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Fondata da Mario Arcelli

Resilienza alla (nuova) doppia
crisi: persistenze e cambiamenti
negli assetti e nelle strategie
delle imprese italiane

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Italian's economy recovery: factors of resilience and future challenges

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Abstract

Following the unprecedented crisis caused by the Covid-19 pandemic, Italy's economy experienced a strong rebound, especially in comparison with its main European partners. This result can be attributed to the timely and extensive support (unlike the policy response to the crises in 2008-12) of the national government and European Central Bank (ECB), and to business strategies to remarkable changes of the Italian productive system. Especially Italian firms in tradable sectors performed remarkably.

The rebound of various economic sectors however was uneven with a lagged recovery of Services, which suffered the most the negative effects of the Pandemic, and a strong dynamism for the Constructions supported by the "Superbonus" scheme. The manufacturing sectors, in this context, showed a very quick recovery which was driven by the industries which benefited by larger share of exports and higher productivity.

In this paper we contribute to the existing literature providing an empirical exercise to assess the main factors behind the heterogeneity in the recovery pattern of the Italian manufacturing sectors.

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Italian economy, which in its path of recovery outperformed its main European partners, is currently facing many challenges such as the management of high public debt, stagnating productivity and demographic issues. Successfully implementing the investments and reforms outlined in the National Recovery and Resilience Plan (NRRP) will be crucial to support demand and enhance longer-term growth prospects, also related to the ongoing green and digital transitions.

Sintesi - La ripresa dell'economia italiana: fattori di resilienza e sfide future

Dopo la crisi eccezionale causata dalla pandemia di Covid-19, l'economia italiana ha registrato un marcato rialzo, più intenso rispetto ai principali partner europei. Questo risultato può essere attribuito al sostegno tempestivo ed esteso (a differenza della risposta della politica economica alle crisi del 2008-2012) del governo nazionale e della Banca Centrale Europea (BCE), nonché ai cambiamenti delle strategie aziendali del sistema produttivo italiano. Soprattutto le imprese italiane esportatrici hanno ottenuto significative performance.

La ripresa è stata tuttavia disomogenea, manifestando un ritardo tra i settori dei servizi, che hanno risentito maggiormente degli effetti negativi della pandemia, e un forte dinamismo per le costruzioni, sostenute dal "Superbonus". Il settore manifatturiero, invece, ha mostrato un recupero rapido, trainato dalle industrie caratterizzate da una quota maggiore di esportazioni e da una produttività più elevata.

Questo articolo contribuisce alla letteratura esistente proponendo una valutazione empirica dei principali fattori alla base dell'eterogeneità del percorso di ripresa dei settori manifatturieri italiani.

L'economia italiana, nonostante abbia dimostrato una decisa capacità di ripresa, sta affrontando sfide rilevanti come la gestione dell'elevato debito pubblico, la stagnazione della produttività e l'invecchiamento demografico. Il successo dell'attuazione degli investimenti e delle riforme delineate nel Piano Nazionale di Ripresa e Resilienza (PNRR) sarà cruciale per sostenere le prospettive di crescita a lungo termine nel contesto di una necessaria transizione verde e digitale.

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1. Introduction

Following the unprecedented crisis caused by the COVID-19 pandemic, Italy's economy experienced a strong rebound, especially in comparison with its main European partners. This result can be attributed mostly to the timely and extensive support (unlike the policy response to the crises in 2008-12) of the Italian government and European Central Bank (ECB), as well as to remarkable changes of the business strategies of the Italian productive system. Especially Italian firms in tradable sectors performed remarkably¹.

After COVID-19 pandemic, interest in evaluating its impact on the economy and the policies implemented to contain its effects generated a lively debate. Research by Brodeur et al. (2021) provides a comprehensive survey of the relevant literature on the pandemic's economic impact.

As for the effects specifically on Italian economy, among the others, notably, Di Bartolomeo et al (2022) provide a macroeconomic quantitative assessment of the early emergency fiscal measures introduced in 2020 and an analysis of the impact of the COVID-19 shock during the lockdown. The authors find that support measures avoided an additional fall of GDP of about 4.4% in 2020, with a particularly significant effect on investments dynamics. Barbieri et al. (2022) provide evidence on the impact of the COVID-19 on the labour market while Istat (2020) illustrates the effect of the policy measures to support households. Also Cassese et al. (2023) assessed the consequences of the sanitary crisis on the Italian labour market and on the production structure. In the most acute phase of the pandemic crisis, the authors evaluated that hours worked decreased more than GDP while employment showed resilience, mainly thanks to government interventions. At a sectoral level, strong

1 See for example Castelli et al (2024)

heterogeneities were observed. If on the one hand the manufacturing and construction sector has recovered the pre-crisis levels of value added and employment very quickly, thank also to the support on the renewal of dwelling, in services the progress showed a later recovery.

Guglielminetti and Rondinelli (2021) examine the factors influencing household behaviour in Italy during and after the pandemic from a macro (and microeconomic) perspective, finding that only half of the fall in private consumption can be explained by the deterioration in economic conditions. The residual contribution can be attributed to other pandemic-related factors (i.e. fear of infection, the lockdown policies and increased uncertainty about the future).

At sectoral level, the Istat “Rapporto sulla competitività dei settori produttivi” (2024) provides a detailed analysis of the heterogeneous response of the Italian sectors to the multiple shocks of the past few years. By using a new Strategy dynamism indicator, able to capture thpropensity to innovate, to invest in technology and staff training and in business organisation, the Report documented an increase in the polarization of Italian enterprises among the 2018 and 2022. Both the weight of low and medium-low dynamism firms increased (from 22.9% to 26.6% in terms of added value) as well as those with medium-high and high dynamism (from 50.4% to 54.1%).

Furthermore, the 2021-2022 period was characterized by a strong boost in the construction sector, stimulated by government measures² to support the industry as well as the Services, which suffered the most from the crisis and

2 In 2020, the Italian government approved the Decreto Rilancio (Relaunch Decree) to support businesses and households. This legislation included the introduction of the Superbonus 110, a program offering a tax break of 110% on qualifying expenses incurred for energy-efficiency improvements to properties. The program’s significant impact is reflected in the Italian index of production in construction, which displayed considerably greater volumes than its main European partners since July 2020. This is likely due in good part to the noticeable fiscal incentives provided by the government, which were not granted in other European countries.

struggled to recovery. Interestingly, in the report is pointed out that the very quick rebound of manufacturing sector masked heterogeneous performances of sub sectors.

Overall, despite the remarkable recovery, the Italian is still facing “old” challenges such as high government debt, weak long-term productivity enhancement, low labour market participation rates, population aging and wide regional and gender inequalities (European Commission, 2023a, 2023b).

These domestic challenges are compounded by international downward risks such as the possibility of renewed energy price hikes (which would affect the timing of monetary policy stance inversion) and trade disruptions due to geopolitical tensions, and a historically weak world trade growth.

In what follows, after summarizing five main evidences for the Italian economy in the post pandemic period, an empirical exercise for the manufacturing sub sectors is provided to assess the main factors behind their heterogeneous recovery patterns in the period 2021-2023.

The paper is organised as follows: in the first paragraph we present the main features of the Italian economy's response to the past four years overlapping crises, in the second paragraph we provide an empirical assessment of various resilience factors in the manufacturing sector. Conclusions and future challenges for the Italian economy follow.

2. The Italian economy recovery in the aftermath of the pandemic crisis: five main evidences

To summarize the main features of the Italian economy's response to the past four years overlapping crises, we present five main evidences.

Evidence 1. The Italian economy experienced a period of sluggish growth before the pandemic.

Between 1999 and 2019, Italian GDP grew by just 8.1%, compared to 30.6% in Germany, 32.9% in France, and 43.5% in Spain. This weak performance reflected low investment, declining labour productivity, and a shrinking workforce.

The COVID-19 pandemic initially affected Italy more severely than other Eurozone countries. In 2020, GDP fell by 9,0% compared to an average decrease of 6.1% in the area. However, the Italian economy exhibited a faster-than-expected recovery, reaching its pre-pandemic level in Q3 2021, ahead of Germany, Spain, and France (Figure A1 in the appendix). The economic activity in Italy, supported by expansionary economic policies, continued to show resilience and dynamism in the first half of 2022 despite rising energy prices, accentuated by the escalation of the war in Ukraine and ECB aggressive interest rates hikes to curb inflation. In 2022, Italian economy grew by 4.0% compared to the previous year, easing considerably from the 8.3% increase in 2021 but still extending its recovery from the deep recession of 2020 and performing better than Germany and France (respectively 1.8% and 2.5%). In 2023, the Italian real GDP growth rate, reflecting the combined

effects of high inflation, rising interest rates, and global economic uncertainty, increased but a lower rate (0.9%) even if still showing greater dynamics than France (0.7%) and Germany (-0.3%). Comparing the level of activity of 2023 with 2019 Italian economy grew by 3.5% more than Spain (2.5%), France (1.5%) and Germany (0.7%).

The GDP growth was mostly supported by private investments and consumption (financed also by households “lockdown-forced” extra-savings), recovery in employment, buoyant tourism, extensive fiscal support of real purchasing power and by private and public investments. The latter starting from 2021, benefited by the financial resources provided by National Recovery and Resilience Plan (NRRP).

As for the external demand, in Italy, exports of goods and services in volume recovered faster than in France and Spain already in Q3 2021 and since Q1 2022 have performed almost better than in Germany.

However, strong import growth, related to investment demand, often outpaced export growth. This resulted in a reduced positive contribution to GDP growth in 2021 and 2023 (0.1% and 0.3% respectively) and a negative one in 2022 (-0.6%)

Evidence 2 Investments as driving forces of Italian economic recovery

Investment has played a significant role in Italy's economic recovery and showed a particular dynamism especially in comparison with its main European partners. In 2023, Italy's investment-to-GDP ratio reached 21.2%, a 3.2 percentage points increase from 2019 and a 4.3 percentage points increase from 2015. This growth surpassed that of France, Germany and Spain in both

periods.

In 2023, Italy's investment shares surpassed Spain's (19.2%) and nearly matched Germany's (21.9%), while remaining significantly lower than France's (24.8%), which has seen a substantial rise in intellectual property investment (Figure A2 in the Appendix).

The rise in Italy's overall investment share in 2023 compared to 2015 is primarily driven by increased investment in dwellings (from 4.1% to 6.4%) and machinery and equipment (from 6.0% to 7.3%). Notably, Italy has overtaken Germany in machinery and equipment investment in the past three years. Investment in non-residential buildings showed a modest increase, while intellectual property investment remained stable at 3.0%.

The strong dynamism of investments determined a heterogeneous increase in productivity³.

Evidence 3. Resilience of the labour market but still stagnant productivity.

The pandemic initially significantly impacted the Italian labour market. The government's response included extensive use of government wage subsidies, however, successfully limited unemployment and the decline in employment in 2020. Since July 2020, the labour market has experienced a gradual recovery of employment that has continued through the end of 2023. It is worth to underline, however, that the employment rate in Italy remains well below the euro area average.

3 Measured as value added per hour worked, productivity increased significantly in construction (6.2%) and manufacturing (2.8%) compared to 2019. The service sector saw a modest increase of 0.6%. Compared to 2015, productivity improvements were more substantial in construction (10.5%) and manufacturing (6.9%) while services saw a modest increase of 0.3%.

Despite a resilient labour market with a continuous growth in employment and Italy's GDP performance higher than its European counterparts, Italian labour productivity, measured as value added by hours worked, decreased in the last three years (-1.7%, -0.2% and -1.4%, respectively). The declines follow an increase in 2020 (3.1%) due to the exceptional fall in working hours during lockdowns.

These trends highlight the longstanding challenge of Italian productivity dynamics compared to its main European partners⁴. In fact, between 1995 and 2022 (Istat 2023b), the average annual growth of labour productivity in Italy (0.4%) was significantly lower than that experienced in the rest of Europe (1.6% in the EU27). Growth rates more in line with the European average were recorded by France (1.0%) and Germany (1.3%). Spain also recorded a growth rate (0.6%) lower than the European average but slightly higher than the one for Italy. The gap with other European economies was particularly large in terms of the evolution of value added: in Italy, the average annual growth in the period 1995-2022 was 0.8%, much lower than that of the EU27 average (1.8%). On the contrary, hours worked recorded overall more limited changes: stagnation in Germany, 0.4% in Italy, 0.7% in France. Only Spain, among the main EU countries, recorded a more pronounced increase (1.2%).

Evidence 4 Public finance worsened substantially despite GDP steady recovery.

The recovery of the Italian economy after the COVID-19 crisis was sustained by significant government spending (Di Bartolomeo et al 2022, Istat

⁴ See among the others De Santis and Ferroni (2020).

2020) enabled by the relaxation of the Stability and Growth Pact rules, low interest rates, and a large amount of liquidity injected into the system by the ECB. The expansionary fiscal policy, while leading to a larger increase in the public deficit compared to other major European countries, along with rising interest costs, avoided a deeper recession and favoured a quick recovery of Italian economic activity. However, the public debt, though its increase was limited by the steep rise in GDP, it remains among the highest in the euro area countries. In 2023, the Italian public deficit was -7.2% and the debt-to-GDP ratio at 137.3%. The widening deficit was largely driven by capital expenditures⁵, particularly the Superbonus 110% program: excluding its contribution, in 2023 the deficit was -2.5%⁶.

Looking at the medium to long term, the primary balance (government budget excluding interest payments) is crucial for debt sustainability. Compared to pre-crisis levels, Italy's key public finance indicators are unfavourable. In 2023, the deficit was -7.2% (-1.5% in 2019), the net interest deficit was -3.4% (1.9% in 2019), and the debt was 137.3%, three percentage points higher than 2019. Only the current account deficit returned to positive territory (0.6% in 2023, 1.7% in 2019).

The Italian public finances situation is particularly challenging since starting from the end of Aprile 2024 the Stability and Growth Pact (SGP) has

5 In 2023, this expenditure contributed €111.2 billion to investment (compared to €14.2 billion in 2019), doubling the net capital expenditure share of GDP compared to pre-crisis levels. In 2020, the Italian government approved the Decreto Rilancio (Relaunch Decree) to support businesses and households. This legislation included the introduction of the Superbonus 110, a program offering a tax break of 110% on qualifying expenses incurred for energy-efficiency improvements to properties.

6 It's important to note the ongoing debate regarding the Eurostat classification of Superbonus expenditures together with its impact on investment and GDP figures as well on deficit and debt (see Istat 2023a). This issue it has been investigated also by the Italian Parliament with parliament hearings that had involved, among the others, Corte dei conti, Istat and UPB. Most of these contributions based on a counterfactual approach using the multiplier a macroeconomic model. For instance, Istat used the multiplier identified in Istat 2018 associated to the model MeMo-It (Bacchini et al., 2013, 2018).

been reactivated. It is still too early to say with certainty what the effects of the SGP will be on the Italian economy in the next years.

Evidence 5. Industry recovered well before services and construction sector was boosted by large fiscal incentives.

Italian value added in manufacturing recovered fully the pre pandemic level in 2021, well ahead of the services sector (travel, tourism, hospitality) which was particularly affected by the pandemic restrictions. The “Superbonus” scheme boosted the construction sector well above pre-pandemic levels already at the end of 2020. Compared to 2019, the value added in construction, that in 2023 accounted for the 5,5% of the total, grew by 30.7% an outstanding performance compared to the services and manufacturing (respectively 4.0 and 3.7%). In the same period, labour input, measure by hours worked, show some differences in the intensity (respectively 23.0, 0.9 and 3.4%) that reflected in the productivity performance (6.2, 2.8 and 0.6%) and in the growth of the income for full time equivalent (9.5, 11.7, 7.8%).

Lockdowns, global supply chain bottlenecks and energy crisis caused particularly significant disruptions in the manufacturing sector. Value added dropped by an average of 13.4% across the sector in 2020. There was however an immediate positive rebound. The sector saw impressive growth of 15.0% in 2021 and 3.8% in 2022. The recovery was not uniform across all sectors reflecting also different sensitivity to the rising energy costs.

3. Key Drivers of the manufacturing sector recovery: an empirical analysis

3.1. The evolution of Italian manufacturing sectors after the COVID-19 crisis

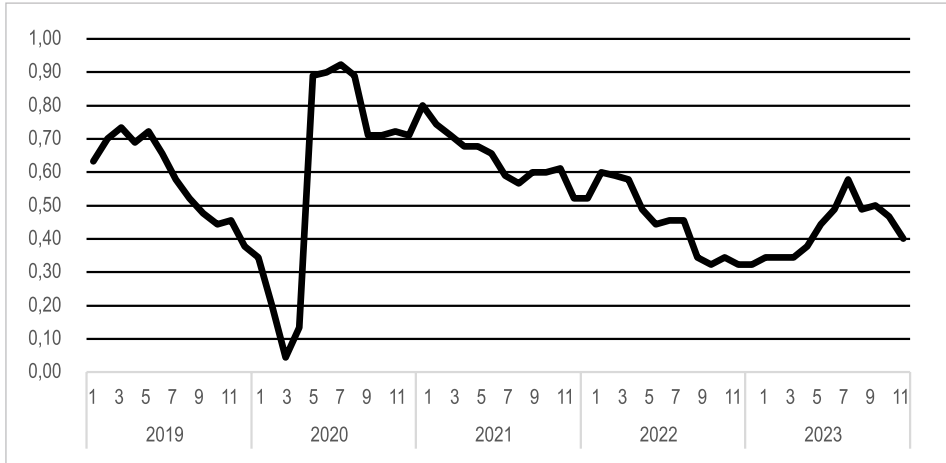
As already mentioned in the previous paragraph, in the last four years, the growth pattern of the Italian economy has been heterogeneous across the economic sectors due to their remarkable differences in the reactions to the shocks. In what follows, to analyse the behaviour of the manufacturing sectors in the period January 2001-December 2023 we build a diffusion index for 87 3-digit NACE sub sectors⁷. The turning points for each of the 87 sectors are estimated using the traditional Bry-Boschan algorithm⁸. For each sector the observations of the monthly index of production in manufacturing, seasonally and calendar adjusted, is classified dichotomously with a 0 and 1 variable corresponding respectively to contraction and expansion. For each month, a “diffusion index” (which distinguishes between expansion, above 0.5, and contraction, below 0.5, of a sector) is elaborated as the ratio among the sum of the “1” and the total number of the sectors.

After the COVID-19 crisis, the rebound of the Italian manufacturing sector was remarkable and lasted, with decreasing intensity, until Q1 2022 when the diffusion index took values below 0.5. Diffusion index reached its minimum in the second semester 2022 and then starting to recover passing the threshold of 0.5 in August 2023 and then taper off in the second half of the year. (Figure 1).

⁷ The sub sectors were selected according to data availability.

⁸ The Bry-Boschan (B.B.) algorithm (Bry and Boschan, 1971) is a well-known method to find statistical maxima and minima using certain censoring rules and to identify turning points in a given macroeconomic indicator. It represents a way of automatizing the cycle dating procedure according to the tradition of the NBER.

Figure 1 Diffusion index for the Italian manufacturing sector



Source: authors own elaborations on Istat data

The pattern of the diffusion index, however, synthetize a high heterogeneity across the 87 sub sectors.

To shed light on this heterogeneity we deepened our analysis disentangling the manufacture 87 3-digit sectors in three groups according to differentiated growth rates for two sub-periods⁹:

- Group 1: Lagging sectors, i.e. sectors for which the index level in the average of 2023 is lower than the average of 2019.
- Group 2: Recovering sectors, i.e. sectors for which the index level in the average of 2023 is higher than the average of 2019, but the growth occurred either in the period 2019-2022 or 2022-2023.
- Group 3: Net recovering sectors, i.e. sectors for which the index level in the average of 2023 is higher than the average of 2019 and have also

9 We considered two different sub-periods: 2019-2022 able to detect the recovery of the sector following the COVID-19 crisis and 2022-2023 to detect for the resilience of the sectors in a period when the diffusion index was below the threshold of 0.5 most of the time.

grown in 2023 compared to 2022¹⁰.

The proposed classification returns a mixed picture. Table 1 shows the distribution in terms of absolute frequency of the 3 groups. In particular, the sectors in Group 1 weigh 56.4% in terms of manufacturing value added. Groups 2 and 3 weigh just over 20% each.

Table 1 **Classification of the Italian manufacturing groups**

Group	Frequency	Value Added (%)
1 Lagging	54	56.4
2 Recovering	21	22.5
3 Net recovering	12	21.1
Total	87	100.0

This classification allows for an interpretation of the dynamics of the Italian manufacturing at a more aggregate level, the sections (two digits of NACE classification Table A1 in the appendix). The textile and clothing industries, the manufacture of chemicals, the supply of energy, and the manufacture of metal products excluding machinery and equipment, all have a high percentage of sectors in decline compared to 2019.

The manufacture of computers and electronic and optical products; electro-medical equipment, measuring and control instruments and watches; and the manufacture of machinery and equipment n.e.c. are mainly characterized by sub-sectors that have recovered pre-pandemic production levels.

10 The result of the classification is illustrated in Figure A3 in the appendix where the observations are the 3 digit NACE sector, the x-axis represents the 2022/2019 growth rate and the y-axis represents the 2023/2022 growth rate.

3.2. Main driving factors for manufacturing sectors recovery.

Heterogeneity in the performance of the sub sectors could be related to different structural factors such as the size of the firm, its productivity performance, and its exposition to the international markets. To measure the impact of these different factors, in the following paragraph we run econometric exercise using, for each manufacturing sectors the main structural indicators available from the traditional statistical sources.

For the years 2019 to 2022 and for each of the 3 groups identified in the previous paragraph we select: the number of legal units; number of Employees; turnover (thousands of euros); purchases of goods and services (thousands of euros); value added (thousands of euros); labour cost (thousands of euros). At the same time, we calculate some economic indicator such as productivity (Value Added/Employees) and CLUP (Labor Cost/Value Added). In addition to this set of structural indicators, we include in our estimate an indicator measuring the export performance, based on the deflated turnover: "Export"¹¹. The three groups identified in the previous paragraph presents a heterogeneous picture with the group 3 "Net recovering sectors" characterized by highest values of productivity and lowest CLUP while for the cluster 2 "Recovering" the opposite occurs (Table 2).

To measure which variable, contribute to the classification of one sector in one of the three groups we estimated an ordered logit model where the categorical dependent variable Y represents the three manufacturing groups previously identified and takes on the values 1, 2 and 3. The structural and

11 Using the data on turnover for the domestic and foreign market in manufacturing sector deflated with the correspondent producer price indices of the group, we calculated a dichotomous variable "Export", defined as follows: 1 if the variation of deflated foreign turnover for 2022/2019 and for 2023/2022 are positive; 0 otherwise.

short-term variables selected were used in different combinations to identify the model with the minimum value of the AIC information criterion.

Table 2 **Main characteristic of the groups**

Group	Productivity	CLUP	Value Added
1 Lagging	86.6	1.863	2,825,417.5
2 Recovering	84.0	1.773	3,236,928.6
3 Net Recovering	90.9	1.720	5,288,299.5

The results are shown in table 3 in which the Export variable was defined above, Productivity (calculated in logarithms) is for 2019 and a Cost Ratio variable that measures the growth rate between 2022 and 2019 of the ratios between the cost of purchases of goods and services and labour cost¹². The latter variable has been introduced to capture the effects of the dynamic of intermediate costs, caused by the increase in commodity prices, compared to labour cost that is typically more rigid.

The estimated model shows a negative relationship between Cost Ratio and the dependent variable Y, implying that as this indicator increases, the probability of the sector being in the Recovering group decreases while Export and productivity variables (in logarithms) have positive effects (first column in Table 3). Table 3 shows also the marginal effects, which indicate the impact of a one-unit change in each variable (Export, productivity, Cost Ratio) on the probability of a sector belonging to each of the 3 group. An increase in the cost ratio of 1 unit increases the probability of a sector being in “Lagging” by 53.8 percentage points, decreases the probability of a sector

¹² Labor cost has been imputed for the independent worker using the average cost of labour for dependent workers.

being in “Recovering” by 29.3 percentage points and decreases the probability of a sector being in “Net recovering” by 24.5 percentage points. An increase in productivity of 1%, instead, decreases the probability of a sector being in decline by 0.423 percentage points and increases the probability of a sector being in recovery by 0.23 percentage points and the probability of a sector being in net recovery by 0.193 percentage points.

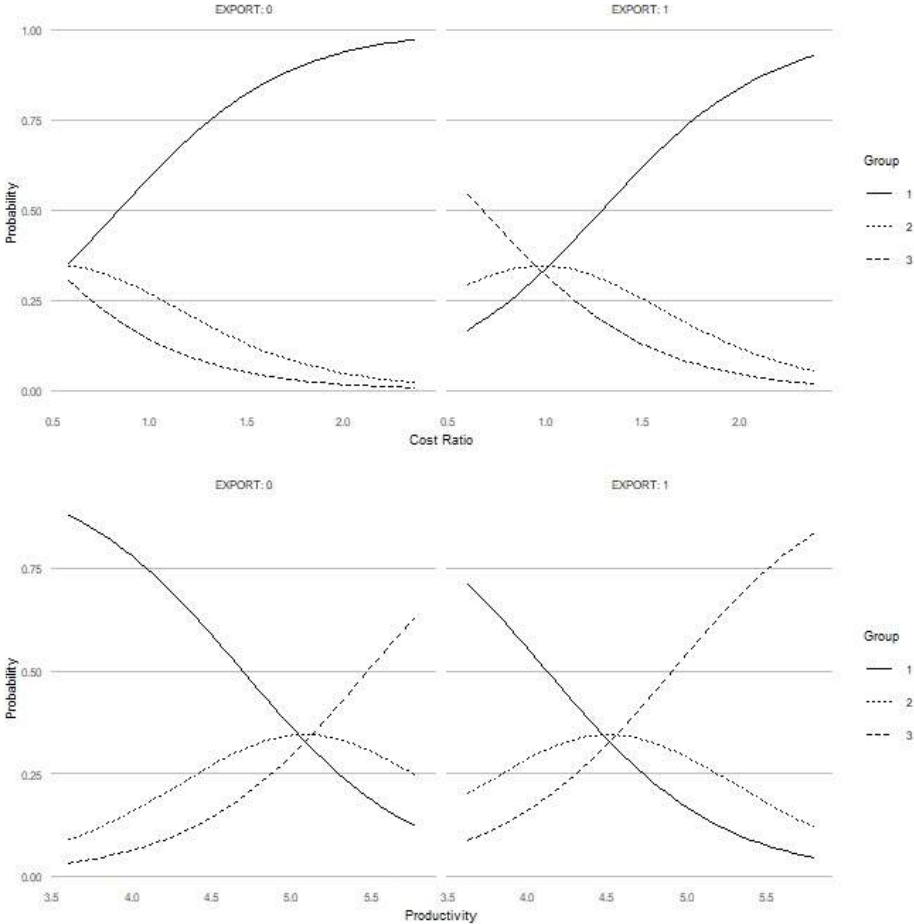
The impact of the Export variable is also positive: if Export is equal to 1, the probability of a sector being in decline decreases by 25 percentage points while the probability of a sector being in recovery increases by 11.7 percentage points. The probability of a sector being in net recovery increases by 13.3 percentage points

Table 3 Ordered logit estimation

	Coefficients	Marginal Effects		
		Group1	Group2	Group3
Export	1.045*	-0.250*	0.117*	0.133*
	(0.556)	(-1.890)	(1.930)	(1.90)
Productivity	1.827**	-0.423**	0.230*	0.193*
	(0.907)	(-2.022)	(1.777)	(1.913)
Cost Ratio	-2.323*	0.538*	-0.293*	-0.245*
	(1.545)	(1.724)	(-1.68)	(-1.711)
Cut1	5.8*			
	(1.657)			
Cut2	7.24**			
	(2.04)			

Note: t-value are reported in parentheses, Cut1 and Cut2 indicate thresholds between one category and the next. **, * indicate statistical significance at levels 0.05 and 0.1;

Figure 2 Ordered logit: estimated probabilities



Source: authors own elaborations on Istat data

The upper panel of Figure 3 shows the probability of belonging to each of the 3 groups for the values in the range of variation of the Cost Ratio, keeping the value of productivity constant at its average value and for groups with negative (Export = 0) and positive (Export=1) export performance. The lower

panel shows the same impact but for productivity, keeping the value of the Cost Ratio constant at its average value.

4. Future challenges for the Italian economy

Italian economy in its path of recovery from the multiple shocks of the past years, overall, outperformed its main European partners. The exceptional resilience in the period 2021-23 was related to a particularly effective economic policy that boosted domestic demand as well as a prompt reaction of the productive sector. Especially Italian firms in tradable sectors performed remarkably, highlighting the Italian export sector's adaptability to changing and challenging conditions.

The rebound of the various sectors however was uneven with a lagged recovery of Services, which suffered the most the negative effects of the Pandemic, and a particularly brilliant result for the construction sector supported by the "Superbonus" scheme. The manufacturing sectors, in this context, showed a very quick recovery which was driven by the industries which benefited by a larger share of exports and a more dynamic productivity. However, the increasing polarisation of their distribution in terms of dynamic strategy behaviour will be a further challenge for the industrial policy.

Despite its remarkable recovery in the past years, recent IMF forecasts (WEO April 2024) suggest, a steady but moderate growth for Italy in 2024 and 2025 with several challenges ahead and clouded by an international environment characterised by many downward risks.

Among the challenges, Italian public finances imbalances will have, starting from this year, to face the targets of the "new" Stability and growth pact.

This issue is also aggravated by Italian demographic projection which will increase progressively the welfare expenditure (pensions and health). On a positive note, in Italy non-financial corporate debt has decreased, and household debt remains moderate mitigating the financial stability risks at least in the short term.

In a context of still subdued productivity growth, aging population and challenging fiscal imbalances a positive impulse to growth is expected by the implementation of the Italian Recovery and Resilience Facility program that should provide incentives for investments and support major reforms in the next two years¹³. However, up to December 2023 of the 101.9 billion euros Italy received from the European Commission, only €45.6 billion were spent¹⁴.

Effectively implementing the RRF, reducing the debt and supporting the socio-economic transformation toward a more inclusive and resilient society is challenging goal for Italy in the next years which might reinforce and extend the positive economic performance of the post pandemic period.

13 The RRF includes a set of common indicators related to the objectives of the RRF. The common indicators show the progress of the implementation of the recovery and resilience plans towards common objectives and the overall performance of the RRF. However, this design, that include also monitoring of a set of milestone and target, shows some difficulties against a clear policy evaluation system both at European and at national level (see Eca, 2023 and Bacchini et al. 2023).

14 Regarding spending, €45.6 billion had been spent by December 2023, with €21.1 billion spent in 2023 and €2.6 billion related to previous plan formulations not included in the current plan (Ministero per gli affari europei, 2024).

References

- [1] Adrian, T., Gaspar, V. and Gourinchas, P.O. (2024. IMF blog), The Fiscal and Financial Risks of a High-Debt, Slow-Growth World, <https://www.imf.org/en/Blogs/Articles/2024/03/28/the-fiscal-and-financial-risks-of-a-high-debt-slow-growth-world>.
- [2] Altissimo, F., Cristadoro, R., Forni, M., Lippi, M., & Veronese, G. (2010). New Eurocoin: Tracking economic growth in real time. *The review of economics and statistics*, 92(4), 1024-1034.
- [3] Bacchini, F., et al. (2013) Building the core of the Istat system of models for forecasting the Italian economy: MeMo-It. *Rivista di statistica ufficiale*, 2013, 15.1: 17-45.
- [4] Bacchini, F., Bontempi, M. E., Golinelli, R., & Jona-Lasinio, C. (2018). Short-and long-run heterogeneous investment dynamics. *Empirical Economics*, 54, 343-378.
- [5] Bacchini, F., Di Biagio, L., Gallo, G. M., & Spinelli, V. (2023). Common RRF Indicators and SDGs Framework: A Proposal for a Composite Index. *L'industria*, 44(3), 441-470.
- [6] Barbieri, T., Basso, G., & Scicchitano, S. (2022). Italian workers at risk during the Covid-19 epidemic. *Italian Economic Journal*, 8(1), 175-195.
- [7] Brodeur, A., D. Gray, A. Islam, and S. Bhuiyan (2021), "A literature review of the economics of COVID-19," *Journal of Economic Surveys*, 35(4), 1007-1044.
- [8] Cassese D., D'Imperio P. and V. Ferroni, (2023), *Crisi Covid-19 e il mercato del lavoro: alcuni fatti stilizzati*, *Economia Italiana*, 1/2023.
- [9] Castelli et al. (2024), "Competitiveness, performance and GVC participation of italian exporting firms". *Economia Italiana* Luiss press.
- [10] Corte dei conti (2023) *Indagine conoscitiva sugli strumenti di incentivazione fiscale con particolare riferimento ai crediti d'imposta*, presented to Commissione 6a finanze e tesoro del Senato della repubblica.

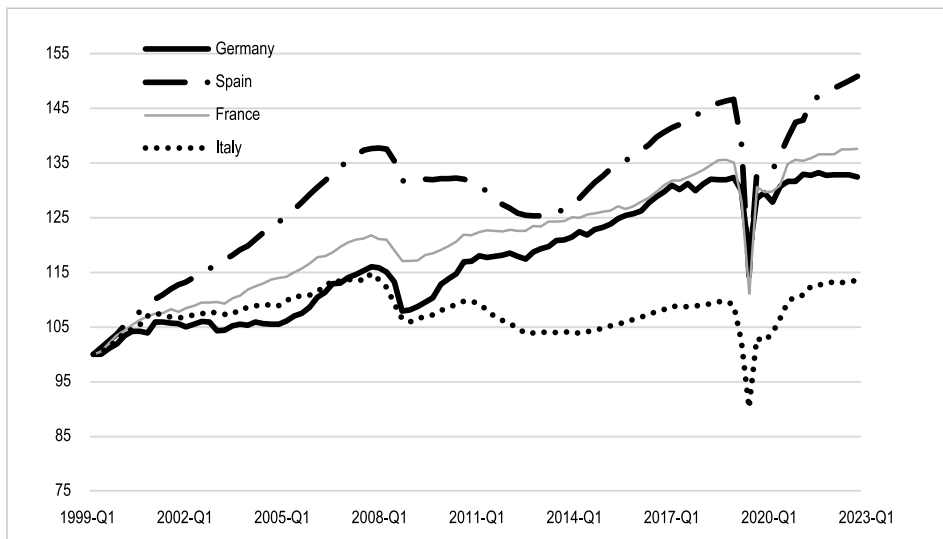
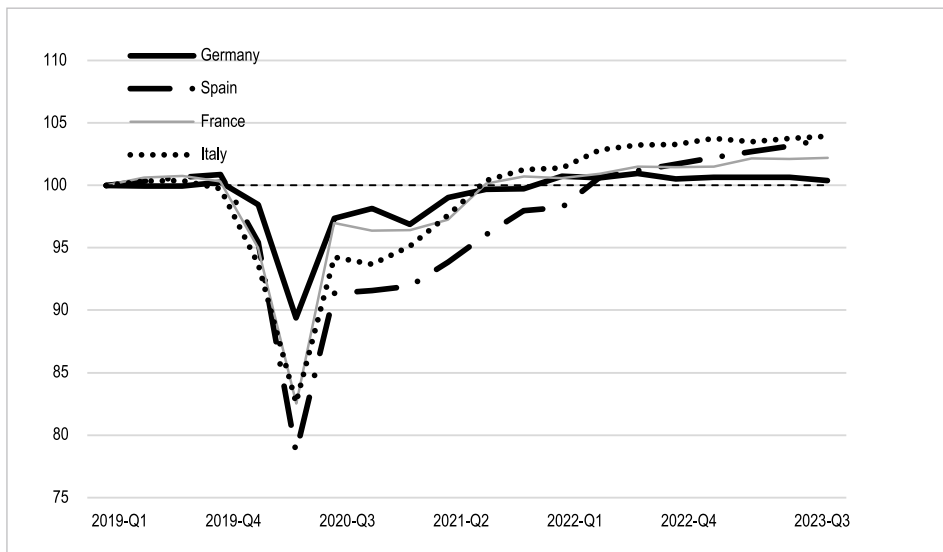
- [11] De Santis, R., and V.Ferroni. (2020). Five evidences on labour productivity and inequality in Italy. *Social Work and Social Welfare*, 2, 63-73.
- [12] Di Bartolomeo G, D’Imperio P, Felici F. (2022), “The fiscal response to the Italian COVID-19 crisis: A counterfactual analysis”. *Journal of Macroeconomics*, September 73:103447.
- [13] Dosi G., Guarascio D., Ricci A., Virgillito M.E. (2019), “Neodualism in the Italian business firms: training, organizational capabilities, and productivity distributions”, *Small Business Economics*, Vol. 57, 1-23.
- [14] European Court of Auditors. 2023. *The Recovery and Resilience Facility’s Performance Monitoring Framework*, Special Report n. 26.
- [15] European Commission (2023a) *Alert Mechanism Report*, December 2023.
- [16] European Commission (2023b) *2023 Country Report - Italy*.
- [17] European Commission (2023c) *Communication from the Commission to the European Parliament, the Council and the European Central Bank on the 2024 Draft Budgetary Plans: Overall Assessment*.
- [18] Guglielminetti E. and Rondinelli C., *Consumption and Saving Patterns in Italy during Covid-19 (June 22, 2021)*. Bank of Italy Occasional Paper No. 620.
- [19] IMF, (2024) *World Economic Outlook*
- [20] Istat, (2018) *Le prospettive per l’economia italiana nel 2018-19*.
- [21] Istat (2020) *Mercato del lavoro, redditi e misure di sostegno: una stima statistica integrata*.
- [22] Istat (2021), “Conti economici delle imprese e dei gruppi di impresa – anno 2019”. *Statistica Report*, novembre. <https://www.istat.it/it/archivio/263052>.
- [23] Istat (2023a) *Indagine conoscitiva sugli effetti macroeconomici e di finanza pubblica derivanti dagli incentivi fiscali in materia edilizia*, <https://www.istat.it/it/files//2023/05/Istat-Audizione-Incentivi-edilizi-24-maggio-2023.pdf>.
- [24] Istat (2023b), “Misure di produttività anni1995-2022”, <https://www.istat.it/it/files//2023/05/Istat-Misure-di-produttivita-anni-1995-2022.pdf>.

[istat.it/it/files//2023/12/report-produttivit%C3%A0-2022.pdf](https://www.istat.it/it/files//2023/12/report-produttivit%C3%A0-2022.pdf).

- [25] Ministro per gli affari europei, il Sud, le politiche di coesione e il PNRR (2024) Quarta relazione sullo stato di attuazione del Piano Nazionale di Ripresa e Resilienza.
- [26] Ministero del tesoro (2023), Legge di bilancio 2024.
- [27] Ministero del tesoro (2024), The Economic and Financial Document – DEF, April 2024.
- [28] Monducci, R. and Costa, S. (2019), Industria, servizi e politiche per la crescita. In C. Dell’Aringa e P. Guerrieri (a cura di), Inclusion, produttività, crescita, Arel – Il Mulino, Roma.
- [29] UPB, (2023) Memoria della Presidente dell’Ufficio parlamentare di bilancio nell’ambito dell’esame dell’atto n. 182 “Affare assegnato concernente la Relazione sullo stato di attuazione del Piano nazionale di ripresa e resilienza (PNRR) aggiornata al 31 maggio 2023.

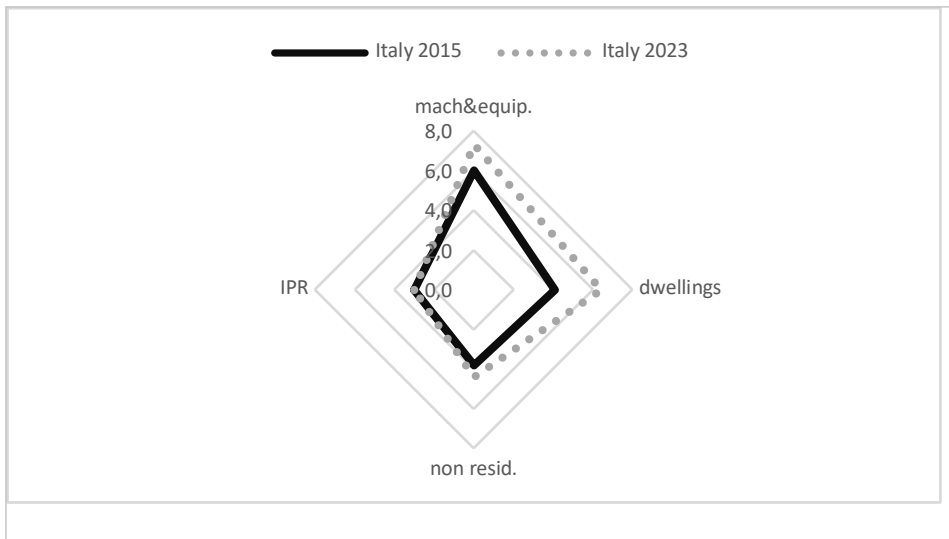
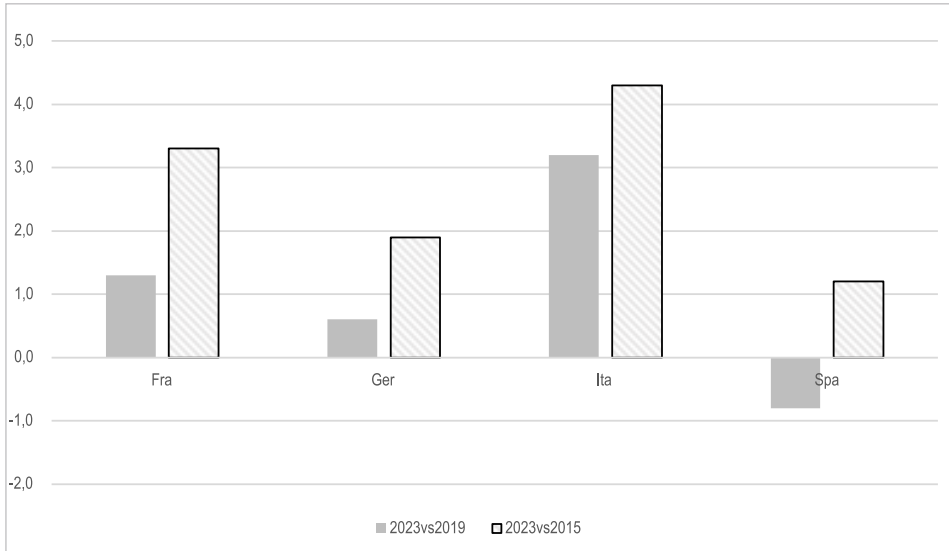
Appendix

Figure A1 Real GDP (s.a. wda index 2019 Q4=100 and Q1 1999=100)



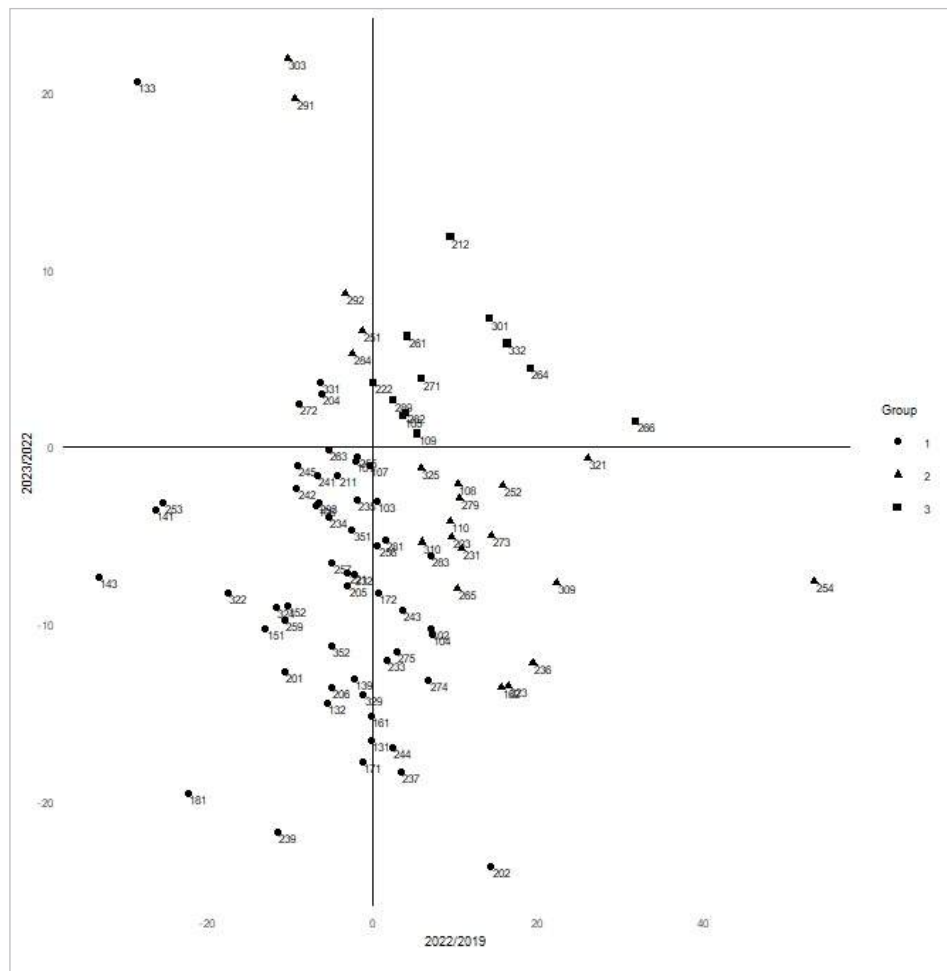
Source: Eurostat

Figure A2 **Share of total investment on GDP: France, Germany, Italy and Spain**
(2015, 2019, 2023 percentage points difference)



Source: Eurostat

Figure A3 The classification of manufacturing groups



Source: authors own elaborations on Istat data

Table A1 **Manufacturing Group Distribution by NACE**

Nace	Group 1	Group 2	Group 3	Total
CA: manufacture of food and beverages products	6	2	2	10
CB: manufacture of textiles, apparel, leather and related products	8			8
CC: manufacture of wood and paper products, and printing	4	1		5
CE: manufacture of chemicals and chemical products	5	1		6
CF: manufacture of basic pharmaceutical products and pharmaceutical preparations	1		1	2
CG: manufacture of rubber and plastic products and other non-metallic mineral products	7	2	1	10
CH: manufacture of basic metals and fabricated metal products, except machinery and equipment	10	3		13
CI: manufacture of computer, electronic and optical products	1	1	3	5
CJ: manufacture of electrical equipment and of non-electric domestic appliances	3	2	1	6
CK: manufacture of machinery and equipment n.e.c.	2	1	2	5
CL: manufacture of transport equipment	1	4	1	6
CM: other manufacturing, and repair and installation of machinery and equipment	4	4	1	9
35: electricity, gas, steam and air conditioning supply	2			2
Total	54	21	12	87

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ECONOMIA ITALIANA 2024/1

Resilienza alla (nuova) doppia crisi: persistenze e cambiamenti negli assetti e nelle strategie delle imprese italiane

Le vicende economiche italiane dopo la fase acuta della pandemia sono state caratterizzate - in un contesto perturbato da ulteriori shock globali - da una ripresa economica più rapida rispetto ai principali paesi europei, sostenuta da politiche fiscali espansive e da una rilevante performance dell'export. In questo numero gli **editor, Giovanni Dosi** (Scuola Superiore Sant'Anna) e **Roberto Monducci** (Osservatorio Imprese Estere), assieme a un folto gruppo di ricercatori, si propongono di dare una prima risposta all'individuazione dei fattori microeconomici e settoriali sottostanti tali dinamiche, attraverso un intenso utilizzo di nuove fonti statistiche realizzate dall'Istat, in particolare la nuova edizione del Censimento permanente sulle imprese.

I primi due contributi di **Costa et al.** (*Ristrutturazioni del tessuto produttivo tra pandemia e inflazione: comportamenti, persistenze e transizioni d'impresa*) e di **Castelli et al.** (*Competitività, performance e partecipazione alle reti produttive internazionali del sistema esportatore italiano*) forniscono il quadro delle persistenze e dei cambiamenti intervenuti tra la fase pre e post Covid-19 all'interno del sistema produttivo e in quello esportatore.

Il contributo di **de Panizza et al.** (*The Italian production system in the aftermath of the pandemic: firms'behavior, production filières and productivity*) esamina il tema della produttività attraverso un'ampia gamma di comportamenti d'impresa, con particolare riferimento alla partecipazione alle filiere produttive. L'ultimo lavoro, a cura di **Bacchini et. al.** (*Italian's economy recovery: factors of resilience and future challenges*), propone un quadro di sintesi settoriale, evidenziando le diverse velocità di recupero dei comparti industriali ed alcuni fattori che potrebbero averne influenzato la ripresa.

Complessivamente, **i contributi forniscono importanti elementi interpretativi sulle caratteristiche strutturali e le dinamiche delle imprese italiane degli ultimi anni.** Il quadro che emerge è in chiaroscuro. Sicuramente gli shocks aggregati non hanno indotto quegli effetti di 'cleansing' generalizzato attesi da molti economisti; allo stesso tempo, una frazione delle imprese (variabile tra i diversi settori) ha mostrato una notevole vitalità, tentando upgrading nelle proprie strategie mediante innovazione organizzativa, nuove tecnologie, penetrazione dei mercati esteri, partecipazione alle reti produttive internazionali.

Completano il volume l'intervento di **Stefano Micossi**, *Understanding the Italian economy's growth crisis* e la rubrica di **Francesco Minotti**, dedicata al Fondo di garanzia per le PMI.

ECONOMIA ITALIANA nasce nel 1979 per approfondire e allargare il dibattito sui nodi strutturali e i problemi dell'economia italiana, anche al fine di elaborare adeguate proposte strategiche e di *policy*. L'Editrice Minerva Bancaria è impegnata a portare avanti questa sfida e a fare di Economia Italiana il più vivace e aperto strumento di dialogo e riflessione tra accademici, *policy makers* ed esponenti di rilievo dei diversi settori produttivi del Paese.