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Aligning social and climate objectives: the effects of the fossil fuel price crisis – the case of Italy

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Chapter 5

Aligning social and climate objectives: the effects of the fossil fuel price crisis – the case of Italy

Leopoldo Nascia, Giuseppe Simone and Mario Pianta¹

1. Introduction

Inflationary pressures started in autumn 2021 and, in 2022, dominated the economic landscape of both Europe and Italy. The average annual growth (over the same period of the previous year) in the Harmonised Index of Consumer Prices (HICP) increased sharply in Italy, reaching 8.7% in 2022 compared to 1.9% in 2021. In January 2023, consumer prices rose by 10.7% compared to the same month of the previous year. The inflationary shock began with a major increase in imported energy prices in late 2021 which subsequently spread to food products, transportation services and producer prices, leading to a higher value of ‘core inflation’ in the economy as a whole. While some goods and services recorded only low price increases, the inflation of the cost of food, gas and electricity has had a strong impact on low-income households who devote a larger share of their income to such goods, resulting in wider inequalities; it also hit hard those industries with energy-intensive production, with serious effects on international competitiveness.

This inflationary shock in Europe and in Italy is primarily the result of a surge in energy prices arising from supply-side bottlenecks, energy market distortions, growing international tensions and the start of the 2022 war in Ukraine. Lockdown restrictions and the economic downturn caused by the Covid-19 pandemic disrupted global value chains and trade flows, reducing the production of energy and other key inputs; the recovery of 2021 was affected by supply disruptions, leading to price increases. The Russian military invasion of Ukraine and the subsequent sanctions have resulted in a major cut in Europe’s gas imports from Russia and in tensions on international energy markets, contributing to the escalation of prices. Within Europe, Italy has been particularly vulnerable to all such factors as it largely relies upon imported energy for industrial production and household consumption.

Energy inflation started in late 2021 and experienced rapid increases until the end of 2022. Gas prices reached a peak increase in November 2022, with a rise of 96.5% in Italy compared to the same month of the previous year; for the euro area, the peak occurred in October 2022 with a rise of 77.6%. In the same months, electricity prices reached a peak rise of 199% in Italy and 45.6% in the euro area.

1. The authors would like to thank Béla Galgóczi, Matteo Lucchese, Fabrizio Ghidini and Alessandro Rubino for their suggestions and comments.

Italy's policy response has included measures to increase energy production from renewable sources, tax credit schemes to lower the impact of higher electricity costs for business and subsidies to the most vulnerable households. The government has approved emergency measures to prevent gas shortages, replacing Russian imports with the shipping of liquefied natural gas and oil, and with a larger supply from pipelines from Africa and Azerbaijan.

2. Inflation and energy in Italy and in the euro area

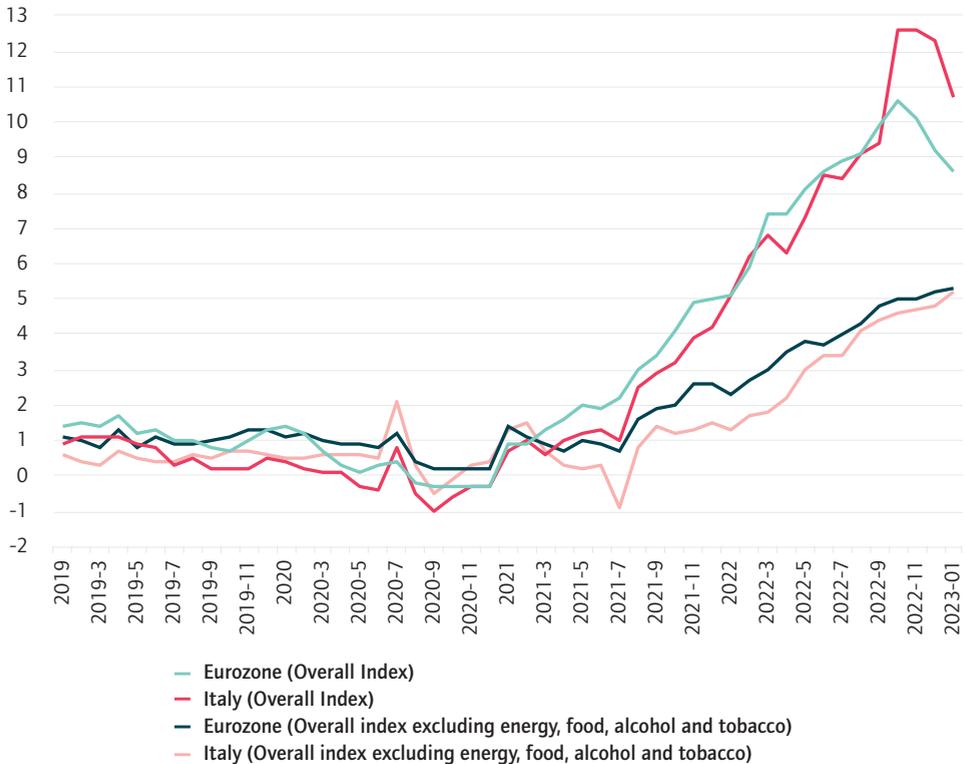
Between 2019 and 2020, inflation in European countries, including Italy, remained well below the European Central Bank target of 2%. However, in 2021, the average increase in consumer prices was 2.6% in the Eurozone and 1.9% in Italy. During 2021, the rise in inflation was primarily caused by supply-side bottlenecks and the disruption to global value chains arising from the restrictions of Covid-19. These trends are shown in Figure 1, showing the annual rate of change in the HICP for each month compared to the same period of the previous year from 2019 to 2023 for both the euro area and Italy, as well as the Index excluding energy, food, alcohol and tobacco.

Looking at Figure 1, it is evident that the Italian HICP was generally lower than the euro area average in 2019 and 2020. In 2019, consumer price increases in Italy ranged from 0.2% to 1.1% whereas the Index for the euro area ranged from 0.7% to 1.7%. In September 2020, the downturn in the economy related to Covid-19 led to a fall in consumer prices of 0.3% and 1%, respectively.

With the subsequent recovery, consumer prices started to rise steadily, driven from the end of 2021 also by the escalating tension between Russia and Ukraine. In February 2022, with the Russian invasion of Ukraine, western economic sanctions and restrictions on Russian gas imports, inflation accelerated, reaching a peak in October 2022 with rises of 10.6% for the euro area and 12.6% for Italy. Other contributing factors were the decline in Ukrainian exports of fertiliser and cereals, driving up international food prices, and the increase in maritime and air transportation costs. In autumn 2022, the Italian HICP increased faster than the euro area average due to the country's higher reliance on imported energy goods and on Russian gas; natural gas is the primary source of heating and electricity generation in Italy.

The dotted lines in Figure 1 depict the change in the HICP excluding energy, food, alcohol and tobacco. Such a measure removes the direct effects of volatile food and energy prices and offers an indication of inflation patterns in the economy as a whole. The difference between the overall HICP and the one reflecting core inflation started to widen in 2021 and increased sharply in 2022. Again, Italy initially experienced lower than average price increases but, by 2023, had converged to the same levels of euro area core inflation, at about 5%.

Figure 1 **Installed capacity per production type in MW, Overall and excluding energy, food, alcohol and tobacco (monthly data), January 2019-January 2023**



Source: Eurostat, Harmonised Index of Consumer Prices.

2.1 The dynamics of energy prices

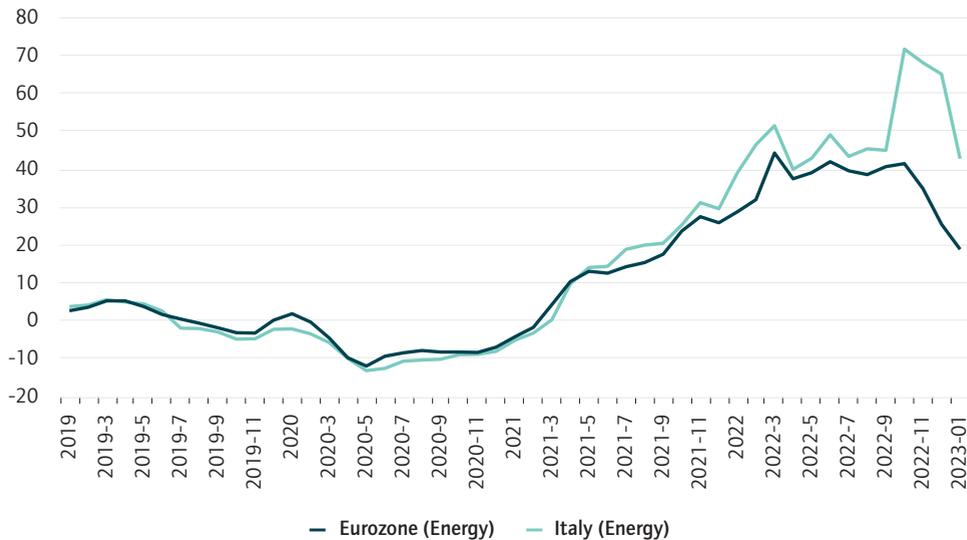
Focusing on energy prices (Figure 2), we observe a period of stability and low inflation between 2019 and 2020; both the euro area and Italy experienced declining energy prices during the Covid-19 downturn of the economy; in May 2020, the HICP for energy decreased by 11.9% in the euro area and by 13.1% in Italy. However, the trend reversed in early 2021 with a steady growth in prices, reaching values of 27.5% for the euro area and 31.2% for Italy in October that year. During 2021, gas recorded large price increases due to cold weather conditions at the beginning of the year, high demand for liquefied natural gas in China and a reduction in the last quarter of the year in the flows of the Russian Yamal pipeline supplying Europe (Fulwood 2022).

This trend persisted throughout 2022 with some fluctuations due to the start of the war in Ukraine and the escalating volatility of energy markets. In March 2022, energy price increases reached 44.3% in the euro area and 51.5% in Italy. After a modest decline and oscillations in later months, in autumn 2022 energy price rises in Italy further surged

to 71% as a result of growing demand for energy supply from large market operators facing the expected rise in winter household consumption. Conversely, energy price rises in the euro area exhibited a slower pace, reaching 41.5% in October 2022. In early 2023, energy inflation appeared to slow but volatility remains high.

The effect of high gas prices has had a major impact on demand; the International Energy Agency (IEA) estimated that gas demand in Europe fell in 2022 by 13%, equivalent to 55 billion cubic metres.

Figure 2 Annual rate of change in HICP for energy (Monthly data), January 2019-January 2023



Source: Eurostat, Harmonised Index of Consumer Prices.

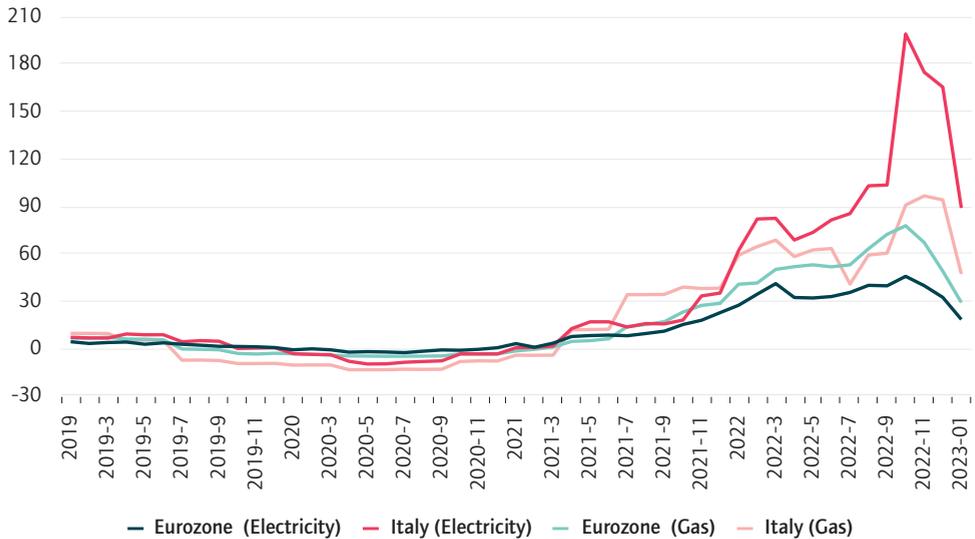
Figure 3 provides in-depth evidence of energy price dynamics and the role of supply-side factors in the current inflationary wave by decomposing the HICP for energy into its main aggregates; namely, electricity and gas. In early 2019, gas prices increased slightly both in euro area countries and in Italy – increases of 7% for the euro area and 9.5% for Italy in March 2019 – followed by a long decline, associated with the pandemic slowdown, that persisted until March 2021. Between April and September 2020, the HICP for gas declined by about 13% in Italy and by 5% in the euro area. Price rises started in April 2021, with strong increases until the end of 2022, driven in particular by war-related limitations of energy imports.

The gas price increase in Italy has significantly exceeded the euro area average due to the high dependence on Russian imports. In November 2022, gas prices in Italy reached a peak rise of 96% compared to the same month of the previous year; for the euro area the peak occurred in October 2022 with a 75% rise. In January 2023, the latest available data suggest lower increases in gas prices of 29% in euro area countries and 47% in Italy.

Considering electricity consumer prices, the overall trends are similar with a prolonged stagnation in 2019 and 2020 and price rises starting in 2021; patterns in the euro area are significantly below Italy’s price increases. The recovery led to a first major price increase in April 2021, with a 7.5% rise in the euro area and a 12.5% rise in Italy. Inflation in electricity gathered speed in the second semester of 2021, with Italy’s prices rising at twice the rate of those in the euro area. In July 2022, the price rise in Italy reached 85%, in stark contrast with the euro area figure of 35.4%. Peak inflation in electricity was reached in October 2022, when the price rise in Italy reached 199% compared to the same month of the previous year while the euro area average reached only 45.6%.

As already pointed out, the roots of such diverging patterns are the high Italian dependency on imported gas and the dominance of gas in electricity generation. Compared to other EU countries, Italy’s energy mix widens the effects of hikes in gas prices, accelerating the transmission of inflation to energy and other goods in the economy and with a major impact on household purchasing power and on business energy costs.

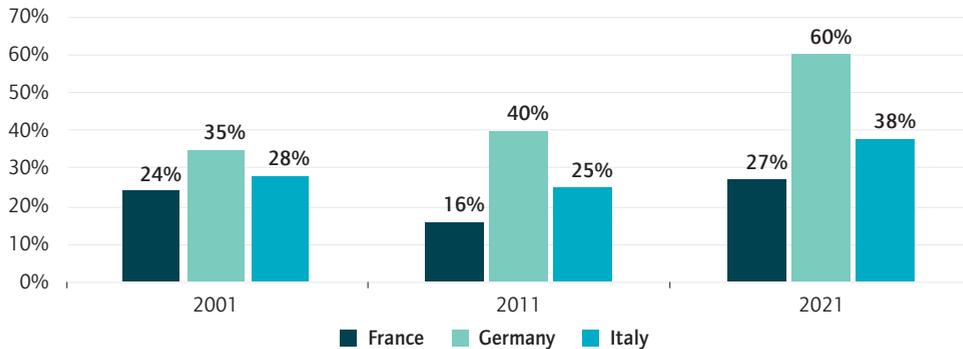
Figure 3 Annual rate of change in HICP for electricity and gas (Monthly data), January 2019-January 2023, percentages



Source: Eurostat, Harmonised Index of Consumer Prices.

The country imports a large amount of oil and gas for electricity generation and for household heating. For gas, Italy’s import dependency stood at 93.7 per cent in 2021. As Figure 4 shows, over the past two decades there has been a significant surge in Russian gas imports, from 28 per cent of total gas imports in 2001 to 38 per cent in 2021. While Germany’s dependence on Russian gas is much higher, Italy relies on natural gas as a crucial energy source for electricity generation; in December 2022, net electricity production derived from gas was 58 per cent in Italy whereas in Germany and France the values were 17.9 per cent and 9.2 per cent, according to IEA data.

Figure 4 Reliance on Russian natural gas in Italy, Germany and France
Years 2001, 2011, 2021. Share of Russian gas imports in total gas demand (%)



Source: Authors' elaboration of IEA data.

2.2 The spread of inflation in the economy

The surge in energy prices, followed by food products, has had a major impact throughout the Italian economy. A report by Istituto Nazionale di Statistica (Istat) argues that ‘the impact of shocks to prices and supplies of energy and agricultural commodities results in large transmission effects, most directly affecting about one-third of the production system in terms of value-added’ (Istat 2022a). Particularly affected have been energy-intensive industries such as the manufacturing of non-metallic mineral products, rubber and plastic products, leather and related products and machinery and equipment, along with the textile industry and construction (see Simone and Pianta 2022).

Figure 5 provides a breakdown of the HICP for goods into four main aggregates – goods (including energy), food (including alcoholic beverages and tobacco), core inflation (a measure excluding imported goods) and other goods – over a four-year period (2019-2023). Until mid-2021, all indicators recorded low and stable inflation with core inflation always below 2%. From that point, however, goods (including energy) prices started their steady surge, reaching 17.9% in November 2022; the rise in food prices started a few months later, reaching a peak of 11.9%; while the prices of other goods surged in late 2022, reaching 15.9% in January 2023. Core inflation followed at a slower pace, reaching 6.6% in January 2023, as prices in service industries had lower dynamics. However, the transmission of inflation to the rest of the economy is still underway in Italy and more industries and products are experiencing significant price increases.

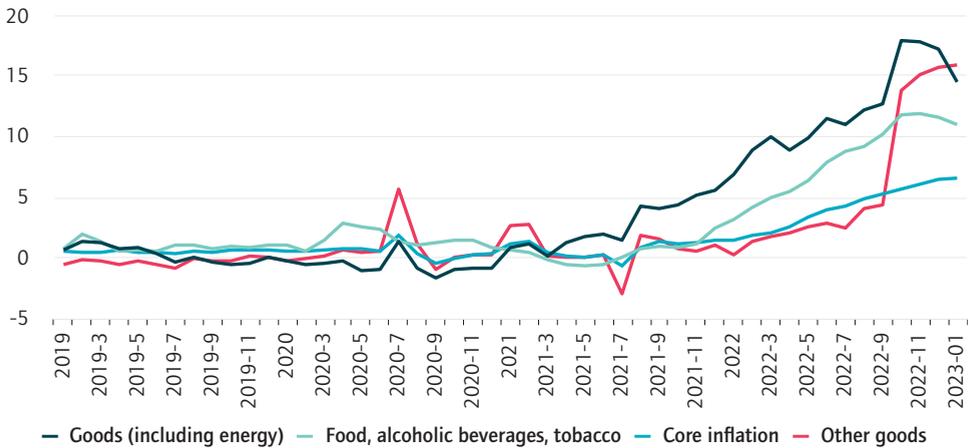
The behaviour of Italian firms has been strongly affected by these price dynamics. The Istat survey of business confidence in December 2022 collected information on how inflation in energy and intermediate goods was affecting company strategies (Istat 2023: 111-120). In manufacturing, 9 per cent of businesses had stopped activities due to high energy costs and 3 per cent due to the increasing cost of intermediate goods.

The most frequent reaction to inflation has been the introduction of price increases. In the case of large firms (above 249 employees), 59 per cent declared they have increased prices, 45 per cent reported a reduction in mark-up margins, 41 per cent had renegotiated contracts with suppliers and 29 per cent had generated electricity internally.

In service sectors, 30 per cent of firms had increased prices (56 per cent in the case of travel agencies) and 46 per cent reported a reduction in profits.

These outcomes of price increases for final consumers are the result of several pressures from the rise in the cost of intermediate inputs (mainly energy and food-related), to the market power of producers in specific industries to the (lack of) action from regulatory authorities in containing price increases.

Figure 5 Annual rate of change in HICP in Italy, main aggregates of goods (Monthly data), January 2019-January 2023 (percentages)



Source: Eurostat, Harmonised Index of Consumer Prices.

3. The operation of energy markets and Italy's energy mix

In considering the evolution in the HICP for gas and energy, we have to remember that the final consumer prices documented above are the end result of several processes. First, there is the increase in supplier prices resulting from demand and supply shocks and from the market power of established suppliers; second, there is the way international energy markets operate, with strong speculative dynamics; third, there is the structure of domestic energy markets and the acquisition strategies of national governments and energy companies, which may reach specific deals with particular suppliers; fourth, there is the broad national policy for developing renewable energy sources, reducing vulnerability to price hikes in fossil fuels; and fifth, there is the role of the national energy regulatory authorities which have to authorise energy price increases and which may follow different policies for dealing with price hikes and

the inflationary risks for the economy as a whole. In the case of Italy, the latter three factors have not operated as in other EU countries in the direction of containing energy inflation, resulting in the major rise in Italian energy prices. We examine some of these issues in the sections below.

3.1 The international energy market and Italy's regulation system

Europe's gas market is organised around the Title Transfer Facility (TTF), a virtual gas hub set up in 2003 by Gasunie, the Dutch gas pipeline owner, that operates as the reference market for fixing gas contracts in Europe. TTF is a virtual marketplace that allows parties to transfer gas already in the European system to another market player. It is the largest market in Europe, where national gas companies obtain rights to gas supplies, even though a substantial share of the gas actually traded in the continent is bought and sold outside TTF. In the US, the Henry Hub operates in the same way and is the largest gas market in the country.

TTF contracts are future-based titles and many financial intermediaries are involved in the daily negotiations. TTF is a deregulated marketplace based on the voluntary participation of traders and does not include any market correction mechanism in the case of excessively high prices.

TTF operates as a financial, futures market with strong speculative dynamics; the action of a small group of traders can affect prices. The war in Ukraine and expectations of stoppages in the gas supply from Russia created the conditions for price increases in the TTF which were higher than the real prices paid at customs and higher than prices in the Henry Hub; such speculation peaked in September 2022.

During the first half of 2022 the European Commission resisted calls – coming, among others, from the Italian government – to introduce measures containing price rises and limiting the speculative dynamics. Only in autumn 2022 did the European Commission agree on introducing the 'dynamic price cap' in the TTF, a market correction mechanism aiming at reducing volatility by setting a limit to the maximum price paid by buyers when the rise in TTF prices is far from the real market fundamentals.

The dynamic price cap became operational in February 2023 and set a maximum price of 275 euros for one-month derivatives on TTF gas where two conditions were fulfilled at the same time. The first condition is that the front-month TTF derivative price had exceeded 275 euros for two weeks; the second is that the TTF European Gas Spot Index, as published by the European Energy Exchange, is 58 euros higher than the reference price for liquefied natural gas reported during the 10 trading days before the end of the above-mentioned two-week period. The price of 275 euros set by the European Commission is extremely high and, in the first months of 2023, the limitation has never been enforced.

This structure of Europe's energy market is the outcome of the liberalisation process introduced by the European Commission in the 1990s that configured the evolution

of national systems. Italy's electricity and gas markets have been shaped by these liberalisation policies, culminating in the 1999 Bersani Law. Former public monopolies were abolished, allowing new actors into the markets; state-owned electricity and gas suppliers were turned into companies listed on the stock market; a separation between generation and distribution for electricity and gas was introduced, creating room for market transactions; and the consumer market was liberalised with competition between providers and differentiation of contracts.

A new regulatory authority for the gas and electricity market, *Autorità di Regolazione per Energia Reti e Ambiente* (ARERA; Regulatory Authority for Energy, Networks and Environment) was introduced with the tasks of ensuring competition and efficiency, and of protecting consumers. Some controls over specific consumer contracts for electricity supply were maintained and, given the inflation crisis, have been extended to the end of 2024.

In the case of gas prices, ARERA relied on TTF gas prices until 29 July 2022 when volatility was very high and when the demands of the Italian government for a price cap had not yet been accepted by the European Commission. Starting in October 2022, Italy's gas prices are set in the virtual gas market *Punto di Scambio Virtuale* (PSV) managed by Snam Rete Gas, the operator of Italy's gas networks, based on one-month derivatives. This has become the benchmark for the prices that Italian gas operators can charge, monitored by ARERA.

The reliance on financial futures markets for setting the price of gas has expanded volatility and uncertainty at a critical moment when the energy supply was in question; and the logic of financial speculation has seriously contributed to the surge in gas prices in Europe and Italy. Policy measures by the European Commission have long been missing and the dynamic price cap it has introduced is ineffective. Moreover the reliance of national regulatory authorities (including ARERA) on financial futures markets for gas prices means that national policies and their pricing decisions are bound to follow market volatility rather than providing constraints to uncontrolled speculative behaviour.

3.2 Italy's energy mix

Italy is vulnerable to energy crises originating abroad due to its heavy dependency on imported fossil fuel sources.

Facing the war in Ukraine and the gas price surge, Italy has been able to reduce its dependence on Russian gas by augmenting demand from other available sources and increasing the use of oil and renewable energy. Gas supply has been expanded from existing pipelines connected to the Netherlands, Norway, Azerbaijan, Algeria and Libya; in part, these have replaced the lower flows from Russia. Additionally, Italy has imported significant quantities of liquefied natural gas via maritime transport, mostly from the United States, and invested in new regasification infrastructure.

In 2021, Italy's total gas imports were 51.6 million tons, with 20.7 million tons coming from Russia; in 2022, the overall volume of imported gas was 48.2 million tons with imports from Russia reduced to 8.7 million tons. In 2021, the most relevant countries for Italy's gas imports were Russia (39.9 per cent), Algeria (31.2 per cent), Azerbaijan (10 per cent) and Qatar (9.3 per cent); in 2022, they became Algeria (36.5 per cent), Russia (17.6 per cent), Azerbaijan (14.9 per cent) and Qatar (9.5 per cent); in addition 5 per cent of gas was imported from the US in the form of liquefied natural gas shipments.

This diversification, however, could not prevent the surge in gas prices. Figure 6 shows gas import prices between 2018 and 2022 on the basis of a quarterly index, documenting the long stability of prices, the slump in the pandemic recession and the dramatic rise starting in 2021, peaking in the third quarter of 2022 when it was six times the value of the initial gas price in 2018. This surge in import prices is the major determinant of the rise in consumer prices for gas recorded in the HICP.

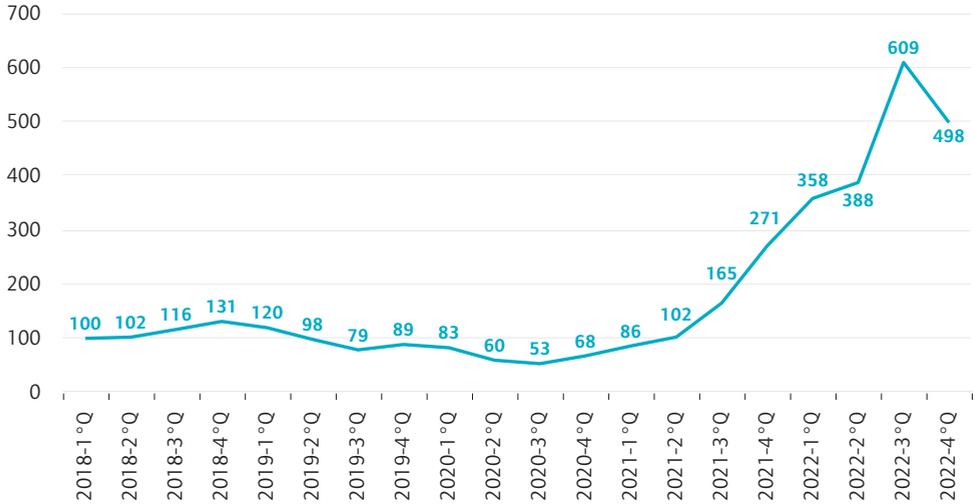
In order to reduce such vulnerability to surges in imported gas prices, several directions of change are important.

A first strategy is the effort to reduce overall energy use in the economy. Energy intensity can be measured by the kilograms of oil equivalent per thousand euro of GDP. Italy has achieved a significant reduction in the last ten years, from 107.27 in 2011 to 85.33 in 2021, an intensity lower than France (105.29) and Germany (91.67) and the EU27 average (100.64).

A second strategy is the expansion of renewable energy sources. Figure 7 shows the slow rise in the share of renewables in gross final energy consumption in Italy and the EU27. In 2021, Italy produced 19 per cent of its energy from renewables, compared to 21.8 per cent across the EU27. The Italian renewable mix in the period between January and September 2022, according to a recent report by Federazione Nazionale Imprese Elettrotecniche ed Elettroniche, based on data from Terna, Italy's electricity grid operator, includes photovoltaic (30 per cent), hydroelectric (29 per cent), wind (19 per cent), bioenergies (17 per cent) and geothermic energy (5 per cent).

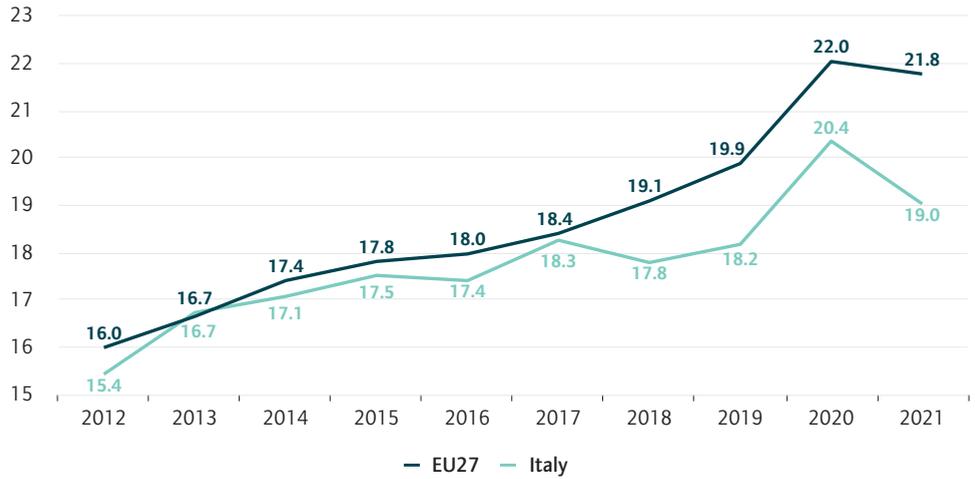
The performance of renewable sources is related to weather conditions. According to Terna, in 2022 net national electricity production (276.4 billion kWh) decreased by 1.3% compared to 2021 with the following breakdown by source: increases in photovoltaic (+11.8%) and thermoelectric (+6.1%); and decreases in hydroelectric (-37.7%), wind (-1.8%) and geothermal (-1.6%). Renewable sources covered a total of 31.1 per cent of Italian demand despite, in particular, a marked drop in hydroelectric production attributable to the long period of drought. There are several bottlenecks that hamper a wider installation of renewable capacity including bureaucratic procedures, delays in local regulation and the lack of a ministerial regulation on energy communities, expected in the summer of 2022 but still not yet released as of spring 2023.

Figure 6 The price of imported gas in Italy (Quarterly index data), 2018-2022. 2018=100



Source: Authors' elaboration of data from Coeweb database (Istat).

Figure 7 Share of renewables in total energy consumption, Italy and EU27 (%)



Source: Authors' elaboration of Eurostat data.

3.3 The energy transition and the Recovery and Resilience Plan

The Italian Recovery and Resilience Plan (NRRP) includes a major programme for investing in the green transition. The NRRP is funded by 235 billion euros, of which 204.5bn come from the EU Recovery Plan and REACT EU Fund and 30.6bn from a complementary domestic fund. NRRP makes available 59.46 billion euros

for the green transition of which 23.78bn are allocated to the energy transition and sustainable mobility and 15.36bn to energy efficiency and building improvements. The development of renewable energy generation systems receives very limited resources from the NRRP. According to the ‘Green recovery tracker’ published by the Wuppertal Institute and E3G,² the actual green spending share of the Italian NRRP is only 13 per cent, below the EU27’s 37 per cent benchmark, since 27 per cent of green projects may have an uncertain impact on the transition as they are dependent on the relevant measures being effectively implemented.

OpenPNRR, an independent civil society platform monitoring the implementation of the NRRP,³ reports that, in the first quarter of 2023, only 19 per cent of invested resources relate to the green transition as opposed to the expected 34 per cent. It also documents widespread delays in the implementation of NRRP projects.

Italy’s government has acknowledged the delays and pointed out the inadequacy of existing NRRP projects in the new context of high energy price increases. Negotiations with the European Commission are underway on possible modifications of the Plan.

4. The effects of inflation on employees and households in Italy

Inflation has a direct impact on the purchasing power of employees’ incomes as price increases reduce the value of real wages. In 2020 and 2021, the aggregate level of nominal wages per employee determined by national collective agreements between employers and unions increased by 0.1% and 0.5%, respectively. The modest dynamics of contractual salaries are in stark contrast to the upsurge in general price levels in 2021 and 2022. Figure 8 shows the dynamics of HICP, core inflation and nominal wages. According to Istat, during 2022 the gap between the growth in the general level of prices – measured by HICP – and that of contractual salaries peaked at 7.6 percentage points during the last quarter of the year, reaching the highest level since 2001 (Istat 2022b). In December 2022, the growth in aggregate nominal wages per employee was limited to 2.1% while core inflation reached 6.5%. Looking at the sectoral aggregates, the performance of industry flattened in the second half of 2022, converging to the dynamics of the private sector as a whole.

Furthermore, in Italy national bargaining does not encompass all employees – most precarious workers are excluded – and salaries outside the coverage of national collective bargaining tend to be lower. The absolute level of Italian wages is well below European standards and a substantial share of workers are below the poverty line, making them particularly vulnerable to the effects of price increases (Cirillo et al. 2022). The ILO study on wages has shown that the decrease in real salaries has been the largest in Italy (-12%) across the G20 economies in recent years, while real wages increased by 12% in Germany and by 6% in France (ILO 2022).

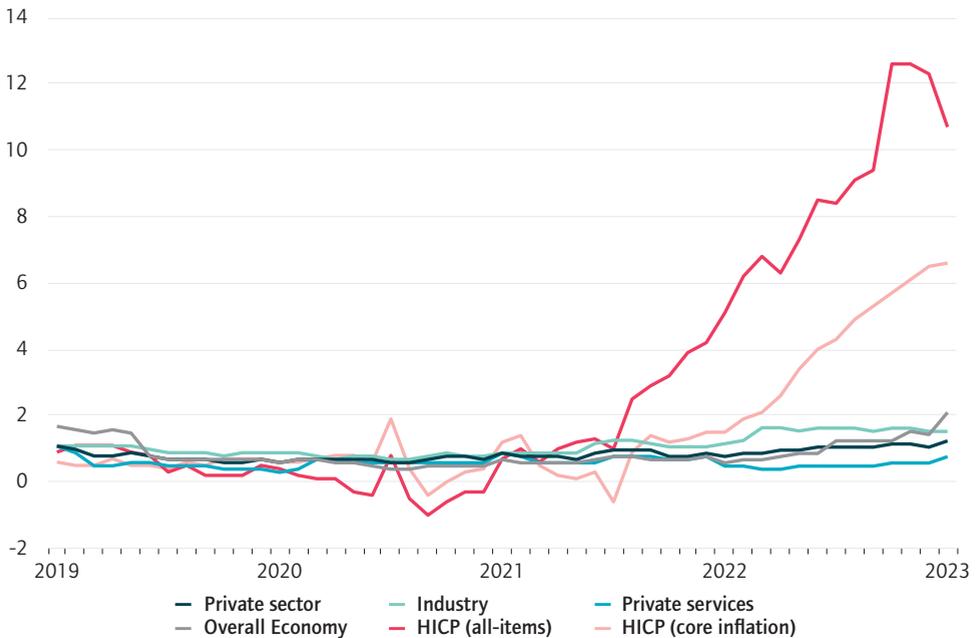
2. <https://www.greenrecoverytracker.org/>

3. <https://openpnrr.it/>

National collective bargaining for nominal salaries has been governed since 2009 in Italy by an agreement between unions and employer associations. Italian nominal contractual renewals are subject to a price-growth adjustment based on a three-year forecast of an inflation index estimated by Istat which excludes imported energy goods (IPCA-NEI). The most recent assessment of the IPCA-NEI, which will be utilised in forthcoming renewals, estimates an inflation rate of 4.7% for 2022. This value is lower than the average annual inflation rate of 8.7% recorded in 2022 and is also lower than the 6.5% observed for that index net of energy components.

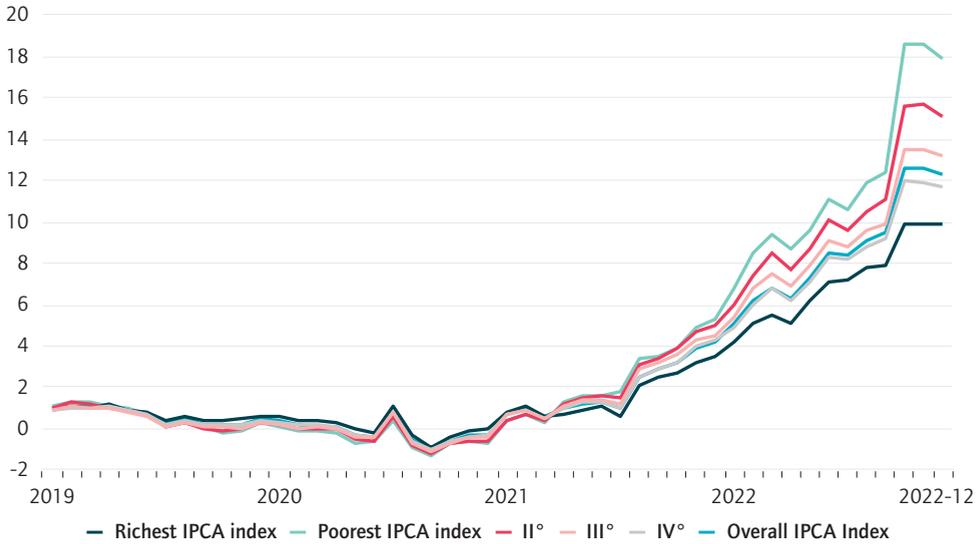
Future salaries will be affected by new agreements which have been delayed in private services and in the public sector. The 2022 survey by Consiglio Nazionale dell’Economia e del Lavoro (CNEL; National Council for Economics and Labour) reports that, as of December 2022, approximately 6.8 million employees are waiting for contract renewals, with almost two-thirds of private sector contracts having expired.

Figure 8 Annual rate of change (%) in HICP (all-items HICP and core inflation, monthly data) and in the index of wages (overall economy and main aggregates), according to collective labour agreements (base December 2015, monthly data), January 2019-January 2023



Source: ISTAT.

Figure 9 Inflation in Italy by income quintile
Annual rate of change (%) in HICP per income quintile, monthly data, January 2019-January 2023



Source: ISTAT.

The surge in price levels has a differentiated impact on households depending on the ways their incomes are spent. Households with lower incomes allocate a significantly higher share of their earnings to the consumption of food and energy goods. Figure 9 illustrates the inflationary effect on Italian households, dividing the population into income quintiles. In the fourth quarter of 2022, inflation increased by 18.4% for the poorest fifth of families while inflation increased by just 9.9% for the wealthiest fifth. Overall, the poorest 60 per cent of Italians experienced an increase in prices greater than the average inflation figure of 12.5% (Istat 2022b). In December 2022, inflation affecting the poorest quintile reached 17% whereas price increases for the richest quintile stood at 10%. Considering the different compositions of consumption in rich and poor households, an inflation driven by energy and food prices has a major polarising effect, hitting the most vulnerable social groups the hardest.

5. Policy measures addressing the effects of inflation

Italian governments have implemented policies primarily aimed at compensating the firms and households that have been hit the most by the rises in energy and food prices. Conversely, little action has been taken in terms of the regulation of the previously liberalised energy market, energy policy and support for renewable sources.

In early 2022, Mario Draghi's government introduced tax reductions on energy goods, subsidies to firms and one-off payments to low-income households. According to Ufficio parlamentare di Bilancio (UPB; Parliamentary Accounting Office) (UPB 2022), Italian

governments have allocated more than 116 billion euros to compensatory measures for the price hikes, approximately 70 billion for 2022 and over 32 billion for 2023. In 2022, the amount spent on these measures equated to 3% of GDP and is expected to reach 1.4% of GDP in 2023.

Figure 10 illustrates the measures introduced for 2021, 2022 and, in some cases, 2023. Overall, over one-fifth of the resources has been allocated to households (24.6 billion euros, 21.2 per cent) and one-third to firms (38.6 billion, 33.3 per cent). A further third (33.7 billion, 29.1 per cent) has been directed towards tax reductions such as cutting excise duties and the Imposta sul Valore Aggiunto (IVA; value added tax) on energy goods. Additional funds have been directed towards supporting cost increases for local authorities (2.2 billion euros), public administration investments (13.9 billion) and the National Health System's efforts to cope with the rise in energy costs (3 billion) (UPB 2022). During 2022, the measures introduced were mainly financed by an increase in tax revenues, including those resulting from greater energy-related IVA and excise revenues.

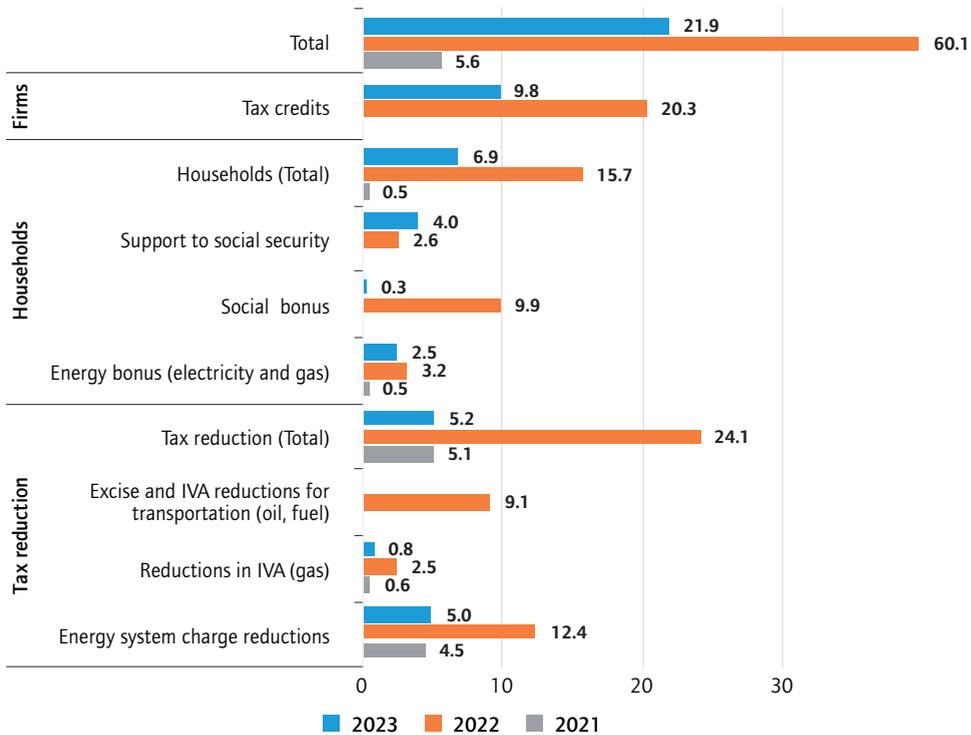
5.1 Tax reductions

In Italy, the electricity bill for households includes not just the consumption of energy but also general system charges for distribution networks, R&D, the elimination of nuclear power, support for renewable sources and even the public television fee.

Government actions have included lowering IVA on gas for civil and industrial use to 5% (at a cost of approximately 4 billion euros) and eliminating the general system charges for electricity and gas (at a cost of 21 billion euros for 2021, 2022 and the first three months of 2023). Cuts in excise duties on petrol, diesel and gas, as well as a reduction in IVA on gas for transportation, were introduced between March and December 2022 (at a cost of 9 billion euros).

Giorgia Meloni's government, elected in autumn 2022, extended in 2023 several of the measures introduced by Mario Draghi with the exception of the cut in petrol excise duties, resulting in major increases in consumer fuel prices that led to social discontent and a fuel pump strike in January 2023. In March 2023, the far-right government extended to the first semester of the year the tax credit measures for business and the reduction to 5% in IVA on gas consumption; furthermore, the elimination of general system charges has been extended for gas bills although not for electricity, leading to an increase of 20 per cent in consumer bills.

Figure 10 UPB estimates of government measures to control inflation in Italy, 2021-2023 (billion euros)



Source: UPB (2022).

5.2 Business measures

Italian governments have also introduced a set of policies supporting firms with the goal of compensating for the increasing cost of inputs. Actions have included tax credits, IVA reductions and specific measures for gas-intensive and electricity-intensive economic activities in manufacturing as well as in transport, agriculture and fishing (Simone and Pianta 2022). Tax credits were offered when the price of the energy component in electricity bills (calculated as the average for the first quarter of 2023) experienced an increase in the cost per kilowatt-hour which exceeded 30 per cent of the corresponding average for the same quarter of 2019. In March 2023, the Meloni government extended the tax credit for firms until July 2023.

Energy price inflation has led to a surge in the profits of energy sector firms and an intense debate has emerged on the way such surplus profits could be reduced or taxed. In January 2022, the Draghi government introduced additional taxes on companies that had benefited from the increase in energy prices. This measure established an additional rate of 10% for companies that import, distribute and sell gas or electricity, as well as those that produce, extract, distribute and sell petroleum products, and

which had increased their profits by at least 10%, or at least 5 million euros, between October 2021 and March 2022 compared to the same points twelve months previously. According to the UPB (2022), although there are no precise indicators of the amount of surplus profits in the energy sector, a substantial increase in the revenue and gross profits of energy companies, compared to other sectors, had been recorded since July 2021. This measure was then modified, increasing the tax rate from 10% to 25% and extending it until April 2022. However, as of November 2022, the revenues from taxing energy sector companies were well below the previous estimates (of over 10 billion euros); firms had objected to the tax, appealing to the courts and delaying their payments. The Meloni government has proposed to introduce a new ‘solidarity contribution’ for energy companies for 2023, with the prospect of raising 2.5 billion euros, a much lower amount.

5.3 Household policies

Policies addressing households have focused on the loss of purchasing power in the poorest groups of the population. An ‘energy bonus’ has been introduced to reduce household bills, with 500 million euros in funding in 2021, 3.2 billion in 2022 and 2.5 billion for 2023, for families with a total annual equivalent income below a certain threshold (20 000 euros in 2022; reduced to 15 000 in 2023) and with at least four members. The energy bonus is also provided to people receiving basic income, social pensions and those with precarious health conditions. This has been extended by the Meloni government until July 2023, with some restrictions.

In addition, a one-off ‘social bonus’ of 200 euros was granted in June 2022 to low- and middle-income workers with a monthly wage lower than 2700 euros or with an annual personal income of less than 35 000 euros.

5.4 Energy policy measures

In 2022, the measures of the government were aimed at ensuring gas imports through a policy based on the diversification of sources and a greater use of liquefied natural gas. New infrastructures for gas processing and transportation were needed so, in 2022, the government accelerated the construction of new gasifiers with incentives amounting to an additional public spending of 30 million euros a year for 20 years. The Draghi government lifted environmental constraints in order to build two onshore gasifiers (Porto Empedocle and Gioia Tauro) and the infrastructure for four temporary offshore ships for the gasification of liquefied natural gas (Piombino, Ravenna, Porto Torres and Portovesme). Three gasifiers – La Spezia, Rovigo and Livorno – were already operational.

According to a study by IEEFA (Institute for Energy Economics and Financial Analysis),⁴ this strategy is likely to build excess capacity. The planned gasifiers in Europe could

4. <https://ieefa.org/articles/over-half-europes-lng-infrastructure-assets-could-be-left-unused-2030>

reach 400bn cubic metres of capacity in 2030 while the demand for liquefied natural gas is expected to stay below 190bn; in Italy alone, the excess capacity could reach 10bn cubic metres.

In early 2022, the government supported the national production of energy by coal and oil-powered plants in spite of plans to end their activities by 2025 to comply with CO₂ emission regulations: six coal plants and one liquid oil plant were returned to electricity generation.

Finally, the government has removed some limitations in favour of the exploration and exploitation of national gas fields and introduced a measure granting a large share of national gas production to national firms.

In 2022, the government also introduced simplified procedures to install additional renewables production. In parallel, in recent years a number of measures for improving energy efficiency and refurbishing buildings – Superbonus, Ecobonus, Bonus Casa and Bonus Facciata – have been introduced; according to a preliminary estimate by Energia Nucleare ed Energie Alternative (ENEA), the research institution in charge of monitoring energy policies, such measures allowed savings of the equivalent of 0.569 million tonnes of oil equivalent (ENEA 2022). In February 2023, the Meloni government stopped the most important of such measures, Superbonus, leading to a liquidity shortage for construction firms and households.

6. Italy's policies and their social and environmental dimensions

The combination of actions described above for addressing the energy price shock and its effects on households and firms shows the following characteristics:

- an emphasis on short-term measures compensating for the rise in energy costs, with some attention to poorer households, but with no ability to prevent an increase in inequality in real incomes;
- a lack of action on the energy market for regulating prices and avoiding volatility;
- a lack of concern for climate change priorities, with little action for improvements in energy efficiency and for the longer term development of domestic renewable energy sources.

The social impact of the policy measures introduced in Italy has been investigated by a few studies. The UPB (2022) report assessed the impact of inflation and the effects of the compensatory measures introduced between June 2021 and December 2022. For the poorest quintile of the population, the impact of the compensation measures has strongly reduced the impact of the price rises in food and energy goods; in a scenario without such policies, the variation in spending would have been 15.1 per cent while the measures reduced the cost of living increase to 4.8%. The burden on the poorest families was thereby limited, making the impact of the rise in the cost of living more homogeneous among income groups. However, the rise in core inflation and the spread

of price increases to other goods and services is diminishing the redistributive effect of the government actions.

A study by the Bank of Italy (Curci et al. 2022) found the measures addressing purchasing power disparities between Italian households to have limited effect. As expected, inflation has widened income inequalities and the mitigation measures, although significant, have only partially contained such an increase.

Moreover, not all measures have had the same effect in social and environmental terms: the reduction in IVA and in excise duties on gas and electricity, and the initial elimination of general system charges, are the most problematic in this regard. From an environmental perspective, the employment of public resources (included foregone tax incomes) to reduce market prices for users has eliminated the incentive to reduce energy consumption. In social terms, the amount of the benefit was greater for richer households than for poorer ones; this has allowed high income Italians to maintain their energy consumption habits without modification and rationalisation.

Concerning policies towards firms, tax credits have supported firms with higher energy costs but without a plan favouring energy efficient investment and restructuring, and without any conditionality on business strategies in the fields of sustainability or labour relations.

A key policy question that has received little attention concerns the protection of real wages. In its April 2023 Documento di Economia e Finanza (DEF; Economic and Financial Document), the government presented policy guidelines for wage moderation. In order to compensate for the fall in real wages, a modest reduction in the cost of social contributions for lower-income employees has been introduced, at a cost of 3 billion euros. This far from compensates the loss in purchasing power occurred in 2022-2023 and is limited both in time (covering only a few months of 2023) and in scope (leaving out a large number of workers). On the welfare side, the government has introduced some benefits for families with three or more children.

At the same time, however, the government is planning the cancellation of the reddito di cittadinanza (minimum income programme) that has played a key role in supporting the poorest Italians. The rise in food and energy prices and the lack of adequate policies for income support and wage increases means that the loss of purchasing power for employees and poorer households is significant and will continue in 2023.

In policy responses to the energy crisis, a major problem has been the lack of attention to the functioning of international energy markets, dominated by the strong oligopolistic power of a few large multinational companies and by the financial logic of futures markets that allow rent-seeking strategies and facilitate price volatility. Facing such serious market inefficiencies, European and national policies have failed to introduce appropriate price regulations protecting the economy from instability and limiting the space for financial speculation and for the surplus profits of the dominant firms.

The Italian energy market is the result of the privatisation policies of the 1990s, with some public companies operating alongside private ones in a market regulated by a weak public authority. The energy strategy pursued since 2000 has been based on massive gas imports from Russia, an approach that has seriously exposed the Italian economy to the effects of international uncertainties and the war in Ukraine. Even for companies in which the Italian state is the majority shareholder – such as ENI and ENEL – public ownership has not resulted in a push for implementing business strategies different from those of private companies, the latter intending to obtain the surplus profits allowed by the surge in energy prices. There has been no discussion about setting a ‘ceiling’ on prices for consumers or companies and there is no plan to reform the current weak forms of market regulation. Above all, there is no talk of an industrial policy aimed at public intervention in the energy and electricity sectors with the goal of favouring the green transition. This lack of action on the supply side and the absence of an industrial policy on the evolution of the country’s production system are the main weaknesses of current economic policies. The policy challenge is compounded by the structural issues of the Italian economy: the current growth model – with high energy intensity and a lack of environmental sustainability – is particularly vulnerable to the effects of inflation both in terms of the economic loss of production and of industrial competitiveness and in increasing income and social inequalities.

A socially and environmentally progressive policy could have combined measures protecting the purchasing power of wage earners and poorer households while also promoting the more efficient utilisation of energy resources, especially for non-essential purposes. A more ecologically oriented policy could have focused on longer term changes in energy sources and on plans for an environmentally friendly conversion of the Italian economy.

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