity Policies: Country Experiences Series

Key words
Globalisation, digital transitions, living standards, market integration, Great Financial Crisis, policy, management practices.

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Acknowledgements
This research was supported by The Productivity Institute at the University of Manchester and LUISS Lab of Economics and Energy transition (LLEE), as part of the project "Mapping Pro-Productivity Policies - (CT-026)". The authors gratefully acknowledge the financial support provided and thank Carlo Altomonte, Andrea Goldstein as well as Dirk Pilat, Bart van Ark, Rodrigo Krell and participants in the Workshop on Pro-productivity policies held on June 24-25, 2025, at King's College in London for their useful comments on a previous version of this paper.

Suggested citation

G. Nicoletti, I. Smiderle (2025) *Where has all the productivity gone? Italy's missing growth in the XXIst century: issues and pro-productivity policies*. Productivity Insights Paper No. 070, The Productivity Institute.

The Productivity Institute is an organisation that works across academia, business and policy to better understand, measure and enable productivity across the UK. It is funded by the Economic and Social Research Council (grant number ES/V002740/1).

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Abstract

Italy's economic growth has stagnated since the late 1990s, diverging from the trajectory of other advanced economies after decades of convergence driven by robust productivity gains. This paper examines the roots of Italy's persistent productivity slowdown in a historical, sectoral, and international context. It identifies weak MFP growth and capital deepening, particularly in intangible and digital assets, as well as underperformance in knowledge-intensive industries as critical contributors. Three self-reinforcing structural traps have hindered innovation, digital transformation, and efficient resource allocation: skills deficit, small scale of firms, and risk aversion. These traps, deeply rooted in Italy's economic and institutional fabric, have limited the country's ability to capitalize on globalization and technological change. Applying the van Ark et al. (2023) policy framework, the paper reviews Italian productivity policies over the past forty years, highlighting a persistent pattern of fragmented, delayed, and ineffectively executed reforms. A policy agenda is sketched to unlock the structural traps and reposition Italy on a dynamic productivity path.

Introduction

After decades of income convergence with the most advanced countries, driven largely by productivity growth, Italy's growth began to lose steam at the end of the last century, and convergence eventually came to a halt. This has heavily affected the progression of living standards. This paper focuses on productivity developments over the past three decades: it investigates the reasons for the disappointing productivity performance, which has dragged down Italian growth well beyond the productivity slowdown that has affected the global economy more broadly, and it proposes possible remedies.

The paper first examines Italian productivity and growth performance relative to its major economic partners, putting it in historical context and highlighting the proximate aggregate, sectoral and firm-level sources of the productivity deceleration. Then it turns to the structural weaknesses underlying ailing productivity, stressing how they have interacted with exogenous changes in regional and global market integration and technology.

The emerging story is one of missed opportunities to address these weaknesses at key moments of Italian economic history, with the country locked into three related traps that tend to reinforce each other: a 'low-skill trap', a 'small-scale trap' and a 'risk aversion trap'. During Italy's early postwar growth period these factors were leveraged to Italy's advantage and ensured economic survival until the mid-90s. However, they became major barriers to pursue further growth during the era of globalization and digital transitions. Notwithstanding recent signs of productivity dynamism in the industrial sector, mostly in trade-exposed activities, and scattered evidence of some virtuous restructuring following the Great Financial Crisis (GFC) and COVID-19 crises, these main weaknesses currently remain, affecting the services sector especially. This impairs the ability of Italy to catch up with other advanced countries in the knowledge economy. Ultimately, Italian weak spots are related to three important productivity channels highlighted in van Ark et al. (2023): insufficient investment in human and intangible capital; the failure of markets to efficiently allocate resources to their most productive uses; and the implied inability to realize the opportunities offered by new technologies in the context of increasingly globalized markets.

These observations then lead to the analysis of policies. The paper looks at those that weighed on productivity in negative or positive ways in the past as well as those that would currently need to be introduced to replace Italy on a dynamic productivity path. Some policy action has been ongoing, especially in the run-up to Euro Area membership and following the GFC. However, Italy should overcome two major obstacles that have impinged on policy effectiveness over the past three decades: the too-little-too-late syndrome and the implementation gap, whereby the appropriate policy initiatives are weak, hesitant and slow-moving and suffer from a hiatus between their *de jure* and *de facto* dimensions.

Breaking the self-reinforcing traps that curb productivity growth requires a holistic and long-term policy approach, which is sketched in the concluding section. Urgent action is needed in several related fields, where policies have been absent, weak or scarcely implemented. First, policies need to support the upgrading of human capital and skills, especially in the scientific

and digital fields, allowing labour to be reallocated to more productive usage across the economy. This requires greater focus on secondary and higher education to close gaps with other advanced countries. Also, active labour market policies need to be strengthened and better coordinated with income support during job transitions. Second, policies should favour the upscaling of firms that have productivity potential. To this end, the widespread adoption of new technologies and the buildup of intangibles – including, importantly, the establishment of modern managerial practices – are essential. This requires encouraging the broadening of firms' asset ownership beyond family control as well as reforming fiscal incentives and financial markets to better support investments in innovative business practices. Some steps in these policy directions have been taken over the past decade, especially as part of the current National Resilience and Recovery Plan (NRRP). However, several extensions and corrective measures are suggested in the paper. Finally, the institutional framework for policy design and implementation needs to be simplified and streamlined to enable swift implementation and ensure their effectiveness, supported by greater reliance on ex post evaluation.

While the paper attempts to be as complete as possible on the patterns and causes of Italy's productivity stagnation, it only mentions in passing three important dimensions: the North-South divide within the country, political connections and cronyism, and public sector inefficiency. The Mezzogiorno has specificities that drag down country-level productivity, but the key characteristics – low skills, small firm size and high-risk aversion – are the same as in the rest of Italy, even though more pronounced (CNP, 2025). The influence of cronyism on productivity growth is yet unclear. There is an infant but growing research on the topic suggesting that the problem is related to other features of the Italian economy, such as institutional complexity and fragmentation, which are dealt with in the paper (Akcigit et al., 2023; Pellegrino and Zingales, 2017). Public sector inefficiency is notoriously difficult to measure but is partly reflected into the policy delays and implementation gaps that are also addressed in the paper. These dimensions of Italy's productivity conundrum will deserve further analysis in the future.

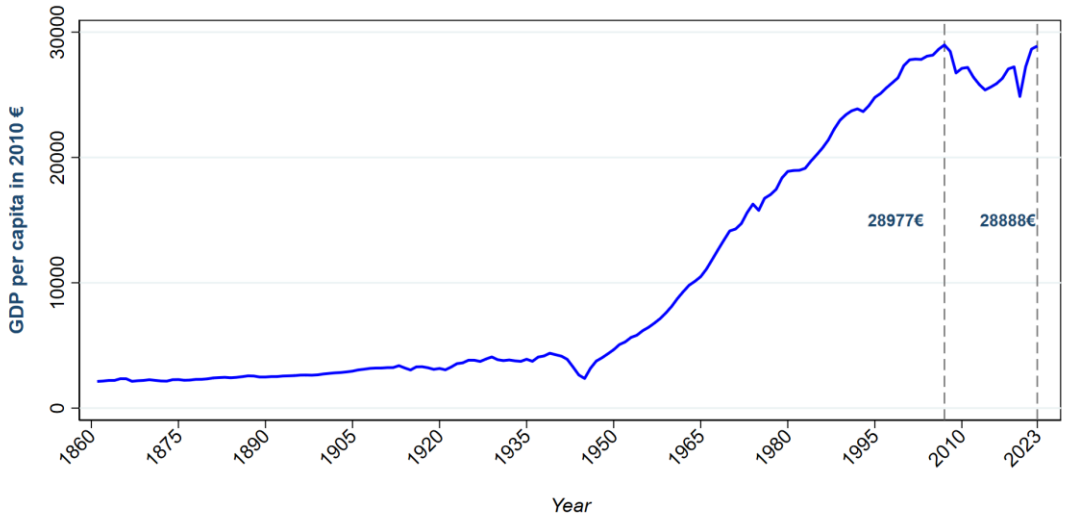
Italian productivity growth in historical context

The big picture

Italy's economic history has been dominated by very rapid growth in the postwar period, which has taken Italian living standards from those of a backward economy to those of the most advanced OECD countries (Figure 1. **Real GDP per capita**, Panel A). However, this convergence process lost steam during the 1990s and eventually reversed in this century (Figure 1. **Real GDP per capita**, Panel B). As a result, real income per capita levels are currently not only still lower than before the GFC but also (in Purchasing Power Parities) farther below those of the US and major EU peers than they were at the turn of the century.

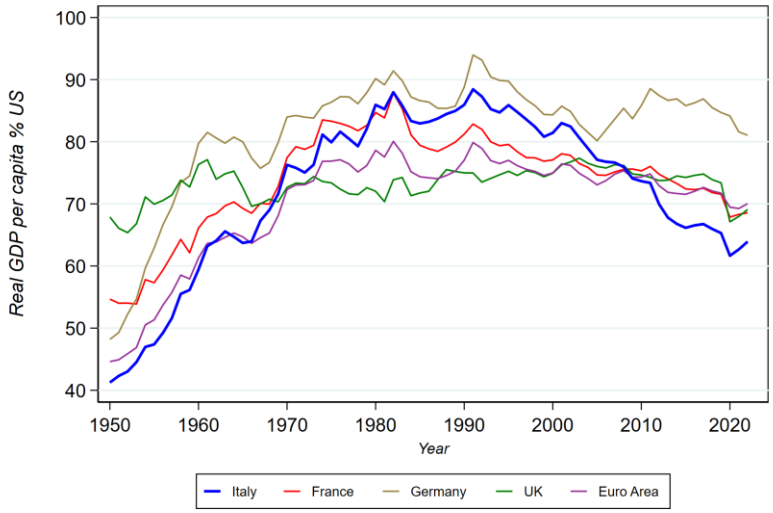
Figure 1. Real GDP per capita

Panel A. From unification to nowadays



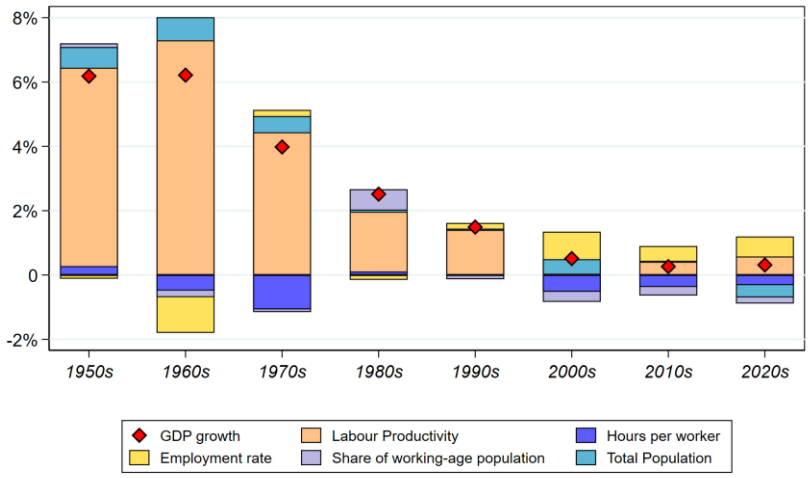
Note: GDP per capita is expressed in thousands of euros (Chained values; Reference year = 2010). *Data sources*: estimated of GDP are from Banca d'Italia (Serie Storiche) up to 2017 and are extended to 2023 with the FRED Database. Population data are from EUROSTAT statistics.

Panel B. Postwar real GDP per capita: convergence and divergence (US=100)



Note: Real GDP per capita is measured in constant 2010 US dollars, adjusted for purchasing power parity (PPP), and expressed as a share of US real GDP per capita. Euro Area includes Austria, Belgium, Germany, Spain, Finland, France, Greece, Italy, Netherlands, Portugal. *Data source:* Long-Term Productivity Database *(*Bergeaud et al., 2016).

Panel C. Postwar real GDP per capita: labour inputs decomposition



Note: Real GDP per capita is measured in constant 2010 US dollars, adjusted for purchasing power parity (PPP). Labor productivity is defined as the ratio of total GDP over total hours worked. Depicted series are logarithmic growth rates, averaged over 10 years. *Data sources:* Long-Term Productivity Database *(*Bergeaud et al., 2016). Working-age population shares are based on OECD-EUROSTAT data.

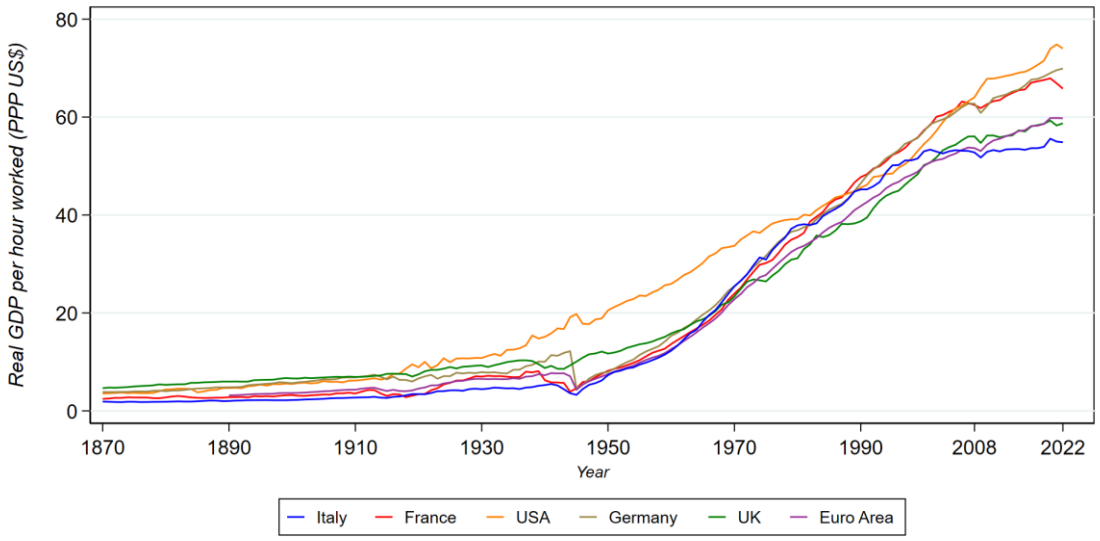
Italy's GDP per capita growth deceleration has been caused by several factors. These include rapid ageing, which shrank the working age population (offset only partially by rising employment rates) and more recently even the total population. But weakening productivity growth has been the predominant factor (Figure 1. **Real GDP per capita**, Panel C).

Indeed, for most of its history, Italian GDP growth has been driven by productivity developments, which brought productivity levels at the frontier of OECD countries by the mid-1990s (Figure 2). By and large, long-run productivity trends have gone through four historical phases (Broadberry et al., 2011): relatively slow growth (with some limited spurs) up to the end of WWII; exceptionally strong growth up to the mid-1970s; subdued but sustained growth in the following two decades; and persistent stagnation since the end of the 1990s.

Unsurprisingly, productivity has also played a role in Italian economic growth during the last three decades. However, average growth rates have dropped off to the previous all-time low observed in the period right after Unification. Moreover, the low rates are persisting longer than at any other time in Italian history.[1] As a consequence, productivity levels have ceased to converge and have drifted away from those of the US, Euro Area (EA) and the UK. The compound effect of domestic productivity stagnation in the context of the global slowdown has been to halt progress in GDP per capita and turn income convergence into divergence.

[1] Estimates by Broadberry et al. (2011) set Italy's post-unification productivity growth at around 0.5% per annum, which is like average growth observed over the past three decades.

Figure 2. *Labour productivity: the long-term*



Note: Labour productivity is computed as Real GDP per hour worked. GDP is expressed in 2010 US dollars per person employed, PPP converted. Euro Area includes Austria, Belgium, Germany, Spain, Finland, France, Greece, Italy, Netherlands, Portugal. *Data source:* Long-Term Productivity Database (Bergeaud et al., 2016).

Since the second half of the 2010s and immediately after the COVID-19 pandemic there have been some signals of productivity revival (Table 1. Comparative labour productivity growth over the past half century). Driven by the post-pandemic rebound and spurred by the combined cleansing and restructuring effects of the GFC and COVID slumps, Italian productivity growth has edged up a bit, especially in manufacturing industries most exposed to trade, as well as in retail distribution and construction. However, the most recent data suggests that GDP growth has been sustained only by the increase in hours worked, with the limited productivity revival being just a blip in a flat line and productivity performance reversing to its long-run stagnation trend (ISTAT, 2025; CNP, 2025).

Table 1. Comparative labour productivity growth over the past half century

Area	*1970s*	*1980s*	*1990s*	*2000s*	*2010s*	*2020s*
Italy	4.26	1.89	1.42	0.09	0.34	0.20
France	4.35	2.94	1.80	1.10	0.88	-0.60
Germany	3.36	2.07	2.28	0.90	1.18	0.42
United Kingdom	3.79	2.20	2.50	1.36	0.64	0.56
United States	0.77	1.37	1.70	2.24	0.94	1.63
Euro Area	.	.	1.40	0.86	0.99	0.34

Note: Labour productivity growth refers to the period averages of the growth rates of GDP per hour worked. Values for 1970s and 2020s refer respectively to the period 1976-1979 and to the average of the 2020-2023 period. Values for 1990s for Euro Area are averaged from 1995 to 1999. Euro Area includes all 20 countries of Eurozone as of 2023. *Authors' estimates based on OECD Data.*

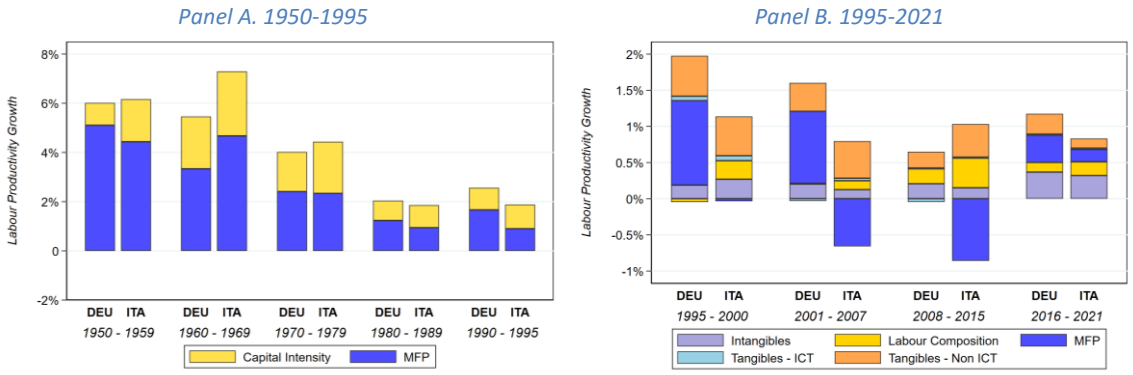
The proximate drivers of productivity

Italy's slowdown and subsequent long-term stagnation over the past three decades mostly reflected vanishing and even negative contributions of multifactor productivity (MFP) (Figure 3. Labour productivity growth accounting: Italy vs Germany, Panels A and B). Indeed, among advanced countries, Italy has stood out since the late 90s for the unusually low performance of MFP (Table 2. Labour productivity growth accounting: Italy vs major trading partners 2). Aggregate MFP captures several phenomena ranging from technological progress to knowledge spillovers across firms and industries. It also captures improvements in the efficient use of factors of production (labour, different kinds of capital assets and natural resources), including via their reallocation across firms and industries. As discussed in the next section, weaknesses in all these phenomena underpin Italy's dismal MFP performances.

As in other EA countries, subdued overall (tangible and intangible) capital deepening has also tended to moderate productivity growth over the past three decades. But in Italy, even this weak contribution to growth was offset by the decline in MFP. This suggests difficulties in exploiting synergies and complementarities in production particularly among ICT and intangible assets – such as organizational capital and skills. These difficulties may have adversely affected spillovers to growth that are captured by MFP.

Moreover, Italy stepped into the knowledge economy era and the related digital transformation with a comparatively low base of ICT and intangible assets (Figure 4. Tangible and intangible capital: stocks and flows, top panels). ICT investment rates have been somewhat higher than in other countries suggesting some ongoing catch up. However, intangible investment rates have so far remained persistently lower maintaining Italy in a laggard position (Figure 4. Tangible and intangible capital: stocks and flows, bottom panels).

Figure 3. Labour productivity growth accounting: Italy vs Germany



Note: In the first panel, labour productivity is defined as the ratio of GDP over total hours worked. Real GDP per capita and capital intensity are measured in constant 2010 US dollars, adjusted for purchasing power parity (PPP). Depicted series are logarithmic growth rates, averaged over 10 years. Contributions of labour and capital *quality* are captured by MFP in this first graph. *Data sources:* Long-Term Productivity Database (Bergeaud et al., 2016). In the second panel, labour productivity is defined as Value Added per hour worked. Value Added is adjusted to consider the capitalization of intangibles and computed over the total economy. Productivity growth over the specified periods is computed as average over annual productivity growth rates. *Authors estimates based on EUKLEMS-INTANProd database, analytical module.* See Bontadini et al. (2023) for more information.

Table 2. Labour productivity growth accounting: Italy vs major trading partners

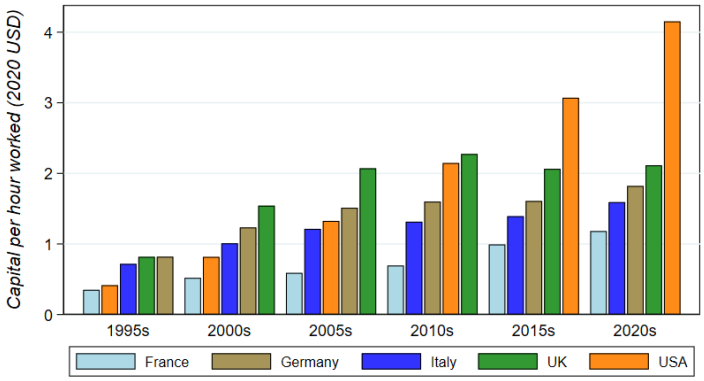
Average annual percentage variations

		Labour Productivity	MFP	Capital Intensity	Labour Composition
1995 - 2000					
	France	1.79	1.11	0.42	0.26
	Germany	1.93	1.17	0.81	-0.05
	Italy	1.10	-0.04	0.88	0.26
	USA	3.58	2.35	1.10	0.13
2001 - 2007					
	France	1.35	0.51	0.64	0.20
	Germany	1.57	0.99	0.57	0.01
	Italy	0.14	-0.66	0.67	0.12
	USA	2.08	0.69	1.21	0.18
2008 - 2015					
	France	0.76	-0.41	0.63	0.54
	Germany	0.60	0.01	0.39	0.21
	Italy	0.17	-0.86	0.62	0.41
	USA	1.33	0.17	0.89	0.27
2016 - 2021					
	France	0.31	-0.61	0.51	0.41
	Germany	1.17	0.38	0.66	0.13
	Italy	0.83	0.17	0.47	0.19
	USA	2.28	0.78	1.16	0.34
1995 - 2021					
	France	1.01	0.08	0.56	0.37
	Germany	1.25	0.58	0.58	0.09
	Italy	0.49	-0.41	0.65	0.25
	USA	2.19	0.87	1.08	0.24

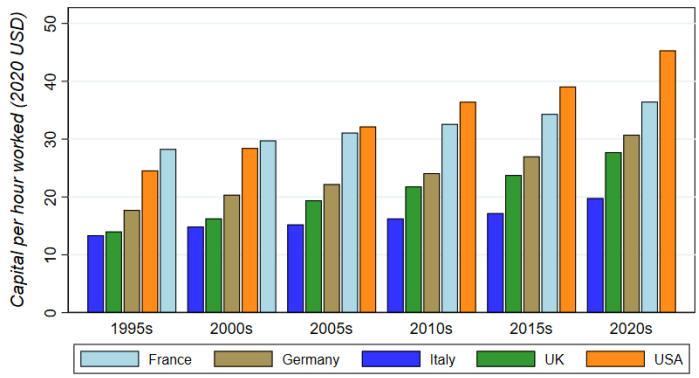
Note: Labour productivity is defined as Value Added per hour worked. Value Added is adjusted to consider the capitalization of intangibles and computed over the total economy. Productivity growth over the specified periods is computed as arithmetic mean of annual productivity growth rates. Capital Intensity refers to capital stock per hour worked and includes tangible, national account intangible and non-national account intangible capital. *Authors' estimates based on EUKLEMS-INTANProd database, analytical module.*

Figure 4. Tangible and intangible capital: stocks and flows

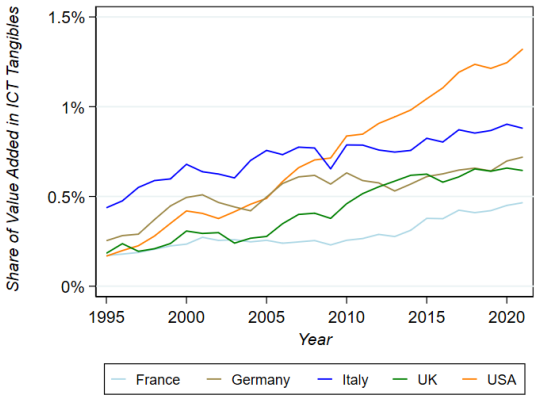
Panel A. Tangible-ICT Capital Intensity



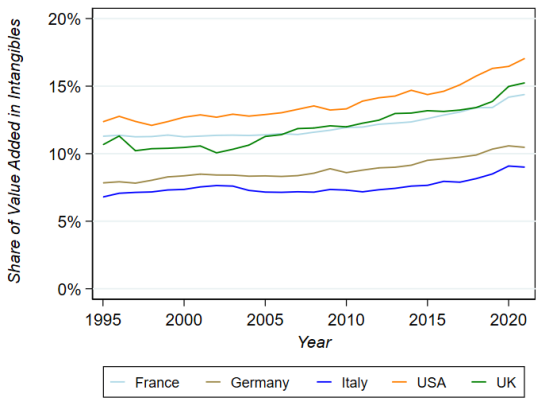
Panel B. Intangible Capital Intensity



Panel C. Tangible-ICT Investment



Panel D. Intangible Investment

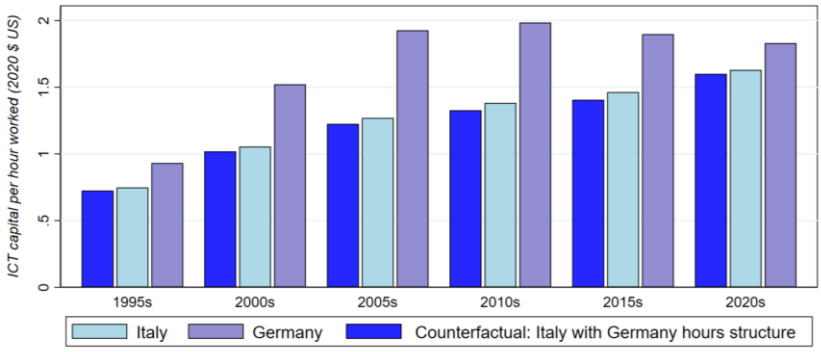


Note: Capital intensity is defined as chain-linked PPP-adjusted capital stock over total hours worked (Ref. year 2020). Value Added is expressed in millions of national currencies, chained linked volumes (2020), and it is adjusted to consider the capitalization of intangibles and computed over the total economy. ICT Tangibles include computing and communication equipment. Intangibles comprehend both national account and non-national account intangibles. Values for 2020s are computed over 2020 and 2021. *Authors' estimates based on EUKLEMS-INTANProd Database, statistical and analytical modules.*

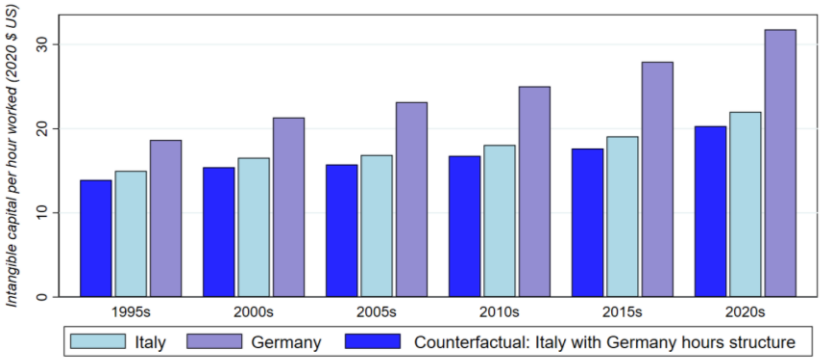
Lower stocks of ICT and intangibles may partly depend on industrial structure. Italy has a relatively low share in value added of ICT producing sectors and lower demand for ICT assets by the rest of the economy. However, it is unclear to what extent this can explain the persistent gap in ICT and intangibles relative to other countries. For instance, a counterfactual experiment that applies German industrial structure to Italian sectoral investment rates has little effect on the aggregate measures, especially with respect to intangibles (Figure 5).

Figure 5. The influence of industrial structure on ICT and intangible capital intensities

Panel A. Tangible-ICT Capital Intensity



Panel B. Intangible Capital Intensity



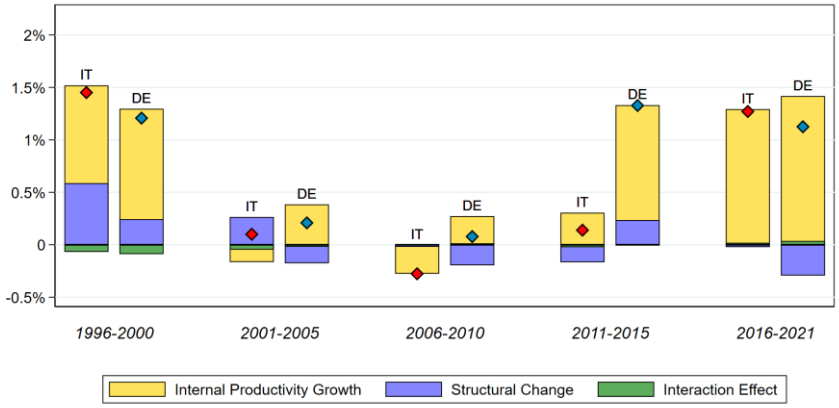
Note: Capital intensity is defined as chain-linked PPP-adjusted capital stock over total hours worked (Ref. year 2020). Blue bars show the capital intensity in the counterfactual case of Italy having the same hour structure of Germany. ICT Tangibles comprehend computing and communication equipment. Intangibles comprehend both national account and non-national account intangibles. Values for 2020s are computed over 2020 and 2021. *Authors' estimates based on EUKLEMS-INTANProd Database, statistical and analytical modules.*

Turning to the sectoral dimension, a shift-share decomposition of productivity growth shows that most of the missing growth in this century is due to weak within-sector performances (Figure 6. Within vs between-sector drivers of productivity growth). While the Italian economy has traditionally specialized in relatively low productivity sectors (such as medium-low tech manufacturing and less knowledge-intensive services) with some implications for aggregate productivity levels (Greco, 2023), over the past three decades, productivity

deceleration and stagnation are not related to resources shifting to these sectors.[2] Indeed, the contribution of sectoral reallocation to productivity performance has generally been positive since the mid-90s, apart from a few years after the GFC.[3] However, this trend has reversed since the pandemic, when significant reallocation of resources towards low-productivity sectors (such as construction, catering and health and personal services) has also contributed to drag down productivity growth (ISTAT, 2025; CNP, 2025).

Figure 6. Within vs between-sector drivers of productivity growth

Shift-share decomposition of productivity growth in Italy and Germany



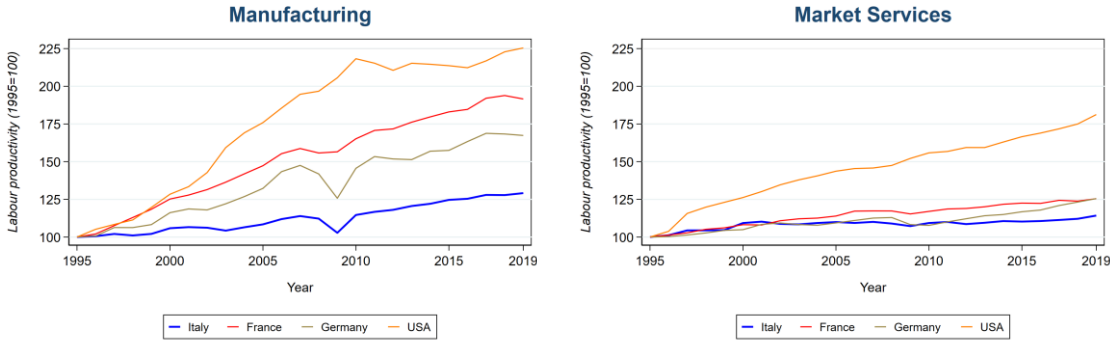
Note: We consider all sectors of the economy except real estate and non-market services like health and education. Following Deleidi et al. (2020), labour productivity growth is decomposed in a *within sector effect*, reflecting productivity gains internal to each sector, the *structural change effect*, due to the shift in employment towards more or less productive activities, and the i*nteraction effect* between them (reflecting the effect of the shift in employment weights on within- sector productivity growth). *Authors' estimates based on EUKLEMS-INTANProd database, analytical module.*

Relatively weak within-sector productivity growth is a feature spread across many areas of the Italian economy. This translates into slower aggregate growth in both manufacturing and market services compared to trading partners (Figure 7. Productivity growth in manufacturing and market services). Productivity-wise, market services are a well-known soft spot of European economies relative to the US, but Italy's services are even weaker than in other European economies: their aggregate productivity has barely moved in this century except during the COVID crisis due to the exceptional fall in hours worked.

[2] Balassa indices indeed suggest that Italy's specialization is twisted towards medium-low tech manufacturing (such as textiles, fabricated metal and mineral products, machinery and equipment, furniture) and low-tech services (such as retail and wholesale, accommodation and food) (Greco, 2023).

[3] Figure 6 updates the analysis by Deleidi et al. (2020) using their methodology. Broadberry et al. (2011) highlight the stylized historical fact that sectoral reallocation in Italy has always contributed positively to productivity in periods of low growth.

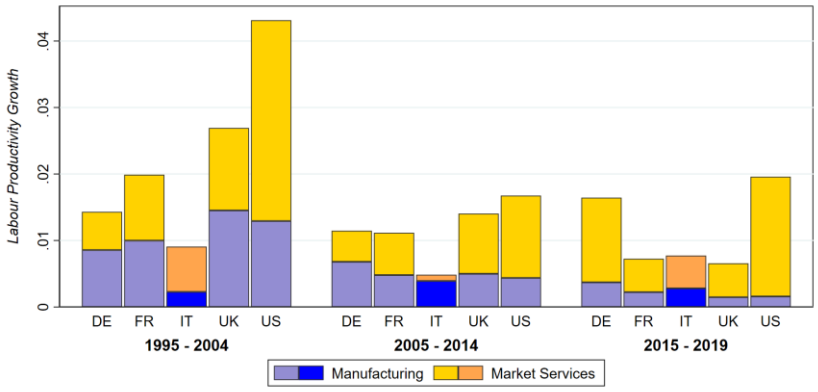
Figure 7. Productivity growth in manufacturing and market services



Note: Labour productivity is computed as Value Added over total hours worked. Value Added is expressed in chain- linked PPP-adjusted values (Ref. year 2020), adjusted for intangibles and labour productivity has been normalized to 100 in 1995. Market Services include ISIC Industries: G, H, I, J, K, M, N, R, S. We omit 2020 and 2021 that were heavily influenced by the drop in hours worked due to COVID-19. *Data source: EUKLEMS-INTANProd, analytical module.*

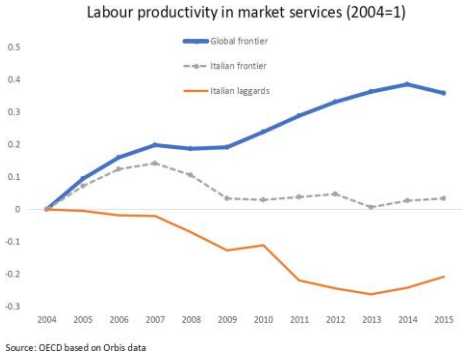
Indeed, what really differentiates Italy from its trading partners is the particularly weak contribution of market services to aggregate performance. The analysis of sectoral contributions to aggregate productivity growth shows that until recently market services have been playing a meagre role in Italy compared to other countries (Figure 8. Contributions of manufacturing and services to business sector productivity growth). Consistent with their productivity stagnation, their contribution has been particularly weak over the first 15 years of this century. Micro data also shows that Italian firms in market services have increasingly fallen behind best practices during this period (Figure 9). Taken together, productivity in services has suffered from both a rising gap between the national and global labour productivity frontier and a growing distance between firms at the national frontier and the rest of firms, whose productivity has even been declining.

Figure 8. Contributions of manufacturing and services to business sector productivity growth



Note: Labour productivity is computed as Value Added in the market sector over total hours worked, yearly averages. Value Added is expressed in chain-linked PPP-adjusted values (Ref. year 2020) and it is adjusted to consider the capitalization of intangibles. Services ISIC Industries: G, H, I, J, K, M, N, R, S. *Authors' calculations based on EUKLEMS- INTANProd, analytical module.*

Figure 9. Market services productivity at the frontier and in the rest of the economy



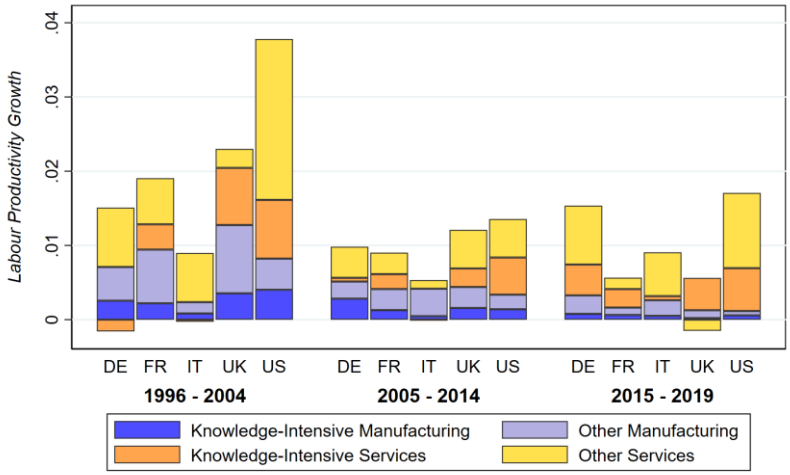
Note: Index (2004 = 1), approximated by changes in logs. Average across detailed industries using firm-level data. 3 year moving average. Labour productivity is defined as value added per employee. The "Global frontier" is defined as the average of the productivity for the top 5% firms in the productivity distribution within each detailed (2-digit) NACE Rev2 industry from 24 OECD countries for which firm level data is available. "Italian frontier" is constructed in the same way. "Italian laggards" is the average productivity of all other firms within the detailed industry. Market services cover non-financial business services NACE Rev2 industries 45-82 excluding 64-66 and 68. *Source:* OECD based on ORBIS data, Andrews et al. (2016).

In addition, the Italian economy has failed to benefit to the same extent as other industrial countries from the potentially strong contribution of knowledge-intensive manufacturing and services to productivity growth. For instance, productivity growth in sectors where intangibles play a key role, has basically been nil over the past three decades (Figure 10. Contribution of knowledge-intensive sectors to aggregate productivity growth, Panel A). Moreover, analysis at the firm level shows that lately over the past decade the most productive Italian firms in some of the most knowledge-intensive service industries have kept pace with the EU frontier, while the rest was falling further behind (Figure 10, Panel B).

This is consistent with the relatively low overall level of intangibles assets and the somewhat limited diffusion of digital technologies relative to other major EA economies and the US. Indeed, in 2022 Italy ranked 39th in the IMD World Digital Competitiveness index and 18th in the European Commission Digital Economy and Society Index (DESI) index (well behind the US, the UK, France and Germany), both measuring the overall digital advancement and readiness of economies faced with the digital transition.

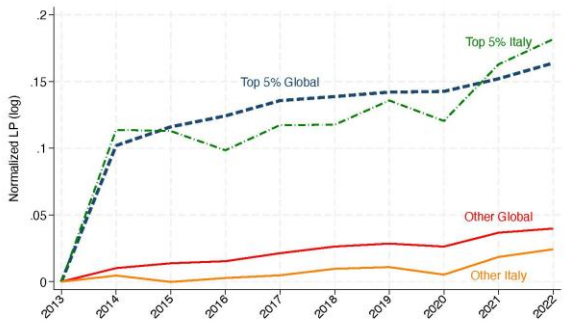
Figure 10. Contribution of knowledge-intensive sectors to aggregate productivity growth

Panel A. Knowledge-intensive vs other sectors



Note: Labour productivity is computed as Value Added over total hours worked, year averages. Value Added is expressed in chain-linked PPP-adjusted values (Ref. year 2020). To define knowledge-intensive sectors we consider the average intangible capital intensity in 15 European Countries (EU15), separately for Manufacturing and Market Services. We classify as *knowledge-intensive* sectors those with intangible capital intensity higher than the average. The selected sectors are C19, C20, C21, C26, C29-C30 for Manufacturing and H51, J, K, M for Market Services. The contribution of each of the 4 groups is computed as the growth of productivity in that group weighted by the average of hours worked in that group in time *t* and *t-1*. The use of more detailed sector-level data in the EUKLEMS-INTANProd database entails an approximation error in the aggregation, implying slight differences in the total productivity growth with respect to Figure 8. Contributions of manufacturing and services to business sector productivity growth. *Authors' calculations based on EUKLEMS-INTANProd, analytical module.*

Panel B. Labour productivity in professional services (2013=1)



Note: Index (2013 = 1), approximated by changes in logs. Average across detailed 4-digit NACE industries using firm-level data. 3 year moving average. Labour productivity is defined as value added per employee. The "Top 5% Global" is defined as the average of the productivity for the top 5% firms in the productivity distribution within each industry from 11 EU countries for which firm level data is available. "Top 5% Italy" is constructed in the same way. "Other global" and "Other Italy" are the average productivity levels of all other firms. Professional services cover 4-digit NACE industries 6910, 7111, 7112, 7120. *Authors' estimates from Orbis Moody's Analytics data (LUISS license).*

Despite these disappointing trends, there are also signs of productivity improvements in certain areas of the Italian economy. For instance, detailed analysis of sectoral contributions to aggregate productivity growth shows that manufacturing industries most exposed to international trade, as well as retail distribution in services, have been doing relatively well productivity-wise after the GFC. This suggests some degree of cleansing and restructuring

has been ongoing in these sectors over the following decade (Greco et al., 2023). Analysis at the firm level, also indicates that in certain sectors, after the GFC, within-sector business dynamics may have been more virtuous than in the past, involving a process of business exit, consolidation and restructuring especially in export-oriented manufacturing (Linarello et al., 2023). [4] The question is whether these positive signs can foreshadow brighter future developments for aggregate productivity. Certainly, for this to happen, some of Italy's structural traps would have to be addressed in a more decisive way than in the past.

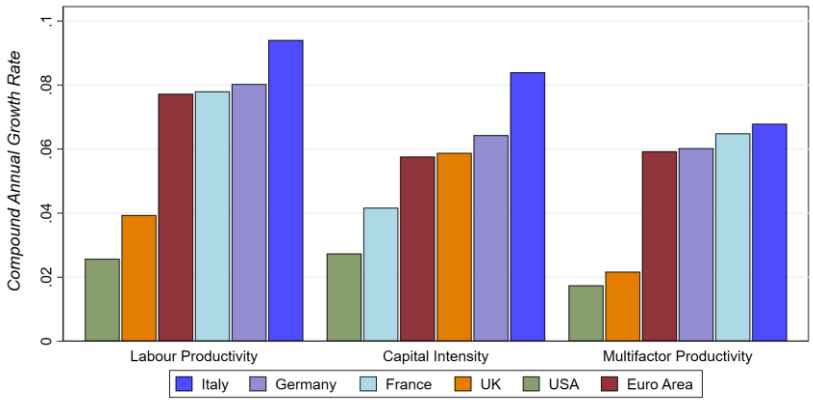
Italy's structural traps

Italy's persistent productivity underperformance since 2000 is best understood against the drivers of its postwar "Golden Age." Until the mid-1970s, productivity surged thanks to both unique historical conditions and the ability of the economy to adapt to the technological and global context. Unique conditions included postwar reconstruction and modernization supported by the Marshall Plan; mass migration from less to more productive regions; resource shifts from agriculture to industry; and rapid urbanization with agglomeration benefits. Ability to adapt was reflected in rising education and on-the-job learning that sustained productivity in the medium- and low-tech industries in which Italy was specializing; early adoption of factory automation (notably in automotive); relationship banking well suited to SMEs mostly operating at local levels; the emergence of local networks of small suppliers (the famous "distretti") serving larger firms or foreign markets, which ensured flexibility and knowledge spillovers (Amatori et al., 1997); [5] and participation in supply chains via EU integration and close trade ties with Germany and the US (a process also helped by competitive labour costs and a large grey economy). As a result, Italy's labour productivity growth, driven by both multifactor productivity and capital deepening interacting in a virtuous circle, outpaced that of its main partners and by the early 1970s its level exceeded that of the UK and approached Germany's (Figure 11. The drivers behind Italy's "Golden Age" of labour productivity, 1945-1975).

[4] The Italian economy has been burdened for a long time by a fat tail of low-productive firms, among which a larger share of so-called zombies than in EA peers (Andrews et al., 2018).

[5] Celebrated industrial districts are in Lombardy (industrial machinery and robotics), Piedmont (e.g. aerospace and industrial tools), Tuscany (e.g. textiles and luxury goods), Emilia-Romagna (e.g. packaging machinery, biomedical equipment, ceramics and knitwear), and the North-Eastern districts (steel plant equipment, eyewear, luxury goods and leather).

Figure 11. The drivers behind Italy's "Golden Age" of labour productivity, 1945-1975

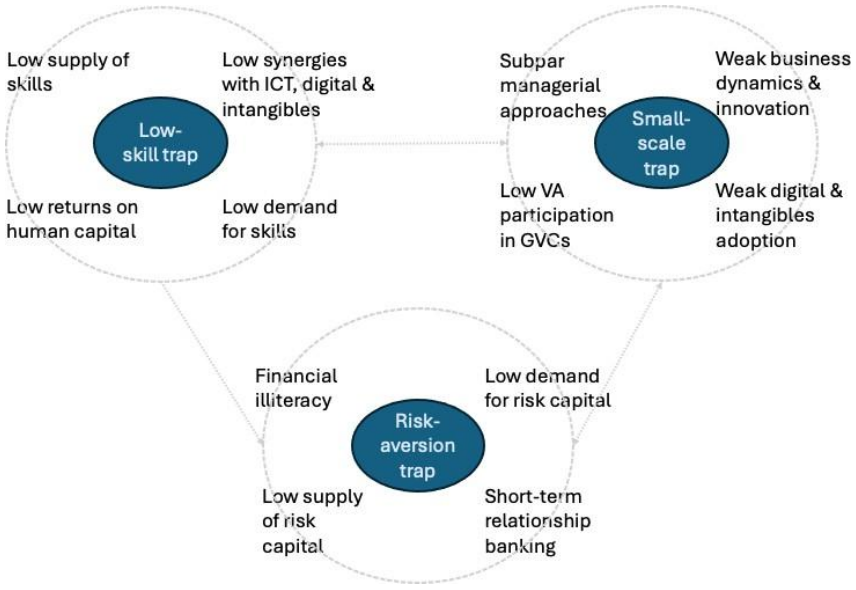


Note: Labour Productivity and Capital Intensity are measured in $US 2010 PPP per hours. Euro Area includes Austria, Belgium, Germany, Spain, Finland, France, Greece, Italy, Netherlands, Portugal. *Data source:* the Long-Term Productivity Database (Bergeaud et al., 2016).

By contrast, subsequent decades saw "lost growth" due to three interacting traps that locked up the Italian economy preventing its adaptation to the rapidly changing global landscape and curbing its productive potential (Figure 12. The structural traps locking-in Italian productivity growth). The **low-skill trap** reflects both weak supply of technical and scientific skills and low employer demand, producing poor alignment with new technologies, low wages, and weak incentives for education and upskilling. The **small-scale trap** arises from family firms' reluctance to scale, subpar managerial approaches, and limited (and subordinate) participation in global value chains, curbing digitalisation, intangible investment, and innovation. The **risk-aversion trap** stems from investor financial illiteracy and a banking system ill-suited to fund innovation, depressing risk capital.

The peculiarity of these traps is that they are not only configured as self-sustaining vicious circles but also reinforce each other, keeping Italy on a low growth equilibrium. Small, family-run businesses that are poorly digitised lack innovation and operate in traditional sectors with limited integration into global value chains tend to persist with low skills and low appetite for risk.

Figure 12. The structural traps locking-in Italian productivity growth



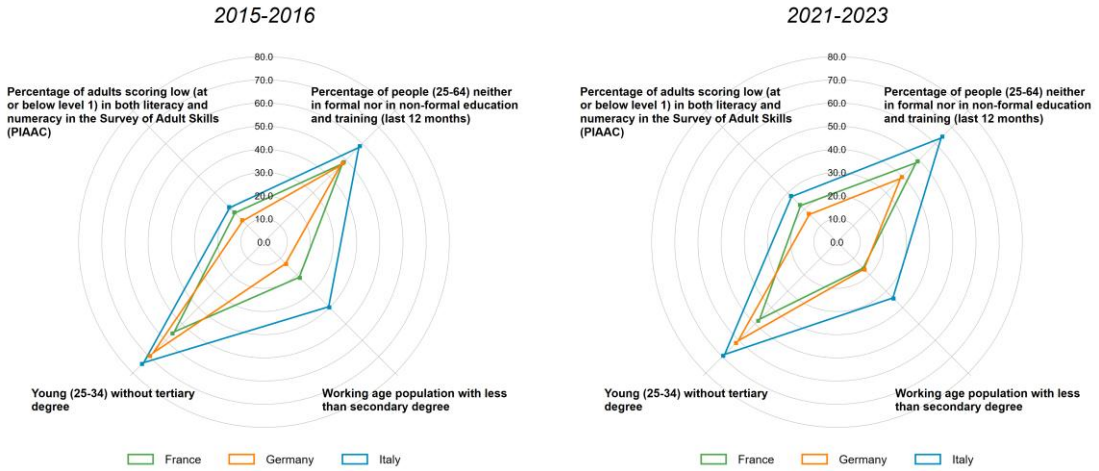
The low-skill trap

Economies increasingly based on the use and exchange of knowledge need to leverage high-skilled labour, talented managerial resources and a well-informed general population to innovate and find other ways to improve productivity. These skills and competencies are needed in R&D and innovation, digital technology adoption, the treatment of huge data flows and the organization of cutting-edge business models. In this respect, Italy has entered the 21st century knowledge economy in an inferior condition relative to its economic partners. Figure 13 compares Italy to other advanced countries along two key dimensions of the adult population during the 2000s: (i) educational attainment, participation and cognitive abilities, and (ii) general digital skills (Figure 13. Italy and the knowledge economy).[6] In 2015 – well into the digital era – around 40% of Italians of working age (25-64) had not gone beyond secondary school, four times more than in Germany and twice as much as in France. Of these, a large share had stopped before achieving a high school degree. At the same #time, the share of 25-34 years old with a university degree was among the lowest in industrialized countries, with literacy and numeracy of university graduates being at the bottom of international rankings. Moreover, a particularly low share of university graduates held a degree in STEM-related disciplines and in the field of information and communication technologies (in 2021, it was still around four times smaller than in Germany and France). Even the most recent youth cohorts have university enrolment rates that are very low by international standards (in 2015, only rates in Hungary and Mexico were lower among OECD countries).

[6] The data quoted in the text and not shown in the figure is drawn from various vintages of OECD Education at a Glance publications and OECD PISA and PIAAC surveys.

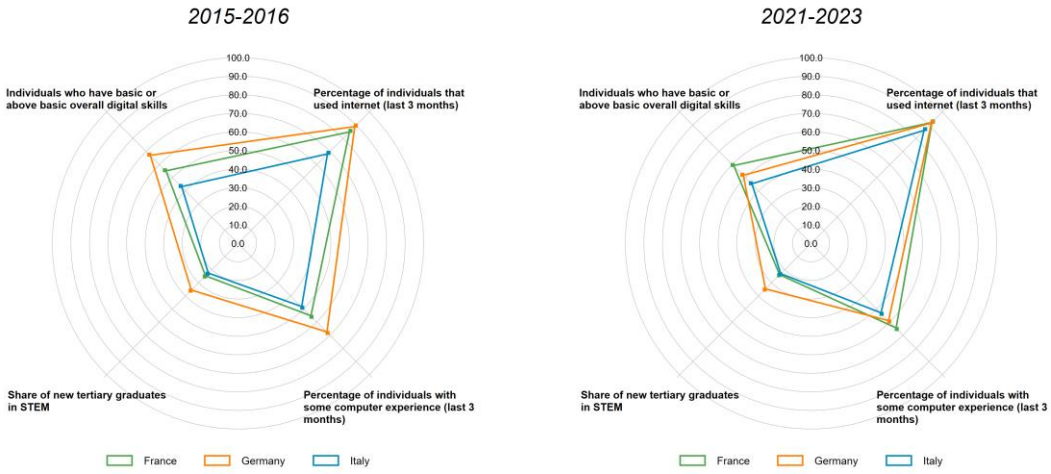
Figure 13. Italy and the knowledge economy

Panel A. Educational attainment, participation and cognitive abilities



Note: Indicators refer to 2016 on the left-hand side and to 2023 on the right-end side; when not available the scores are referred to the closest year available. Data on the percentage of adults that are low performing in both numeracy and literacy are collected in the Survey of Adult Skills (PIAAC) [2015 & 2023]. The PIAAC survey measures the cognitive abilities of adults (in literacy, numeracy and adaptive problem solving) approximately every decade in around 30 countries since 2011, with the latest survey in 2022-2023. The percentages of people (25-64) neither in formal nor in non-formal education and training (last 12 months) are based on the Adult Education Survey (AES), covering working and non-working adults, available in Eurostat database [2016 & 2022]. Estimates relative to young people (25-34) with tertiary degree and to working age population with less than secondary degree can be found in Eurostat [2016 &2023].

Panel B. General digital skills



Note: Indicators refer to 2016 on the left-hand side and to 2023 on the right-end side; when not available the scores are referred to the closest year available. Data on the shares of tertiary graduates in STEM field can be found in the OECD Going Digital Toolkit, based on the OECD Education Database [2016 & 2021]. Percentage of population that used internet in the last 3 months [2016 & 2023] and individuals who have basic or above basic overall digital skills [2016 & 2021] are available in Eurostat database. Percentage of individuals with some computer experience is proxied by the percentage of individuals who "have copied or moved files between folders, devices or on the cloud in the last 3 months", according to Eurostat [2016 & 2021].

The relatively low level of educational attainment was compounded by shortcomings of the educational system. This resulted in reading, mathematical and especially scientific literacy scores of teenagers being persistently lower than in France and Germany (as well as below the OECD average), at least until the pandemic. COVID-19 reduced teenagers' literacy scores in those countries to Italian levels.[7] In other words, Italian youth entering tertiary education or the labour force during the digital revolution of the 2000s were cognitively disadvantaged relative to their peers in other advanced countries.

With both the quantity and quality of education being relatively weak, it is not surprising that the share of adults with low levels of literacy and numeracy (approximately 30% in 2022) has been consistently higher in Italy than in France and Germany. Italy has been one of the OECD countries with the largest shares of both individuals lacking basic digital skills and making little use of digital technologies. In 2015 only 44% of the population aged 16-74 had basic digital skills (against 57% in the EU as a whole) and three out of ten people were not regular internet users. In 2016, only half of the adults surveyed by Eurostat had some computer experience in the previous three months, which is well below the proportion of German adults, at around 70%.[8] Moreover, the deficit in formal educational attainment and competencies was hardly offset by vocational training or lifelong learning. In 2015, only 14% of adults with a skills deficit participated in formal education or training courses, a much lower percentage of workers than in Germany or France (OECD, 2017).

The panels in Figure 13 show that by 2022 some of the staggering gaps highlighted above had shrunk, suggesting that catch up is ongoing (Figure 13. Italy and the knowledge economy). However, the deficit in skill endowments relative to other advanced countries remains sizable and persistent. For instance, although the share of population with low educational attainment has decreased in absolute terms, the gap relative to Germany and France has become more pronounced in time. Moreover, the percentage of people that are neither in education nor training is even higher in 2022 than it was in 2016. The latest evidence from the OECD Survey of Adult Skills (2024b) suggests that the positioning of Italian adults in terms of numeracy, literacy and adaptive problem solving is still well below the OECD average, though the prevalence of these skills improved over the last decade in absolute terms.[9] At the same time, Italy seems to be catching up with European countries in terms of the basic digital skill set necessary to participate at all levels of the knowledge economy. This is to some extent attributable to the pandemic-driven shift toward digital tools and remote work.

[7] The most recent vintage of the OECD PISA Survey finds a marked decline in literacy of teenagers in most countries after the pandemic.

[8] Moreover, although there is considerable variability in PIAAC cognitive test results, lower adult skills than in other advanced economies were found across most age groups, regions and occupations, including managerial occupations.

[9] Even within national borders, Italy faces worsened disparities as the skills gap between highest and lowest-performing adults widened over the last 11 years and women are scoring systematically lower in numeracy with respect to men, without the typical advantage in literacy found on average in OECD countries (OECD Survey of Adult Skills OECD, 2024).

Taken together, over the past three decades the Italian economy appears trapped in a "low skills" equilibrium. While postwar growth benefited from rising human capital, the ICT and digital revolutions exposed Italy's failure to upgrade skills in step with technological and global shifts. This failure reflects both limited supply and weak demand. The education and training system produced few high-skilled workers, and firms showed little appetite for hiring them. International comparisons show that both employment prospects and wage premia of tertiary graduates in Italy are below OECD average and significantly lower than in other EU countries (OECD, 2024a).[10] Consistent with this, the share of employees that are ICT specialists is also lower than elsewhere.[11] Low wage premia further discouraged investment in higher education and upskilling.

Skills were also poorly matched. In 2015 about one third of Italian workers were unsuited to their jobs, the highest share among surveyed countries (Adalet et al., 2015). Recent OECD data confirm that one fifth of workers feel underqualified and over a third are judged underskilled by employers (OECD, 2024b). Gaps between training outcomes and the needs of dynamic firms, universities' weak signalling of graduates' actual competencies and poorly designed active labour market policies (see below) may partly explain these high mismatch rates. Cross-country empirical studies suggest that mismatch is negatively related with individual and, possibly, aggregate productivity performance (Vandeplas and Thum-Thysen, 2019; Rathelot et al., 2023). Counterfactual simulations pointing to potentially large gains from better matching, especially in Italy (Adalet-McGowan and Andrews, 2015).

Among the various factors sustaining this low skill equilibrium, the dominance of small, family-run firms with weak innovative capacity, low demand for qualified staff, and limited interest in tertiary degrees, especially in STEM and ICT is certainly key.

The small-scale trap: familism and its consequences

A persisting small-scale business structure

At the turn of the century, the average size of Italian firms (computed as the national mean of average sizes in each dimensional class) was half that of the average EU country, a quarter of the average German or UK firm and half of the average French firm (Pagano and Schivardi, 2003). While these gaps were reduced over the past two decades, the average size of Italy's firms remains much smaller than in partner EU countries, still about half that of German firms and roughly one third of French firms (Table 3). This reflects both a larger overall share of small firms relative to other countries and their smaller average size in each dimensional

[10] Moreover, in sharp contrast with other countries, employment rates of male 25-34 years old tertiary graduates are even lower than those of less educated individuals.
[11] The weak demand for digitally skilled workers by Italian firms seems to be confirmed by the finding that, while Italy has one of the largest shares or workers lacking digital literacy, it also has one of the lowest shares of workers feeling that their digital skills are inadequate for their job (OECD, 2024).

class.[12] The predominance of relatively small firms is not related to industry composition, as corporate small-scale has been spread out across almost all sectors of the Italian economy.[13]

Table 3. Co-worker mean in 2023: average firm size in number of employees and in ratios to EU27

	EU27	France	Germany	Italy
	N. of employees		*Ratios to EU27*	
Business Sector[1]	432.36	1.97	1.26	0.77
Accommodation and food	139.66	2.07	0.82	0.84
Administrative services	688.00	2.09	0.81	1.32
Arts, entertainment and recreation	168.89	2.00	0.94	0.59
Construction	127.50	3.43	0.87	0.38
Financial and insurance activities	1142.41	1.59	0.80	1.37
Information and communication	475.01	2.07	1.06	1.01
Manufacturing	541.09	1.66	1.42	0.54
Professional & scientific activities	172.28	1.50	1.68	0.54
Real estate activities	94.15	4.21	1.27	0.20
Transportation and storage	685.41	2.55	1.36	0.82
Water & waste management	587.42	4.05	1.00	0.76
Wholesale and retail trade	424.53	1.33	1.41	0.55

[1] *Business Sector* is calculated net of Mining and Quarrying and Electricity, gas, steam and air conditioning supply.
Note: Calculations in the Table are based on the "co-worker mean" formula of Pagano and Schivardi (2003), obtained as the mean of the average firm size (AVF) in each class weighted by the class share of employment:

$$AVF_{ij} = \sum^{c} \frac{emp_{cji}}{unit_{cji}} * \frac{emp_{cji}}{emp_{ji}}$$

where emp_{cji} and $unit_{cji}$ are respectively the number of workers and of firms in class c, sector i, and country j. This summary statistic reduces the influence of the numerous small firms with respect to an arithmetic average. Classes of firms are partitioned in the following way: from 0 to 1 employees, from 2 to 9, from 10 to 19, from 20 to 49, from 50 to 249, and 250 employees or more. EU27 is the European Union post 2020. The year of reference is 2023. *Authors' calculations based on Eurostat Structural Business Statistics.*

Cross-country firm-level analysis suggests that small scale is at least partly due to the more limited growth of firms after entry in Italy compared to other European countries (Criscuolo et al., 2014). In the first decade of this century, the average French or UK manufacturing (service) firm employed around 40 (20) workers 10 years after entry, while older Italian firms were close to the average size of new entrants during the same period (around 10 workers in both manufacturing and services). Combined with relatively low exit rates, this tends to generate markets characterized by more smaller and older incumbents than in other advanced countries.[14] Recent data shows that Italian micro firms accounted for 20% (38%)

[12] For instance, in 2005 the share of microenterprises (less than 10 employees) was over 95% in Italy vs 90% in the EU while the share of large enterprises (more than 250 employees) was half the EU share (0.1% vs 0.2%). ImF Bonn (https://www.ifm-bonn.org/en/statistics/mittelstand-themes/sme-in-the-eu- comparison) reports that in 2021 the average size of an Italian SME was less than half that of a German firm and smaller than its French peers.
[13] See also Pagano and Schivardi (2003) and Bartelsman et al., (2005).
[14] In 2000-2010 over 70% of Italian SMEs was over 5 years old as against 60% in France and the UK (OECD, 2015).

of employment in manufacturing (services) compared to an average of 11% (25%) in other EU countries (OECD, 2025).

The prevalence of small firms suggests that higher entry rates and better post-entry performance (in terms of survival rates and employment growth) are particularly important for the evolution of the corporate sector towards a less fragmented and more productive structure. However, recent data suggests that start up, survival and post-entry growth rates remain either below or at average levels relative to other EU countries (OECD, 2025).

Familism and subpar managerial practices

Italian firms are not only undersized but also predominantly family-owned and family-managed, with a prevalence of obsolete managerial practices. While widespread family ownership is common in many European countries, family management is an all-Italian anomaly, only partly related to small firm size. Maintaining management totally within the family is the choice of 66% of Italian family-owned firms compared to 28% in Germany, 26% in France and 10% in the UK (Bugamelli et al., 2012).[15]

Esposito and Ferrante (2024) show that the prevalence of family managers in family-owned firms is related to the choice of a centralized and hierarchical management approach. Overall, Italian firms have been characterized by an extremely centralized management approach prevailing in 85% of firms (as against 70% in Germany, 77% in France and 63% in the UK), which is at odds with productivity-friendly 'high performance work practices' (HPWP).[16] Reluctance towards HPWP is stronger than elsewhere: for instance, performance-related remuneration is implemented in only 11% of family-owned and managed firms – as against 40% in the UK and over 30% in Germany and France. Unsurprisingly, Italy scores lower than Germany, France or the US in the World Management Survey, which rates the quality of managerial practices based on firm-level replies by managers (Bloom et al, 2024). This is largely due to the negative influence that family ownership and management have on managerial approaches (Pellegrino and Zingales, 2017). Only in recent years this traditional ownership and managerial landscape has been partially evolving thanks to the entry of Private Equity funds into the capital of an increasing number of SMEs, which has generated changes in the composition of management and in managerial practices (LIUC, 2024)

As mentioned, the intertwining of small firm size with family capitalism is a key element of the low-skill equilibrium in which Italy is trapped. The wish to maintain family control over business activities limits funding sources and hinders the hiring of skilled managers and workers. Moreover, family managers are often unable to value skills supplied by the higher education system, partly because they have not been exposed to such level of schooling

[15] The data result from a representative EU-financed survey (EFIGE) implemented over the 2007-2009 period in seven countries.

[16] High performance work practices include aspects of both work organization – such as teamwork, autonomy, task discretion, mentoring, job rotation, applying new learning – and management approaches – such as employee participation, incentive pay, training practices and flexibility in working hours (Bloom and Van Reenen, 2010; Johnston and Hawke, 2002).

themselves.[17] With low wage premia and wage progression based more on seniority and contractual arrangements than on performance, participation in higher education and upskilling programs is discouraged.

Beyond its interaction with the low-skill trap, the prevalence of small firms and weak management also depresses productivity by (i) misallocating capital and labour away from the economy's most productive segments and (ii) preventing to cope successfully with rapid global and technological change. Heuristically, these are the **level** and **growth** productivity effects respectively of Italy's fragmented, family-managed industrial structure.

Consequences for productivity levels

Italy's dominant business model mechanically translates into an aggregate productivity gap relative to other countries for two reasons. First, because workers in smaller firms are on average less productive, given the well-established relationship between firm size and productivity (van Ark and Monnikhof, 1996; Bartelsman et al., 2013).[18] The prevalence and persistence of many old and inefficient small firms in the market tends to depress aggregate productivity both directly and indirectly by crowding out resources that could be reallocated to more productive firms (Adalet et al., 2018), though the economic significance of this latter channel has been disputed (Schivardi et al., 2020).

Second, because of the apparent difficulty of Italian firms to grow, even the most productive firms are smaller in size than foreign ones and, therefore, contribute less to aggregate productivity. For instance, Andrews et al. (2015) show that much of the manufacturing productivity gap between Italy and frontier countries is due to the smaller size of Italian firms: while Italian firms are often as productive as those at the global frontier, they contribute less to aggregate productivity due to their limited dimensional growth. Andrews and Cingano (2014) estimated that in 2005 the average contribution of allocative efficiency (intended as the ability of the most productive firms to grow to scale) to the level of productivity in Italy was four times lower than in Germany and three times lower than in France .[19] While there is evidence that the allocative process has improved after the GFC (CNP, 2025), it remains to be seen whether this improvement lasted beyond the pandemics.

At the same time, available empirical evidence also shows that family ownership and management have negative effects on firm productivity (Bloom and Van Reenen, 2007; Pellegrino and Zingales, 2017; Bandiera et al., 2018) through failures in 'delegation efficiency' (Akcigit et al., 2021). These failures prevent the separation between ownership and management as well as the efficient layering of tasks within the firm, which requires

[17] Research shows that CEO or manager education levels are complementary to the quality of managerial practices, including valuation of qualifications and talents (Baltrunaite et al., 2021). In Italy, poor valuation of qualifications reflects both poor signaling content of tertiary degrees and relatively low average education levels of CEOs and managers (OECD, 2021; OECD, 2018a).
[18] However, Berlingieri et al. (2018) show that this relationship is much stronger in manufacturing than in services, which represent the largest share of GDP in advanced economies.
[19] Allocative efficiency contributes to aggregate productivity by ensuring that labour and capital move from inefficient firms to the most productive (Olley and Pakes, 1996).

decentralised managerial oversight with a multiplicity of managers.[20] Specific evidence for Italy (Bandiera et al., 2015; Andretta et al., 2021) and the UK (Robinson, 2017; ONS, 2018) points to an average 30% productivity gap relative to public companies, largely related to lower management quality, with a particularly large gap when management is also in hands of family members. Esposito and Ferrante (2024) also find a negative effect of management centralization on firm performance. Based on cross-country firm-level evidence, Criscuolo et al. (2021) show that the most productive firms typically have a larger share of managers in their workforce and estimate that aligning the share of managers in the average firm to the higher share observed in those at the productivity frontier would entail large gains in aggregate productivity.

Consequences for productivity growth

There are reasons to believe that failure of Italian firms to upscale or exit (the "up-or-out" process) has curbed not only the level of aggregate productivity but also its growth rate. First, there is a strong relationship between company size and drivers of productivity growth linked to economies of scale in the organization of work, logistics, investment in fixed capital, personnel training and research and development. Second, Andrews et al. (2015) show that the ability of innovative Italian firms to attract more investment than other firms has been much weaker than in other European countries, with the gap widening in the early 2000s (Andrews et al., 2015). Calligaris et al. (2018) also found evidence of worsening allocative efficiency from the mid-90s to the mid-2000s, reflecting difficulties in moving resources within sectors towards firms that advance technology most rapidly and trade most intensively. Ultimately, such trends may have contributed significantly to the pronounced Italian productivity slowdown.[21]

Third, while 17% of Italian businesses is involved in international trade and global supply chains, their structure, governance and production specialization has limited the productivity gains usually associated with strong exports or deep involvement in global value chains (Veugelers et al., 2013; Baldwin and Yan, 2014; OECD, 2015). On the trade side, Italy is characterized by a small number of 'happy few' – large firms representing 1% of all exporters accounting for over half of all exports – and a myriad of small exporters (SMEs) accounting for the remaining share.[22] Both groups specialize in trading goods and are heavily exposed to rising international competition and global shocks. Service exports are relatively low in Italy and have grown much less rapidly than in other EU countries (such as France and Germany)

[20] Failures to efficiently delegate are also related to other factors, such as judicial efficiency and trust (Akcigit, 2021). These factors are also relevant in the case of Italy: see Palumbo et al. (2013), for comparative inefficiencies in the Italian judicial system and Cette et al. (2024), for the role played by trust, especially in the context of the knowledge economy.

[21] Calligaris et al. (2018) argue that if misallocation had remained at its 1995 level Italian productivity would have been almost 1/5th higher two decades later, implying an average loss of 1% growth per year. Productivity losses were particularly large in market services where misallocation was more extensive.

[22] Mayer and Ottaviano (2008) showed that concentration of exports is a widespread phenomenon in the EU, with Italy representing an extreme case among large continental countries. Bugamelli et al. (2018) suggest that concentration has been decreasing and specialization has been moving towards goods less exposed to international competition since the GFC.

(Bugamelli et al., 2018). The existence of a strong productivity premium for firms that export (across all size classes but rising with size) suggests that there is a large untapped productivity potential that could be unleashed by a wider implication of Italian firms into foreign trade (CNP, 2025).

With regard to global value chains (GVCs), overall participation of Italian firms in GVCs is at par with those in France and Germany. However, their position in the chain – being generally small suppliers operating only in exporter mode (Agostino et al., 2016) – confines them into a subordinate role at relatively low levels of value added, limiting the productivity benefits from GVC participation (see also below).[23]

Weaknesses in the "up-or-out" process and inefficiencies in resource allocation were compounded by governance approaches ill-suited to implement the business choices required by the changing technological and global market environment. The once successful family-driven model of industrial districts specializing in medium to low-tech manufacturing lost its power in the face of four global developments at the end of the 20th century: (i) increasing foreign competition in the context of EU enlargement and especially China's accession to world trade, challenging Italy in its traditional markets; (ii) fast development of supply chains, well beyond the regional dimension in which Italian firms had been integrated; (iii) rising importance of services markets and trade, especially knowledge-intensive ones in which Italy lacks comparative advantage; and (iv) the need to take up information and communication technologies to raise productivity and remain competitive, an area in which Italy lags behind.

Meeting these challenges would have required investing in new technologies and intangibles to climb the manufacturing value added chain by moving to higher-tech products and sectors (e.g. more ICT or knowledge-intensive), including the modernizing and opening up of services industries to competition. Instead, the combination of the low-skill trap with industrial fragmentation – with the related familism and centralized management – interacted in various pernicious ways with the evolving business environment to generate an 'innovation deficit' that constitutes another important driver of Italy's productivity decline and stagnation.

The risk-aversion trap: the adoption and innovation deficit and the link to finance

Burdened by weak human capital, an undersized business structure and weak management culture, Italy lags in R&D and innovation as well as in the adoption and dissemination of new business organizational models and innovative technologies. Despite recent advances, adoption and diffusion of ICT and digital technologies has been slow compared to other EU

[23] Theory and empirics have established several channels through which trade and GVC participation can boost firm-level productivity – including via scale economies, technology and knowledge spillovers, cost savings and competitive pressures. Descriptive and econometric micro evidence generally confirms that exporters and companies engaged in GVCs enjoy a productivity premium. However, the size of the premium depends on whether firms are suppliers or final firms along the chain, operate in single or multiple modes (e.g. importer, exporter and FDI) and maintain purely transactional or relational ties with other firms involved in the chain.

countries. Moreover, investment in key intangibles – such as innovative property, organizational capital and workers' training – remains below EU standards (Figure 14). Given the complementarity between ICT, digital technologies and intangibles, productivity growth was negatively affected by delays in the digital transformation, insufficient innovative effort and failure to climb up the ladder in GVCs. In turn, overcoming these obstacles to growth was hindered by financial market weaknesses.

Figure 14. Investment in key intangibles in Italy, France and Germany

Note: Innovation property non-R&D comprehends New Financial Products, Design, Entertainment, artistic and literary originals. Valued Added is adjusted to account for intangible capital. *Data source: EUKLEMS-INTANProd database, analytical module.*

Difficulties in dealing with the digital transition

Underperforming family-owned (and managed) firms lack the scale, absorptive capacity, and risk appetite needed to adopt new technologies and invest in increasingly critical intangible assets. To partly offset small-firm scale disadvantages, Italy has made strong progress in high-speed broadband access and cloud computing use – now on par with or above leading EU countries. Yet Eurostat surveys show large average firm-size gaps in other key digital tools (ERP, CRM, data analytics, AI, etc.): with SMEs predominant, Italian adoption remains constrained in the aggregate. Still, evidence indicates that digital adoption can boost SME productivity more than in larger firms (Cirillo et al., 2023; Gal et al., 2019), suggesting substantial gains if the barriers to adoption by SMEs are eased.

Family-run, centralized management also clashes with the complementarity between technology and organizational change (Hitt & Brynjolfsson, 1995; Black & Lynch, 2004; Li et al., 2003; Garicano & Heaton, 2010). This synergy is essential for new business models, especially in services. Recent analysis links the combination of small size and centralized family management to weak productivity-enhancing restructuring in Italy – constraining ICT adoption and investment in organizational assets (Schivardi & Schmitz, 2020). [24] Moreover, management quality – proxied by the share of workers in High-Performance Work Practices

[24] In turn, alternative managerial approaches (e.g. decentralized, incentive-based and flexible management) were found to stimulate ICT adoption in both large firms and SMEs (Rasel, 2016).

– is pivotal for adopting ERP, CRM, and cloud, particularly in knowledge-intensive industries (Nicoletti et al., 2020). [25] Limited digital diffusion and poor resource reallocation toward dynamic firms and sectors – amplified by digital-skills shortages – therefore hinder the expansion of knowledge-intensive manufacturing and services.

Difficulties in boosting innovation

Despite doubling since the beginning of this century, public and private expenditure on R&D is still significantly weaker in Italy (1.3% of GDP) than in France (2.2%) and Germany (3.1%) and far from the 3% EU Lisbon target. Also, the ratio of researchers and ICT specialists per thousand employees ranks at the bottom of international comparisons and the share of patents filed at the European Patent Office (8%) is much lower than that of France (16%) and Germany (35%) (OECD, 2024). This reflects a low share of firms investing in R&D, low R&D spending per firm and, only to a limited extent, the structure of Italian industry, with high-tech manufacturing and knowledge-intensive services accounting for a smaller share of the economy than in other countries.[26] As gross returns from innovation in SMEs are estimated to be the same in Italy as in other countries (Hall et al., 2009), country-specific structural factors and higher costs of innovating are likely to explain their relatively low innovative activities (Bugamelli et al., 2012).

Aside from the institutional and policy context (discussed in the next section), the predominance of family-owned and managed SMEs is the main driver of the disappointing overall innovation performance for a variety of reasons (Bugamelli et al., 2012). First, larger firms are better able to face the fixed costs and enjoy the increasing returns associated with these assets especially during the development phase (Pagano and Schivardi, 2003). Second, family firms have a low propensity to take the risks involved in such investment, as they must balance family and business interests and typically prioritize stability over disruption. Moreover, their strategic choices are often influenced by the need to manage family interests and the involvement of external investors. Third, family-managers tend to prioritise incremental product innovation over more radical (process or business model) innovation, as the latter requires R&D spending, patenting, hiring of specialists and tertiary graduates, cooperation with other entities (e.g. universities or consultancy firms), and significant organizational change.[27]

[25] Improving managerial approaches was found to be particularly impactful for the adoption of cloud computing and customer relationship management technologies, with adoption rates increasing by around 10 percentage points in the most knowledge-intensive industries (relative to the least knowledge- intensive ones) as the share of workers involved in HPWP moved from observed values to the sample maximum.

[26] A counterfactual exercise by Bugamelli et al. (2012) suggests that differences in industry composition can only explain at most ¼ of the private innovation spending gap between Italy and Germany.

[27] Italian SMEs are 'innovators without R&D' (OECD, 2010). Often, when process innovations are implemented, they tend to consist in the acquisition of new machinery, which is less costly and does not usually require organizational change (Bugamelli et al., 2012).

These hindrances to innovative activity are compounded by the lack of managerial and worker skills and the weak 'up-or-out' firm dynamics. While declining business dynamism is a common phenomenon in the OECD area (OECD, 2020), Italian productivity growth suffered particularly strongly from weak dynamism in the wake of technology and globalization shocks (Rossi, 2018). There was a shortage of young firms realizing radical innovations and growing subsequently to boost aggregate productivity. Startup rates have been historically low relative to other EU countries, especially in high-tech manufacturing or knowledge-intensive service sectors (OECD, 2025). With new firms tending to grow less and for shorter periods than in other countries, their contribution to aggregate growth is weaker. Typically, an innovative Italian company attracts three times less investment than a similar Swedish company and half the investment that is marshalled by a similar British company (Andrews et al., 2014).

Difficulties in upgrading GVC participation

The association of small firm size with a poor ICT and intangible assets base tends to curb both export propensity (which tends to increase with size), and the ability of Italian firms to participate in GVCs. In turn this may curb technology adoption and innovation as participation in GVCs stimulates digitalization (Agostino et al., 2025) and investment in R&D, managerial expertise and worker training (Esposito et al., 2023), with a particularly large effect on SMEs.[28]

These weaknesses also curb the ability of Italian firms to climb up the value chains to higher value added activities. Indeed, most Italian manufacturing exports consist of low to medium technology products, with only 16% consisting of products at the technology frontier. Moreover, they act mostly as small export suppliers operating at intermediate stages of GVCs, largely based on transactional (as opposed to relational and long-term) links with their foreign downstream counterparts. In 2010, around 65% of Italian GVC participants were mere suppliers (as against 40% of German firms) most of them exporting intermediate (or transformed imported) goods to foreign firms serving final markets. They generally did not serve the end market themselves, whereas firms delivering the final product govern the chain and add most of the value via intangible assets – such as innovative product design, branding, marketing, etc..[29] In 2019 only 7% of firms participating in GVCs held 'relational governance' links (entailing long-lasting and close strategic/technological exchanges) with their foreign counterparts, and experienced the largest impact on digital adoption (Agostino et al., 2025).

Evidence suggests that digital adoption and innovation rise as firms operate at higher value-added levels along GVCs. Hence, the positioning of Italian firms limits both their ability to benefit from technology and knowledge transfers and their incentives to upgrade their products via digitalization, innovation and better internal organization of production.

[28] This is because digital adoption, innovation and upskilling are both more needed and more profitable along GVCs than for domestic production.

[29] This GVC positioning was similar across all sectors, except the Food and tobacco industry, where the share of final firms was slightly higher. Data quoted in the text are from representative samples of Italian and EU firms (EFIGE, 2010 and MET, 2019).

Financial market weaknesses

Italy's adoption and innovation deficits are also closely related to weaknesses of Italian financial markets. As in other continental EU countries, finance has always been mostly bank-based with a predominance of relationship banking. Separation of commercial and investment banking and a dominant role of public-owned banks were inherited from the interwar period which continued until the mid-90s. Since universal banking was established, financial markets were significantly liberalized and large-scale privatizations of banks were implemented, virtually eliminating the presence of the state.

However, several financial market features still distinguish Italy from countries like France or Germany:

- First, overall market size remains small – as measured by total balance-sheet assets that were twice the Italian GDP in 2010, well below France (4 times) and Germany or Spain (3.3 times) (De Bonis el al, 2011).
- Second, Italian relationship banking is peculiar: firms hold close ties with multiple banks that privilege short-term and heavily collateralized loans often in the form of current account overdrafts. These allow strict monitoring of the firm cash flow.[30] This kind of credit, often provided by local banks, was particularly significant for SMEs, the backbone of the Italian economy, resulting in higher leverage ratios than in the other countries (Usai and Vannini, 2005).
- Third, partly because of these peculiarities, private capital markets (both equity and venture capital) in Italy failed to growth at the pace of European peers. In 2000, Italy's market capitalization was similar to the Euro Area average, representing approximately 45% of GDP. However, by 2014, Italy's market capitalization had declined to 27% of GDP, significantly lower than the Euro Area average of 44% (World Bank Data, 2014). This downward trend continued, with Italy's market capitalization falling further to 19% of GDP in 2025, down from 21% in 2023, and remaining substantially below the levels observed in other advanced economies (Bank of Italy, Financial Stability Report, 2025). In recent years, however, the number of new listings of Italy's non-financial companies increased with respect to Germany, UK and France, mainly driven by a surge in IPOs by SMEs (Finaldi Russo et al., 2020).

This exclusive and peculiar bank-based funding source – supplemented by subsidized credit from public-owned investment banks – proved effective in financing tangible capital that fuelled growth during the first four post-war decades. This was a period in which the economy could thrive exploiting its comparative advantage in medium-low technology industries and least knowledge-intensive services characterized by a relative lack of business dynamism. However, the system floundered under the combined impact of increased competitive pressures from abroad and rapid technical progress. Adapting to these shocks called for moving resources to higher value-added industries and helping young and dynamic

[30] Note that this may also help reduce information asymmetries between banks and the firms they provide credit to.

firms grow to scale and climb GVCs. This required funding risky startups, adoption and experimentation of new technologies and costly intangible investments, with uncertain and delayed returns. These activities involve low cash flow (especially at the initial stages), high risk, strong asymmetries of information and little collateral – all features that Italian banks are ill-equipped to face.

Difficulties of Italian financial markets in adapting their supply of funding to the new needs combine with relatively low demand from firms themselves. Italian SMEs have traditionally been reluctant to go public or seek external financial support, due to cultural reasons (distrust in these forms of finance) and for fear of losing family control. The weak financial literacy prevailing in Italy also did not help overcome this reluctance: the latest comparative data suggests that Italy scores well below OECD average and much lower than Germany and France on financial literacy (OECD/INFE, 2023).[31] Moreover, until recently, policies did not encourage these newer funding options and the costs involved were prohibitive for small firms. These factors contributed to keeping the share of IPOs, private equity markets and the use of venture capital below EU standards, with negative consequences on business dynamism and productivity growth.

Productivity policies

The intertwined structural traps that underlie Italy's productivity stagnation point to weaknesses in policies that affect human capital, the business environment, innovation attitudes and finance. These weaknesses resulted in underinvestment in skills and intangible capital; barriers to innovation, adoption, and diffusion; and misallocation of resources due to malfunctioning labour, product, and financial markets. Following van Ark et al. (2023)'s productivity policy taxonomy, Table 4. **Stylized productivity policies in Italy** sketches policies that affected productivity in Italy via five main channels: institutional foundations, factor accumulation, technology and structural change, markets and resource allocation, and internationalization (see Annex Table for a fuller summary). Broadly speaking, these policies followed four main stages: an industrial policy stage flanking postwar growth until the end of 1980s, when state-owned conglomerates and banks collapsed; two gradual market-oriented stages in the 1990s and early 2000s, focused on privatization and limited liberalization; and a more explicit, although hesitant and fragmented, pro-growth stage since the GFC. These policies accompanied productivity developments during Italy's "Golden Age" (1945–75), moderate growth (late 1970s–90s), and subsequent stagnation periods. Policy action in Italy has typically been delayed relative to global and technological shocks, and undermined by weak design, poor continuity, and wide gaps between stated goals and implementation – problems compounded by the adverse policy legacy of the 1980s. Thus, although more recent policies addressed Italy's main weaknesses, they failed to lift productivity growth from its secular swamp.

[31] In 2023, the OECD financial literacy indicator for Italy scores at 53 out of 100, while France and Germany score 62 and 76 respectively (OECD/INFE, 2023). This ranking holds for all components of the indicator: financial knowledge, financial behaviour and financial attitudes. Of the 39 countries covered by the survey, only Paraguay (50), Cambodia (49) and Yemen (42) rank below Italy.

Table 4. Stylized productivity policies in Italy

	Postwar to end-80s	1990s	First half of 2000s	Mid-2000s to now
Foundations				
Institutions and frameworks	Dysfunctional decentralization (1970)	Creation of Competition Authority and independent Telecom, Energy and Privacy Authorities, strengthening of Central Bank and CONSOB autonomy	Constitutional reform extending role and powers of regions and establishment of independent Authority for Transport and anti-corruption watchdog	Extension of anti-corruption watchdog powers
	Creation of security and exchange commission (CONSOB) and independence of Central Bank from Treasury			Failed referendum aimed at centralizing back certain powers to enhance policy coordination and coherence
Government capabilities	Pervasive and inefficient public sector, dominance of SOEs with soft budget constraints in industry and finance	Administrative and anticorruption justice reform	Substantial acceleration of e-Government	Creation of the Italian National Productivity Board (2024)
		First (limited) steps towards e-government	Civil justice reform aimed at digitalisation, speeding up trials and allowing alternative routes	Comprehensive reforms in public procurement, public administration and toward e-government
				Further civil justice reform, only partially effective
Macroeconomic policy	Entry into European Monetary System (EMS/ERM) and major tax reform	Adherence to Maastricht Treaty and Euro adoption, fiscal consolidation	Deficits (and debt) on the rise again in the wake of GFC crisis, though they remain under control (back to 3% by 2014)	Deficits (and debt) on the rise again in the wake of COVID crisis but still under control
		Various adjustments to tax code	Various further adjustments to tax code	Various further adjustments to tax code
	Expansion of public spending, with two-digit budget deficits and inflatio, soaring public debt, and series of "competitive" devaluations via currency realignments	Exit from and re-entry into ERM with free float		
		Debt and spending still soar, deficits cut mainly through lower investment and tax hikes.		
Factor accumulation				
Investment	SOEs investment and subsidized loans interest rate subsidies for machinery and equipment in SMEs	Law 488 introducing non-repayable capital grants for investment in fixed assets for SMEs and EU structural funds zones	Abrogation of Law 488	Industry 4.0 Plan (2016-2019): horizontal and incentive-based incentives for digitalization, subsidized loans and grants to SMEs
				Public procurement reform to improve spending efficiency and quality of public infratructure
				NRRP funds for improving logistics and infrastructure
Human capital	Reforms impose universal compulsory education below 14 years and expand access to secondary and higher education	Extension of compulsory education to 15 years	Further extension compulsory education to 16 years and introduction of vocational secondary training, mandated secondary, vocational or apprenticeship training until 18	Education reform: stregthening of technical secondary and post-secondary curricula with focus on ICT, mandatory high school internships in firms
				Industria 4.0 (2016): Tax credits and subsidized competence hubs for SME aimed at digital upskilling
				Vouchers to SMEs for hiring of "temporary export managers" and tax break for introducing "performance related pay" (PRP) practices
				NRRP (2021): funds for further reforming technical and vocational education, support for doctoral programs
Internationalisation				
Trade	Creation of European Economic Community (EEC), European Free Trade Association (EFTA) and Customs Union (1968)	Establishment of the EU Single market and of the European Economic Area (EEA)	Deepening of Single Market and exposure to WTO China accession shock	Exposure to US tariffs
	EEC and EU enlargement			
			Transposition of EU services directive (2010): elimination of restrictions on cross-border trade in services	Limited easing of entry barriers in professions (2017-22)
FDI and capital movements	Adherence to OECD Code of Liberalisation of Capital Movements (1961), albeit with strict capital controls at first	Removal of capital account restrictions (EU Directives) and liberalization of FDI (1994-95)	Replacement of golden shares with targeted foreign investment screening	Extension of screening to all sectors above certain foreign equity thresholds
		Foreign ownership of shares (including in banking and network sectors) is subject to state golden shares with veto powers		

Potential antiproductivity effects
Low income policy stance
Low-middle income policy stance
Middle income policy stance
Advanced country policy stance

Table 4. Stylized productivity policies in Italy – Continued

	Postwar to end-80s	1990s	First half of 2000s	Mid-2000s to now
Technology and structural change				
Innovation and adoption	Stimulus to innovation via discretional grants and subsidies, and SOE investments			Industria 4.0, NRRP and other interventions (2016-23) shifting to automatic, volume-based, horizontal innovation incentives (e.g. R&D tax credits, National Fund for Innovation, public guarantees and digital hubs to forster innovation in SMEs)
Industrial policy	SOE investments and projects financed by public development banks with specialized agency for investments in Southern Italy			NRRP (2021): digitalization, green transition, mobility, education and R&D
				Industria 4.0, Transition Plan 4.0 and specialized agency for investments in Southern Italy
	Market sector dominated by SOEs and public banks	Corporatisation of public banks and SOEs and their progressive and complete privatization		Partial privatization of postal services and the national airline.
Creative destruction	Long and complex insolvency procedures (based on 1942 Law) and civil justice inefficiency that hinder exit of firms			Insolvency reform (2017-2022) to align with EU 2019 Directive
	No incentives for new firms, high barriers to entry in many markets		StartUp Act (2012): fiscal incentives and administrative simplification	Extension of StartUp Act to innovative SMEs (2015)
Markets and resource allocation				
Financial markets	Liberalisation of domestic interest rates (1983-85) and institution of an open market for government bonds (1984)	End of separation between commercial and investment banking and liberalization of bank branching	Adherence to Basel II and III	Adherence to EU banking and capital markets union
		Privatization of major state-owned banks	Allowance for Corporate Equity ACE (2011): more neutral tax system vis à vis equity and debt	ACE strengthened
		Liberalisation, privatization and modernization of stock market	Introduction of minibonds (2012): unlisted SMEs can access capital markets via private debt placements	Fiscal advantages to equity savings plans (PIR) directed at financing SMEs (2017-19) and tax credits to SMEs for IPO costs (2018)
Product markets	Legal SOE monopolies in network sectors and restrictive regulations in services	Introduction of Competition Law (1990)	Introduction of annual pro-competitive measure (2009), although scarcely implemented	Annual pro-competition laws (2017, 2021)
		Liberalization of telecoms and air transport and limited liberalization of retail trade with power delegation to regions	Further liberalization of retail trade, energy and rail transport, more limited in business services and pharmacies	Limited further liberalization of business services and pharmacies (2017-22)
	Monopolies of local public services remain			
Labour markets	Workers' Statute (1968): basic workers rights and high employement protection	Liberalization of fixed-term, temporary-agency, training-and-insertion contracts (1997), dualizing the labour market	Further liberalization and extension of temporary contracts (2003-04)	Jobs Act (2015): major move towards flexicurity, with reform of EPL, progressive strengthening of ALMPs, creation of national agency for ALMPs with digital platform
			Restrictions on fixed-term contract abuses and limited move to flexicurity (2011): reform of Employment Protection Legislation and ALMPs	

	Potential antiproductivity effects
	Low income policy stance
	Low-middle income policy stance
	Middle income policy stance
	Advanced country policy stance

A heavy policy heritage: the 1980s

Italy entered the computer age with a historical legacy that combined weaknesses in foundational policies, an oversized and inefficient public sector, industrial policy settings geared to a developing country mode, restrictive labour and product market regulations, and obsolete or ineffective innovation policies. Overlapping with Italy's structural problems (the three traps discussed above), this configuration of policies left Italy ill-equipped to face the radical changes that were looming in the technological and global environment.

Foundations

Institutional fragilities included political fragmentation and a slow pace of policymaking due to the prevalence of a strict proportional representation system, a two-chamber legislative system and multiple layers of government (central state, regions, provinces and cities)

involved in decisions and implementation of policies, laws and regulations. This was compounded by a substantial overlap and confusion of roles between regulators and regulated entities in many key areas – such as utilities, transport and communications. Finally, there was widespread corruption (notably in public procurement) and serious threats to the rule of law in several regions where organized crime had strongholds.

At the same time *government capabilities* were curbed by administrative inefficiencies, lengthy procedures and excessive bureaucracy, notably in the areas of starting up businesses, licensing and permits, judicial processes and tax administration.[32]

Altogether, these weaknesses resulted in a heavy burden on business in terms of costs, opacity and discretion in accessing markets and hurdles on business operation.

Markets and resource allocation

The *functioning of markets* was heavily affected by laws, regulations and contractual arrangements that curbed flexibility and competitive pressures. Besides the widespread presence of public-owned banks, *financial markets* were constrained by the strict distinction between commercial and investment banking – with long-term lending only allowed to the latter and equity participation forbidden to both – and by tight restrictions on the permitted number of territorial branches.[33] This contributed to shift credit to firms towards short-term loans and limit competition among banks, to the detriment of innovation and dynamism in both financial and product markets.[34]

Labour markets were stiffened by employment protection laws that imposed heavy and uncertain firing costs on employers, restricting their ability to reorganize production processes and discouraging hiring, especially with open-ended contracts. These laws applied only to firms with more than 15 employees, potentially discouraging firms to grow (Schivardi and Torrini, 2008).[35] Italy also lacked effective and universal active and passive labour market policies (LPMs): passive LMPs consisted mostly in funding temporary or structural reductions in working time for firms in selected industry branches (via the Wage

[32] For detailed studies of the history and flaws of the Italian public sector and administrative machinery, see Cassese (1983), Melis (1988). Putnam (1993) and Giordano and Tommasino (2013) relate public sector inefficiencies to historical and political economy factors. Giordano et al. (2015) and Fadic et al. (2019) show the detrimental effects of public sector inefficiency on the productivity of Italian firms.

[33] This was largely a legacy of the interwar banking crisis when bank failures due to their dependence on long-term loans to and equity holdings in firms affected by the Great Depression forced the government to step in to prevent economic collapse (eventually creating the large public conglomerates that lasted until the 90s).

[34] Commercial banks and firms have to some extent overcome the constraints imposed by the 1936 Banking Law by repeatedly renewing short-term credit (based on collateral rather than on the expected value of the firm and provided through bank affidavits or overdraft facilities) with multiple banks. But this came at the cost of less balance sheet transparency, more information asymmetries and less bank monitoring or strategic advice (OECD, 1995).

[35] While acknowledging this potential, Schivardi and Torrini (2008) find that the contribution of this factor to explaining Italian small business scale is limited.

Supplementation Fund-CIG). [36] Active LMPs were historically underdeveloped, under-resourced, poorly targeted and territorially fragmented. Moreover, not only ALMPs were uncoordinated across local governments but also lacked coordination with passive LMPs. These labour market settings were particularly adverse to fast and efficient job transitions and reallocations within and across firms and industries. They also resulted in subsidizing firms with no future prospects and delay industrial adjustment to permanent shocks.

Product markets suffered from an endemic lack of competitive pressures due not only to market dominance by heavily subsidized state-owned enterprises (SOEs), but also because of legal and regulatory barriers to entry, especially in service markets. Restrictive and overly arbitrary licensing and permit systems coupled with excessive bureaucratic and administrative complexities favoured cronyism, undermining fair competition and the ability to challenge incumbents. Regulations unnecessarily restricted entry and business operation in key areas such as retail trade, transport, business services and information and communication. International openness subjected tradables to strong competitive forces that encouraged the quest for efficiency and innovation, allowing the Italian manufacturing sector to thrive in international markets. However, non-tradables had scarce incentives to upscale, innovate and improve productivity largely due to the regulatory environment.

Factor accumulation, structural change and innovation

Industrial policies operated mostly through the widespread presence of increasingly inefficient SOEs with soft budget constraints in almost all economic activities (from food and beverages to electronics) and public-owned banks operating in both commercial and investment banking. At the end of the 1980s they accounted for around one fifth of value added, one quarter of capital formation and over 15% of employment in the non- agricultural business sector, while public-owned banks collected 80% of overall deposits, intermediated 90% of total financial investment and employed 60% of workers in the banking sector (OECD, 1994). SOEs and public banks were instrumental in supporting postwar reconstruction, regional rebalancing and convergence, strategic industrialization and infrastructure development, though with mixed outcomes. (Zamagni, 1993; Berta, 2006). However, by the 1990s they had exhausted their role and seemed especially geared towards supporting employment, bureaucratic empire building and political cronyism, at the expense of efficiency and technological progress (OECD, 1994; Goldstein and Nicoletti, 1996). Moreover, they were often entrusted with legal or de facto monopolies even in areas where competition was possible, or they competed unfairly with other businesses thanks to their waiver from private company law and generous state aid. The lack of any competition provisions in Italian law left their market dominance and privileges virtually unchallenged. These industrial policy settings created barriers to entry in many markets and induced distortions that also affected private incentives to compete and business dynamism.

[36] Since its creation in 1941, the CIG's main goal was to avoid dismissals during temporary crises. In 1975 it was restructured in two types: ordinary and extraordinary, with the latter dealing with more structural company crises and applied especially to selected manufacturing sectors (automotive, textile and steel).

Policies aimed at encouraging *capital formation and innovation* were neither horizontal nor incentive-based and were fragmented and poorly targeted. Aside from capital formation and innovation driven by SOEs, policies consisted of a mix of subsidized loans for SMEs often provided by public development banks (especially to Southern regions), tax credits for investments in fixed assets, sector-specific packages blending capital subsidies and public investment, as well as direct support to R&D and applied innovation via targeted grants and subsidies.[37] Overall, these policies lacked consistency, suffered from a "picking-the-winner" bias, entailed deadweight losses, were poorly evaluated and did not provide Italian firms with real incentives to upscale and innovate. In parallel, business dynamism and creative destruction were curbed by the absence of focus on new innovative entrants, regulatory barriers to entry in product markets and insolvency procedures especially costly for SMEs that combined with long and inefficient civil justice proceedings.

Internationalization

During this period Italian manufacturing continued to benefit from Italy's *trade policies* involving increased integration in EU markets, which created conditions for developing close supply chain relationships with other founding members of the EU (especially Germany). However, the service sector – including financial services – was little exposed to international competition, both intrinsically and due to pervasive state ownership and restrictive regulations, which de facto acted as non-tariff barriers. The same factors also limited openness to *foreign direct investment*, which in manufacturing was also hindered by capital controls and the close grip that Italian families and investors maintained on both SMEs and large companies.[38] Tight ownership control was exerted via peculiar corporate governance arrangements that included high concentration of corporate ownership, pyramidal business group structures (through which ultimate owners could control the whole pyramid with small equity shares), inter-group cross- shareholdings, interlocking directorates and the strategic gate-keeper role played by the only large private investment bank (Mediobanca) (Barca et al., 1994; OECD, 1995).

The age of reform: from the 1990s to nowadays

Over the past 35 years, Italy's structural policies have undergone radical changes. Initially, these changes were spurred by the worst financial and political crisis Italy faced in the postwar period during the 1990s, as well as by the urgency to comply with EU Directives and the coming Eurozone membership. Later, especially during the 2010s, the changes were more endogenous, driven by the rising awareness by decision-makers of the structural traps that were strangling the Italian economy amid the digital transition. However, this belated

[37] Until the 1990s, the main measures supporting capital formation and innovation were based on the so- called Sabatini Law (1965), which currently survives with modifications (Nuova Sabatini, 2013), and Law 675 (1977), which provided limited fiscal investment incentives to overcome the economic crisis of the mid-1970s.

[38] The share of foreign ownership in listed firms (around 5%) was one third smaller than in Germany and less than half than in France. Capital controls were only fully lifted in 1990. FDI was also deterred by administrative and structural weaknesses that reduced Italy's attractiveness, especially in Southern regions.

awareness was uneven over time, did not always translate into effective policies – partly due to inappropriate design and implementation issues – and often clashed against resistance by both the electorate and interest groups. This made the reform process hesitant and slow.

The changes came in two waves (1990-99 and 2010-24), with a long pause in the middle partially overlapping with the GFC. During the first wave, structural policies essentially shifted gear from a developmental to an advanced-country policy mode. During the second wave, policies were more decisively directed at addressing some of drivers of Italy's structural traps. In both waves, policy changes have involved all the productivity channels highlighted in van Ark et al. (2023), though with different timing and depth.

Foundations

Institutional modernization advanced along three axes: macroeconomic stability, competition and regulation, and administrative reform. In the 1990s Italy pursued fiscal consolidation, inflation targets, and exchange rate stability, underpinned by Maastricht criteria, central bank independence, and the adoption of the Euro. This shift forced growth and employment policies to rely on structural adjustment rather than past reliance on fiscal profligacy, high inflation, and "competitive" devaluations (Nicoletti et al., 2001). [39]

Competition and regulatory reform, which was largely ignored in the past, gained prominence. Italy introduced a modern and globally advanced competition law, created a well-resourced authority for enforcement, and separated operators in telecoms, energy, and transport from their regulators, establishing independent agencies. This was supported by privatization and liberalization (see below). Oversight of the stock market was also made independent and strengthened.

A range of reforms aimed to tackle inefficiencies in the public sector though with mixed results. A constitutional change delegated more responsibilities to regions and cities under subsidiarity. However, increased complexity and weak coordination in key areas, such as environment and active labour market policies (ALMPs) constrained positive results. An attempt to partially reverse decentralization to correct these flaws was rejected in a referendum. At the central level, administrative reforms in the late 1990s and mid-2000s sought to streamline procedures, modernize HR policies, and reduce bureaucracy, but incomplete implementation – also due to resistance and under-resourcing – diluted their economic impact. More progress was achieved in anti-corruption through an independent procurement authority, and in e-government Italy is now relatively advanced.

Civil justice – long hampered by inefficiencies, huge backlogs, and lengthy trials (Palumbo et al., 2013) – was another major reform target. The 2009–10 and 2021–23 packages sought to cut backlogs, speed up proceedings, and raise efficiency through office reorganization, accelerated digitalization, and greater use of out-of-court settlements. Despite some

[39] The idea that loss of monetary and (partially) fiscal discretion would force governments to focus on structural reforms was reflected in the "there is no alternative" (or TINA) debate (Calmfors, 1998; Bean, 1998).

progress, results remain disappointing: Italy still ranks near the bottom of the Euro Area for judicial efficiency and quality (EU, 2024).

Markets and resource allocation

Policy reorientation towards structural issues also reshaped financial, product, and labour markets. In *finance*, reforms in the early 1990s ended the long-standing separation of commercial and investment banking, liberalized branching, and privatized or corporatized major state-owned banks. The stock market was modernized and liberalized, and by the 2000s banks aligned with Basel II and III and EU banking union rules.

Additional measures sought to address SMEs' small-scale trap: a fiscal system more neutral towards the debt/equity choice through the allowance for corporate equity (ACE); tax credits for SME IPO costs; "minibonds" to diversify unlisted SME funding beyond bank loans; and tax advantages for equity savings plans targeted to SME financing. Yet these initiatives had little impact on firms' financial structure or size until recently.

Product market reforms were driven by EU Directives and advocacy by the new competition authority. Since the mid-2000s governments engrained these reforms in the legislative process by requiring the drafting of annual "pro-competition packages," but between 2009–25 only three were approved. Overall reforms were fragmented, limited in scope, and resisted by incumbents, legislative bodies and professional associations.

The most effective liberalizations were in telecoms and air transport in the 1990s, followed by energy and rail (freight and later high-speed passenger travel) in the 2000s, where Italy fared better than other continental EU peers. However, little was achieved in making local public services contestable.

Retail trade and professional services were also targeted repeatedly. Entry barriers and opening hours in retail were eased, but with limited and uneven impact due to delegation to local authorities. In the professions, attempts to strengthen competition and dynamism by eliminating fixed fees, allowing multidisciplinary firms and partnerships, and permitting advertising or limited liability companies had limited impact. Resistance to the EU Services Directive, a narrowing of the liberalization scope by legislative bodies, and incumbents' opposition left Italy among the most regulated EU countries in this area, under ongoing infringement procedures.

The *labour market* was shaken up for the first time in decades. Reform began with the liberalization of fixed-term contracts in the late 1990s, introducing temporary-agency work and training contracts. The mid-2000s "Jobs Act" moved towards "flexicurity" by easing hiring and firing rules for large firms reduced firm-size thresholds (de facto eliminating firm size thresholds effects), expanded coverage of unemployment benefits, strengthened the scope and governance of ALMPs, and led to better coordination of passive and active LMPs, whose resources and reach were further enhanced more recently. Yet reforms were uneven: strong dualism spurred reversals in temporary contract regulation and attempts to centralize ALMP governance failed.

Factor accumulation, structural change and innovation

The most radical shift was in *industrial policy*, moving from dirigisme to a market-oriented approach. Complying with EU State Aid rules, SOEs were corporatized and progressively subjected to private law, paving the way for large-scale privatizations. In the 1990s, major financial institutions (Banca Commerciale Italiana, Credito Italiano, INA, IMI) and non-financial conglomerates (IRI, ENI, EFIM, ENEL) were dismantled, privatized, or liquidated, with government retaining special voting rights in subsidiaries delivering public services (transport, post, telecoms, energy). Privatizations slowed after the 2000s but continued with partial openings in airlines and postal services. The new industrial policy turn further shaped up after the GFC and COVID crises, through comprehensive plans supporting digitalization, notably "Industria 4.0" (2016) and later revisions in the context of the national RRP financed by the EU Recovery and resilience Facility.

These plans signalled a move from discretionary grants to broader, incentive-based instruments for *capital formation and innovation*. Until the mid-2000s, investment and innovation policies relied mostly on non-repayable grants or subsidies often targeting SMEs – with outcomes affected by administrative complexity, long delays, cronyism and deadweight. Thereafter, emphasis shifted to horizontal tax credits, deductions, and loan guarantees for new machinery, equipment, and advanced technologies, aligning Italy with best OECD practice. The partial shift to automatic, volume-based and horizontal incentives – such as R&D tax credits and patent boxes – modernized innovation policies. Fiscal incentives for innovative startups and SMEs, and a modern insolvency regime (replacing the WWII legacy one) encouraged business dynamism.

For the first time in decades, policies also targeted *human capital and skills*. Measures extended compulsory education from 14 to 16 years, strengthened subsequent vocational and technical academic pathways, introduced apprenticeships and internships as well as tax credits and support for digital upskilling. Yet spending per student (% of GDP per capita) did not increase much, remaining well below France and Germany until recently.

Internationalization

Much progress was made in the 1990s in *international trade and FDI* policies. All capital controls were lifted; and most sectors of the economy, including strategic ones, were opened to foreign investors in concomitance with the privatization and liberalization process and entrance in the Eurozone. Nonetheless, the government retained Golden Shares in certain sectors until their replacement with targeted foreign investment screening in the mid-2000s in response to adverse ECJ rulings. Also, persisting barriers to entry in service sectors limited the impact of the adoption of the EU Services Directive notwithstanding some limited easing in professions most recently. Ultimately, much of the progress made in this area were largely "passive" alignments to EU-wide requirements and policy initiatives.

Stagnation despite reform: a conundrum

Ironically, Italy's reform era coincided with its longest productivity stagnation. While we lack a no-reform counterfactual, the absence of a discernible productivity boost from reform

activity has fuelled wide debate (Bugamelli et al., 2018; Fontana, 2021; Pellegrino and Zingales, 2017; Perugini et al., 2017; Reichlin, 2019; Visco, 2020; de Santis and Ferroni, 2019). Two related factors likely blunted reform effects. First, there was a mismatch between the timing and scope of pro-productivity policies, on the one hand, and the speed and depth of global technological and market change, on the other. Second, a persistent implementation gap emerged between stated intentions and what was ultimately implemented and reached the market. In short, many reforms were too limited, too late, or ineffective – sometimes flawed, sometimes never implemented – compounded by Italy's limited use of ex post evaluation, which could have enabled mid-course corrections and greater impact. We'll address these factors in more detail below.

Too little, too late

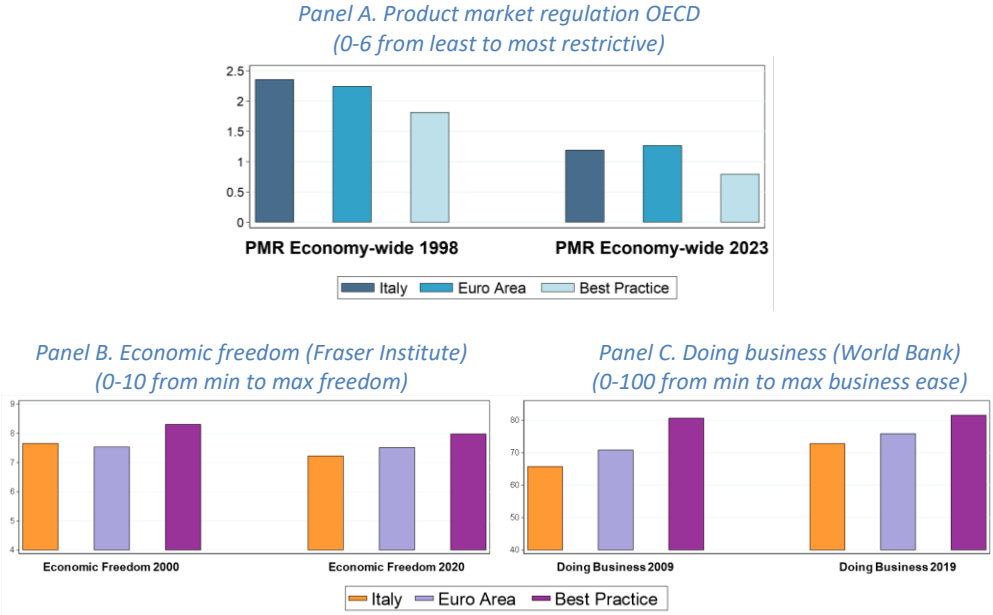
Italy converged to best-practice productivity performance in the 1980s but was slow to shift policy from a developmental to an advanced-economy model. By the time it did – during the 1990s – global trade and technology had moved on. Fixing the emerging traps of low skills, small firm size, and risk aversion was a long-term task that required foresight or, at minimum, swift, far-reaching action. Instead, privatization, regulatory reform, financial opening, and incentive-based technology and innovation policies merely brought Italy up to market-oriented standards other advanced countries had reached a decade earlier – and only gradually evolved over the following two decades.

Meanwhile, Italy's traditional engine – medium-low tech manufacturing – was shrinking and losing competitiveness. The escape route would have been to climb value chains toward higher-tech manufacturing and boost the role of services in growth. However, that would have demanded stronger policy focus on business dynamism, technology adoption and innovation, GVC repositioning, the expansion of knowledge-intensive tradable services, and sustained upskilling. For a long time, these priorities stayed off the policy radar, receiving meaningful attention only late in the century.

A few examples illustrate the mismatch between global developments and Italian productivity policies:

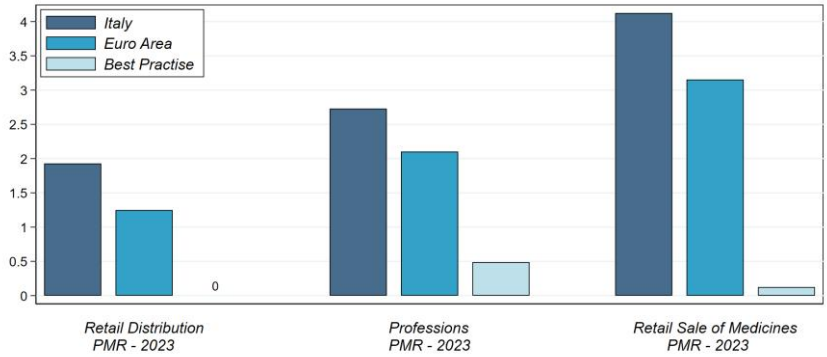
- *Market competition*. Competitive pressures are central to productivity gains, yet Italy only established its competition authority in 1990 – decades after Germany and the UK and years after France. By the late 20th century, survey-based indicators still showed Italy more restrictive of competition than the rest of the EA, both *de jure* (Figure 15. Measures of market competition: Italy, Euro Area, Best Practice, Panel A) and *de facto* (Figure 15. Measures of market competition: Italy, Euro Area, Best Practice, Panels B–C). Some progress has been made since, but services – especially knowledge-intensive professions, which are crucial for productivity in advanced economies – remain heavily regulated (Figure 16. Barriers to competition in services: Italy versus Euro Area (0-6 from most to least competitive).

Figure 15. Measures of market competition: Italy, Euro Area, Best Practice



Note: **PMR Economy-wide indicators** capture the extent to which the regulatory framework is hindering competition. *Best Practice* values refer to the best performing country in the Euro Area: Netherlands for 1998 and Lithuania for 2023. **The Economic Freedom of the World index** measures the degree to which the policies and institutions of countries are supportive of economic freedom. *Best Practise* values refer to the best performing country in the Euro Area: Luxemburg for 2000 and Estonia for 2020. **Doing Business Indicators** refer to the World Bank global estimates of the *Ease of Doing Business score*. It measures aspects of business regulation affecting small domestic firms located in the largest business city. *Best Practice* values refer to the best performing country in the Euro Area: Ireland for 2009 and Lithuania for 2019. The Euro Area indicator is a simple average of the indicators for every country in the Eurozone for which information is available (maximum 20 countries). Some methodologies are changed considerably over time, hence the juxtaposition of the first and last year is just for illustrative purposes. *Sources: PMR Sector Indicators, OECD*; *Economic Freedom of the World, Fraser Institute; Doing Business database, World Bank.*

Figure 16. Barriers to competition in services: Italy versus Euro Area (0-6 from most to least competitive)



Note: PMR Sector indicators capture the extent to which the regulatory framework is hindering competition in key sectors of OECD countries. Data displayed refers to the last available vintage: in most cases values refer to 2023, but few exceptions refer to 2024. Best Practice values refer to the best performing country in the Euro Area: Estonia and Lithuania in Retail Distribution, Netherlands in Retail Sale of Medicines, Finland in Professions. The Euro Area indicator is a simple average of the indicators for every country in the Eurozone for which information is available (maximum 20 countries). Data source: PMR Sector Indicators, OECD.

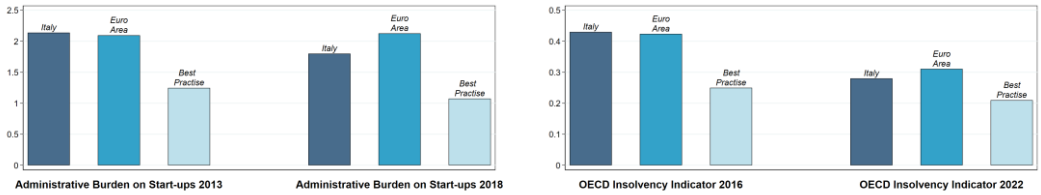
- *Firm growth*. Scaling up would have aided technology diffusion and the upgrading of industry specialisation and GVC positioning. Yet policies to ease the reallocation of labour and capital across firms and sectors arrived late. The relaxation of hiring–firing rules (including removal of firm-size threshold effects) and the strengthening – incomplete – of active/passive labour-market policies came only in the late 2000s (2015 Jobs Act). Support to diversifying firm finance away from multiple short-term bank loans also began only in the mid-2000s (ACE, minibonds, equity saving plans), with limited results until recently.
- *Managerial practices*. Better management – especially in SMEs – could have unlocked firm growth, raise skill demand, spur innovation, and help move up value chains. Yet incentives remain scarce, aside from the 2016 voucher for "temporary export managers" and the tax break for performance-related pay (PRP). Both programs increased productivity among participating firms (Manaresi et al., 2022; Damiani et al., 2022), indicating the need for broader measures of this kind. [40]
- *Business dynamism* is key in the new technological era, but became a policy focus only a decade ago. Reforms accelerated e-government and simplification, while laws supported entry of innovative startups (2012–15) and exit via a modern insolvency regime (2017) and faster civil justice procedures (2010, 2021). Yet until recently, high startup costs, outdated bankruptcy rules, and judicial inefficiencies continued to hinder the creative-destruction process (Figure 17. Creative destruction: Italy versus Euro Area).

[40] The TEM programme has been renewed twice (2018 and 2021) since it was launched. The vouchers are assigned on a first-come first-serve basis to SMEs and innovative startups until exhaustion of the programme's budget. Firms using the voucher to acquire external consulting services aimed at supporting internationalization improved not only their export and import performances but also labour productivity. The PRP tax break was assessed to increase productivity and, to a lesser extent, wages especially in family- owned SMEs of Northern regions.

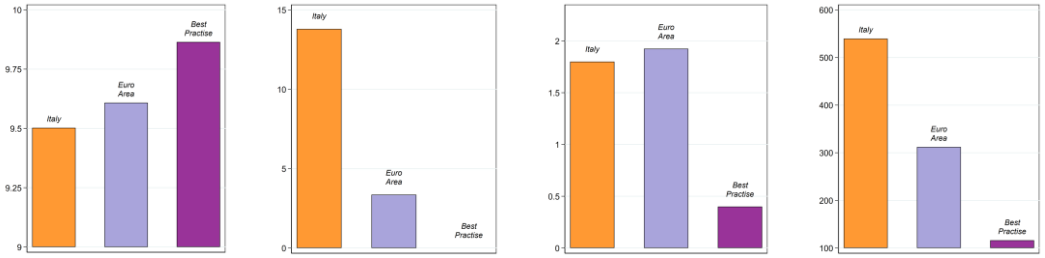
Figure 17. Creative destruction: Italy versus Euro Area

Panel A. Administrative burdens on startups (OECD) (from least to most heavy)

Panel B. Insolvency regime (OECD) (from least to most restrictive)



Panel C. Entry and exit costs (Fraser Institute, World Bank, Doing Business) (from lowest to highest)



Note: ***Administrative Burden on Start-ups*** is a sub-indicator of the OECD PMR taking values from 0 (most competitive) to 6 (least competitive). The methodology to build the PMR has changed over time, hence the juxtaposition of the first and last year is just for illustrative purposes. *Best Practice* values refer to the best performing country in the Euro Area: Spain for 2013 and Ireland for 2018. The ***OECD Insolvency Indicator*** in 2022 provides information on the state of play with respect to the different features of insolvency regimes. It takes values on a scale from 0 (most efficient) to 1 (least efficient). *Best Practice* values refer to the best performing country in the Euro Area: Germany scores best in both 2016 and 2022. The ***Ease of starting a business*** is a subcomponent of the Economic Freedom of the World index (from 0 to 10), provided by the Fraser Institute. *Best Practice* values refer to France in 2020. ***Cost*** *(% of GNI per capita)* refers to the homonymous World Bank indicator. *Best Practice* value refers to Sweden in 2019. ***Time to resolve insolvency*** is a Doing Business World Bank indicator measuring the years needed to complete insolvency practices. *Best Practice* values refer to Ireland in 2019. ***Time needed to resolve litigious cases*** is from the EU Justice Scoreboard and refers to the estimated number of days needed to resolve litigious civil and commercial cases at the first court instance. *Best Practice* values refer to Lithuania in 2022. The Euro Area indicator is a simple average of the indicators for every country in the Eurozone for which information is available (maximum 20 countries).

- <u>*Innovation*</u>. Italy is still lagging on innovation. Support for digital adoption and incentive-based automatic and horizontal innovation policies were only introduced in 2016 – with tax deductions for investment in new technologies, R&D tax credits, patent boxes and the like. By comparison, France's R&D tax credits were established in the early 1980s. Previous policies based on grants and subsidies were narrowly focused, selective, fragmented and suffered from several other shortcomings that failed to stimulate a widespread take up of business R&D (Bugamelli et al., 2012). By contrast, recent evidence suggests that fiscal incentives for technology adoption were effective in supporting the digital transformation (Bratta et al., 2022).
- <u>*Human capital and upskilling*</u>. Managerial upgrading, business dynamism and innovation would have required a corresponding supply of high skills, which is still insufficient in Italy. However, tertiary education spending per head kept declining for most of the past decades, no significant reform of higher education has yet been engaged, and the system still suffers from an undersupply of STEM graduates. It was

only barely a decade ago that education curricula have been hesitantly adapted to the digital age and closer ties between schooling and the labour market were established – including via the strengthening of technical and professional schools, mandatory internships and the creation of post-secondary studies alternative to university (La Buona Scuola, 2015). Policies were also slow on the upskilling of workers, where the first measures encouraging digital training date from the same period.

Given the high synergies between new technologies and key intangibles, such as R&D, skills and managerial talent, the delayed and slow pace of reform in all the above areas made it difficult for Italy to overcome its structural weaknesses and take full opportunity of the diffusion of ICT and digital technologies to revive its stagnant productivity.

The policy implementation gap

The delay in adapting productivity policies to global and technological change was compounded by frequent failures to translate laws and regulations into effective improvements in the business environment. Two factors stand out: design flaws that overlook market conditions and incentives, and weak enforcement capacity.

Implementation problems exist everywhere, but the gap is unusually wide in Italy. Contributing factors include institutional complexity and fragmentation across central, regional, provincial and municipal levels (each with its own system of checks and balances and lobbying channels); administrative inefficiency and uneven capabilities across territories; limited expertise – especially in lower tiers and the South; and strong resistance from interest groups.

Overlapping powers and differing political cycles across government tiers further narrow measures during implementation and divert them from original goals. The resulting long lags between legislation and application often extend beyond the political cycle, weakening both responsibility and accountability.

Again, a few examples illustrate how implementation gaps slowed down pro-productivity policies, limiting their impact:

- Implementing **foundational policies** has proved difficult. *Public sector reform* was applied unevenly across territories, reflecting wide differences in local capabilities, expertise, and resistance from civil society. Estimates of public sector efficiency confirm persistent heterogeneity – still evident a decade after the first administrative reforms – with negative effects on productivity, especially in lower-performing (often Southern) areas (Giordano et al., 2015; Fadic et al., 2019). *Civil justice reforms* faced similar obstacles: long after the first measures, average trial length still ranged from about 400 to over 1,500 days across jurisdictions, and court efficiency varied widely (Fusco et al., 2021). These disparities causally depress firm growth via weak contract enforcement, continued reliance on relational transactions, and tighter credit (Giacomelli and Menon, 2016). Such implementation gaps help explain Italy's

persistent disadvantage in firm entry and exit conditions relative to other EA countries (Figure 19, Panel C).

- Enhancing competitive pressures in services via **product market policies** has been difficult despite formal adoption of the EU Services Directive in 2010. In *retail trade*, two reform waves (1998, 2011) met local obstacles that produced highly uneven outcomes: the 1998 delegation to regions often delayed implementation and even raised entry barriers, hindering ICT adoption and productivity (Schivardi and Viviano, 2008); quantitative limits on opening hours and location bans persisted even after the 2011 wave. In *professional services*, exclusive rights, self-regulated tariffs, and advertising limits – sustained by local inertia and resistance from professional bodies – continue to restrain business dynamics in a knowledge-intensive sector crucial for productivity (Stelkens et al., 2012; Canton et al., 2014). Liberalization in other areas – such as *ride-hailing* and *tourism* (e.g., beach concessions) – have likewise failed to overcome opposition by entrenched incumbents, leading to adverse EU rulings and repeated actions by antitrust and anti-corruption authorities.
- Promoting efficient job transitions and reallocation via **labour market policies** also faced implementation hurdles. Efforts to strengthen ALMPs, including the 2015 creation of ANPAL to coordinate policies region-led since 1998 and the recent launch of the NRRP program Garanzie di Occupabilità dei Lavoratori (GOL), ran into persistent regional disparities, overlapping institutions (ANPAL, regional job centres, INPS, other agencies), limited public employment service capacity (among the lowest staff-to-jobseeker ratios in the EU), and insufficient digital integration. Outcomes were therefore limited and uneven, with fragmented governance, low coverage, and poor alignment between training programs and labour-market needs.
- Finally, policies to foster **creative destruction** faced both design and implementation problems. On *entry*, the 2012 measures for innovative startups showed positive results (Manaresi et al., 2021; Biancalani et al., 2021) but had important flaws: eligibility was defined too formally rather than by substantive criteria (e.g. high growth potential); reliance on public guarantees tied startups to bank debt ill-suited to high-risk projects needing patient capital; and there was limited attention to subsequent scale-up (OECD, 2018, 2020). On *exit*, the new insolvency regime advanced slowly from launch in 2015 to completion in 2022 because the obsolete 1942 code had to be overhauled (shifting the focus from ex post liquidation to early warning, out-of-court solutions, restructuring and continuity), while institutional fragmentation, political instability, and chronic judicial undercapacity delayed implementation.

A policy agenda to revive growth

For a heavily indebted and ageing country like Italy, boosting productivity is vital. Yet policymakers' awareness of the consequences of productivity stagnation for living standards came late. Despite fast global and technological change, growth was constrained by persistent structural traps and delayed, ineffective policies to unlock them. While several measures

were taken over the past four decades, especially after the GFC, they lacked vision and coherence. A comprehensive productivity strategy is now urgent amid geopolitical shocks, globalization reversals, and AI.

Designing such a strategy in detail lies beyond this paper, but earlier sections highlighted structural bottlenecks and policy challenges. These span institutions, human capital, the business environment, innovation attitudes and finance – all the productivity domains described in van Ark et al. (2023). Thus, reviving growth requires cross-cutting, coordinated policy actions. The NRRP has taken steps in these directions, but outcomes will take time and depend on swift and full implementation. [41]

The three traps identified in this paper – low skills, small scale, risk aversion – interact in ways that reinforce stagnation. None is an ultimate cause; each is endogenous and shaped by external factors, such as globalization and technology. Policies can only shift Italy toward a more productive equilibrium if they address all three together. For example, boosting skills will not raise productivity without measures enabling growth of dynamic firms, while promoting innovation and business dynamism requires broader financing sources and improved financial literacy. Effective coordination demands a centralized productivity strategy, cross-ministerial cooperation, and continuous evaluation. A step forward was the belated creation in 2024 of the National Productivity Board, nearly a decade after the EU Council mandate. [42] Its first Annual Report (CNP, 2025) recommends several detailed policy actions, partly overlapping with proposals in this paper.

Three broad policy directions stand out. First, *human capital*: close gaps with other EA countries in secondary and higher education spending; reorient curricula towards STEM disciplines; expand training and lifelong learning especially in digital and managerial skills; and better coordinate ALMPs to align skills with labour-market needs, reduce mismatch and enhance individual incentives to invest in education. Concrete steps in this direction would include a new "Formazione 4.0" tax credit for companies that invest in certified employee training in fields critical for productivity (e.g. advanced manufacturing, ICT, smart logistics) coordinated with employment services, using the national (SIISL) digital platform; fully implement the reform of the technical and vocational system (Law 121/2024) by strengthening Higher Technical Institutes (ITS) and better connect the system to universities, firms and research firms (e.g. through "territorial education pacts").

Second, *technology and business* policy: promote business dynamism and innovation by simplifying and digitalising administrative procedures under the NRRP to ease business creation and management; promoting managerialism and internationalisation through

[41] The plan foresees reforms in public administration, justice, tax administration, public procurement and product markets as well as investments in infrastructure, digitalization, innovation and education. At the time of writing, Italy was in line with the milestones set out in the plan but 65% of the resources provided by the EU remain still to be spent by the 2026 deadline.

[42] The Italian NPB was created in mid-2024 as a new-unit within CNEL, a constitutional body that has both consultative and law-proposing mandates as well as a mediating role among different stakeholders (social partners and civil society) (Altomonte et al., 2024).

programmes such as internationalisation vouchers to cover consultancy costs and support for hiring innovation managers; reinforcing and reforming R&D tax credits for digital technologies and intangible assets (e.g. software, patents and design) by expanding coverage beyond manufacturing, allowing refundability and deferred use for loss-making start-ups and making them volume-based to better support SME scaling; and facilitating generational turnover and firm growth by removing fiscal advantages that encourage family firms to remain small (e.g. very low inheritance taxes, business asset and capital gains tax exemptions for intra-family equity transfers, easier tax evasion, etc.).

This would also require shifting from size-contingent to cross-cutting or better targeted policy criteria. Because Italy's business landscape is so fragmented, many policies sensibly targeted SMEs (e.g. loan guarantees, digital-adoption incentives, export vouchers, etc.). While this may have helped overcoming some obstacles to growth, paradoxically it may also have supported low-potential firms and, by making benefits contingent on small size, may have generated incentives to remain small in order to continue benefitting from government measures. Implementing size-neutral measures and then focusing on firms with proven growth potential could better boost aggregate productivity.

Third, *finance*: build markets supportive of firm growth and intangibles. Despite reforms, investment is still constrained by high transaction costs for opening firms' capital structure; weak minority rights protection; interest rate spreads between large and small firms; and insufficient supply of patient and non-collateralized funding, such as venture capital or private equity. Priorities include further lowering IPO costs; facilitating direct investments of venture capital and private equity in firms; enabling government-guaranteed and IP-backed credit, and addressing spreads. Small changes in corporate and financial policies, such as the 2011 ban on interlocking bank directorates, have shown sizable effects.[43]

Finally, stronger productivity policy requires simpler, more streamlined institutional and administrative pathways from policy design to application, and wider use of evaluation tools to adjust or end ineffective measures. Simplification, streamlining, and evaluation are perhaps the hardest elements of a comprehensive strategy, but they are essential to overcome the delays and implementation gaps that have long undermined Italy's productivity policies.

[43] The prohibition was found to significantly reduce interest rates, especially for creditworthy SMEs (Barone et al., 2025).

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Annex Table - Productivity Policies

	Postwar to end-80s	1990s	First half of 2000s	Mid-2000s to now
Foundations				
Institutions and frameworks	Decentralization (1970), with multiple layers of government involved in regulation and policy-making Creation of CONSOB (1974) Independence of Central Bank from Treasury (1981)	Increased autonomy for Central Bank under Consolidate Banking law (1993) Creation of Competition Authority (1990) Strengthening and independence of Security and Exchange Commission (CONSOB)(1993) Establishment of independent telecom (AGCOM), energy (ARERA) and privacy authorities (1995-97)	Constitutional reform (2001) extending role and powers of regions Establishment of independent authorities for transport (ART, 2003) and corruption (ANAC, 2009)	Failed attempt to centralize back certain powers to enhance policy coordination and coherence by referendum (2016) Extension of ANAC powers (2016)
Government capabilities	Hypertrophic and inefficient public sector--Business sector dominated by presence of SOEs and public-owned commercial and investment banks	Administrative reform (1997-99) Anticorruption justice reforms (1992-1999) First (limited) steps towards e-government	Acceleration of e-Government: Digital administration code (2005), Digital Agenda (2012), national digital agency (AGID)(2014) Civil justice reform (2009-10) aimed at digitalisation, speeding up trials, fixing huge case backlog and allowing alternative routes	Comprehensive public administration reform (2015)-- digitalization, performance evaluation systems, rationalization of SOEs, especially at local level Reform of public procurement (2016) to implement EU 2014 directive Further civil justice reform (2021-23)--but Italy remains at bottom of EA on length of proceedings, perceived independence and protection of investors as well as trust by companies Further acceleration of e-government implementation also stimulated by COVID and EU NRRP (SPID, e-invoice, PagoPa, use of AI and cloud) Creation of the Italian National Productivity Board (2024)
Macroeconomic policy	Expansion of public spending Major tax reform modernised the tax system (1973) Moderate budget deficits up to mid 70s---- Large two-digit budget deficits thereafter--Public debt soars Two digit inflation Entry into EMS/ERM with wide fluctuation bands (1979)-- "Competitive" devaluations and EMS realignments (1981,1983, 1985, 1986)	Exit from and re-entry into ERM with free float (1992-96)--Major devaluation Adherence to Maastricht Treaty (1992-93) Public debt continues to soar--Fiscal consolidation via tax hikes and (lesser) reductions in spending (deficits from 10% to 3%) Euro adoption (1999) Various adjustments to tax code	Deficits (and debt) on the rise again in the wake of GFC crisis, though they remain under control (back to 3% by 2014) Various further adjustments to tax code Low inflation	Deficits (and debt) on the rise again in the wake of COVID crisis but still under control Inflation remains subdued Various further adjustments to tax code
Factor accumulation				
Investment	Until 1965 only direct investment by government and SOEs and subsidized loans from public banks -- Sabatini Law (1965) introduced interest rate subsidies for machinery and equipment in SMEs	Law 488 (1992)-- non repayable capital grants for investment in fixed assets for SMEs and EU structural funds zones	Abrogation of Law 488 in 2012	Industria 4.0 (2016-2019) -- tax deductions for new machinery and equipment and advanced technologies (super or hyper depreciation), public guarantees on loans to SMEs --mostly horizontal and incentive-based Nuova Sabatini (2017-24)-- subsidized loans and grants fo investments in advanced technologies by SMEs Public procurement reform aims at improving spending efficiency and quality of public infratructure (2016) NRRP (2021)--funds for improving logistics and infrastructure
Human capital	Reforms introducing universal compulsory education below 14 years (1962), expanding access to secondary schooling (no more early separation between vocational and academic paths) and opening up access to university to all school graduates in 1969 (from high school, technical institutes or professional schools)	Extension of compulsory academic education to 15 years (1999)	Further extension compulsory academic education to 16 years (2006) Introduction of vocational secondary training Mandated academic (high school, technical school or professional school), vocational or apprenticeship training until 18 (2010 Diritto-Dovere allo Studio)	Buona Scuola (2015)-- Strengthening and simplification of technical institutes and professional schools curricula (with focus on ICT) as well as of post-secondary technical schools (alternative to university) -- Mandatory internships at high school level (for technical and professional schools) for work-based learning--Regularization of precarious professors Industria 4.0 (2016)--Training tax credit for digital upskilling, establishment of subsidized competence hubs for SMEs and startups Vouchers to SMEs for hiring of "temporary export managers" (2016) Tax break for introducing "performance related pay" (PRP) practices (2016) NRRP (2021)--funds for further reforming technical and vocational education, support for doctoral programs

Note: comments in red denote policies and characteristics that hinder productivity gains

Low income policy stance
Low-middle income policy stance
Middle income policy stance
Advanced country policy stance

	Postwar to end-80s	1990s	First half of 2000s	Mid-2000s to now
Technology and structural change				
Innovation and adoption	Stimulus to innovation via discretional grants and subsidies, and SOE investments	Stimulus to innovation via discretional grants and subsidies, and SOE investments	Stimulus to innovation via discretional grants and subsidies, and SOE investments	Industria 4.0, Nuova Sabatini 4.0, Transition Plan 4.0, Growth Decree, NRRP (2016-23) -- R&D tax credits, Patent Box, Fondo Nazionale Innovazione, public guarantees to innovative SMEs -- Partial shift to automatic, volume-based, horizontal innovation incentives Digital innovation hubs at regional level for SMEs
Industrial policy	SOE investments and projects financed by public development banks -- Specialized agency for investments in Southern Italy	SOE investments and projects financed by public development banks -- Specialized agency for investments in Southern Italy	Specialized agency for investments in Southern Italy Privatizations stall	NRRP (2021)--digitalization, green transition, mobility, education and R&D Industria 4.0, Transition Plan 4.0 and specialized agency for investments in Southern Italy Partial privatization of postal services and the national airline
		Corporatisation of public banks and SOEs and their progressive privatization (1992-->)		
Creative destruction	No incentives for new firms, high barriers to entry in many markets, long and complex insolvency procedures (based on 1942 Law) and civil justice inefficiency make exit difficult	No incentives for new firms, admin burdens and barriers to entry in many markets, long and complex insolvency procedures (based on 1942 Law) and civil justice inefficiency make exit difficult	Admin burdens and barriers to entry in many markets, long and complex insolvency procedures (based on 1942 Law) and civil justice inefficiency make exit difficult	Insolvency reform (2017-2022)--early warnings mechanisms, simplified restructuring, promotion of business continuity vs liquidation, more efficient and fast procedures, aligns with EU 2019 Directive
			StartUp Act (2012)-- fiscal incentives and administrative simplification	Extension of StartUp Act to innovative SMEs (2015)
Markets and resource allocation				
Financial markets	Liberalisation of domestic interest rates (1983-85) Open market for government bonds (1984)	End of separation between commercial and investment banking and liberalization of bank branching (Banking Law reform 1991) Privatization of major state-owned banks (Amato Law 1992-->) Liberalisation, privatization and modernization of stock market (1994-97)	Adherence to Basel II and III Allowance for Corporate Equity ACE (2011)--more neutral tax system, encourages equity vs debt Introduction of minibonds (2012)--allow unlisted SMEs to access capital markets via private debt placements	Adherence to EU banking and capital markets union ACE strengthened Fiscal advantages to equity savings plans (PIR) directed at financing SMEs (2017-19) Tax credit to SMEs for IPO costs (2018)
Product markets	Legal monopolies in network sectors both at national and local level Heavy regulation in retail trade and professional services sectors	Competition Law (1990)--covers M&A, abuses of mkt power, collusion, etc., includes consumer protection, allows for advocacy Liberalization of telecom and air transport in application of EU Directives (1997-98) Monopolies of local public services remain Limited liberalization of retail trade (1998)--no more administrative authorizations required for opening up outlets (aside from large ones)--delegation of key powers to regions	Introduction of annual pro-competitive measure (2009)--only drafted 3 times in the past 15 years Further liberalization of retail trade (2010-2011)--also application of EU Service directive (2010) Liberalization of energy and rail transport (2000-2012) Monopolies of local public services remain Some liberalization of professional, business services and pharmacies (2006-12)--abolition of fixed fees, permission of multidisciplinary firms, interprofessional partnerships and advertising, opening to minority capital	Annual pro-competition laws (2017, 2021) Further liberalization of professional, business services and pharmacies (2017-22) --easing of some entry barriers--strong resistance from professions, measures watered down in Parliament, Italy still one of most regulated and defaulter vis à vis EU Service Directive (2006)
Labour markets	Workers' Statute (1968)--basic workers rights but also very restrictive hiring and firing (Employment Protection Legislation--EPL) Very weak ALMPs and fragmented at local level	Liberalization of fixed-term contracts, temporary-agency contracts, training and insertion contracts (1997)-- generates dual labour market	Further liberalization and extension of temporary contracts (2003-04) Restrictions on fixed-term contract abuses (2007-2011) Limited move to flexicurity (2011)--reform of EPL, stronger ALMPs	Jobs Act (2015)--major move towards flexicurity--reform of EPL, creation of national ALMP agency (ANPAL) Strengthening of ALMPs (2020-24)
Internationalisation				
Trade	Rome Treaty (1957) Creation of EEC (6 founding members) Creation of EFTA (1960)(EEC+Nordics, UK, Austria, Switzerland) Customs Union (1968) EEC enlargements (UK, Denmark, Ireland then Greece, Spain and Portugal)	Further EU enlargement (Austria, Finland and Sweden) Establishment of the EU Single market (1993) Establishment of the European Economic Area (EEA)	Adoption of the Euro (1999) Further EU enlargement (10 countries: Baltics, Balkans, Eastern Europe, Cyprus, Malta)(2004-13) China WTO shock (2001) Transposition of EU services directive (2010)--eliminates restrictions on cross-border trade in services	Limited easing of entry barriers in professions (2017-22)
FDI and capital movements	Adheres to OECD Code of Liberalisation of Capital Movements (1961) -- But strict capital controls until end of 80s.	Capital account restrictions removed (EU Directives) Liberalization of FDI (1994-95) Foreign ownership of shares allowed (including in banking and network sectors), but state retains golden shares	Replacement of golden shares with targeted foreign investment screening	Extension of screening to all sectors above certain thresholds

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