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Performance and outlook of the italian economy in 2026–2027

- In 2026 and 2027, Italian GDP is forecast to grow by 0.9 per cent and 0.6 per cent, respectively (Table 1), driven mainly by domestic demand excluding changes in inventories (a contribution of +1.2 percentage points in 2026 and +0.6 percentage points in 2027). Net external demand, by contrast, is expected to contribute zero in 2026 and a slightly positive in 2027.
- The upward trend in commodity prices on international markets is leading to an acceleration in headline inflation: the household expenditure deflator, which stood at +1.5 per cent in 2025, is projected to average 3.3 per cent in 2026 before falling to 2.8 per cent in 2027.
- Over the two years 2026–2027, household and non-profit institutions serving households (NPISH) consumption is forecast to expand but at a progressively slower rate (+1.0% and +0.6% respectively, down from +1.2% in 2025), held back by the sharp rise in prices against a backdrop of positive but essentially stable growth in nominal gross wages per capita.
- Gross fixed capital formation is also expected to show a slowdown (+2.9 per cent in 2026 and +1.0 per cent in 2027, down from +3.9 per cent in 2025), caused mainly by the scaling back of public stimulus measures under current legislation.
- Employment (in terms of full-time equivalent (FTE)) is projected to show a slowdown in growth in 2026 (+0.9 per cent, following +1.2 per cent in 2025), accompanied by a further fall in the unemployment rate (6.0 per cent, down from 6.1 per cent in 2025). In 2027, an even more modest expansion in employment is forecast (+0.5%) and a further fall in the unemployment rate (5.9%)[1].

TABLE 1. FORECASTS FOR THE ITALIAN ECONOMY – GDP AND MAIN COMPONENTS

Years 2024–2027, chain-linked volumes for demand components; year-on-year percentage changes and percentage points.

	2024	2025	2026	2027
Gross Domestic Product	1.1	0.6	0.9	0.6
Import of goods and services (FOB)	-0.7	4.2	3.3	2.0
Export of goods and services (FOB)	-0.8	1.7	3.0	2.2
DOMESTIC DEMAND (INCLUDING INVENTORIES)	1.1	1.4	1.0	0.5
Residential household consumption expenditure and NPISH	1.4	1.2	1.0	0.6
General Government Consumption	1.3	0.3	0.2	0.2
Gross fixed capital formation	-2.7	3.9	2.9	1.0
CONTRIBUTION TO GDP				
Domestic demand (net of inventories)	0.4	1.6	1.2	0.6
Net export	0.0	-0.7	0.0	0.1
Inventories	0.7	-0.2	-0.3	-0.1
Household consumption expenditure deflator	1.8	1.5	3.3	2.8
Gross domestic product deflator	2.1	1.8	2.1	2.4
Compensation of employees per full-time equivalent	2.1	2.6	2.5	2.7
Full-time equivalent employment	2.0	1.2	0.9	0.5
Unemployment rate	6.5	6.1	6.0	5.9
Trade balance (level as % of GDP)	1.5	1.4	0.7	0.4

[1] This note brings forward to November the forecasts for the Italian economy released by Istat at the end of the year, compared with the 2025 publication issued on 5 December. The estimate for the IPCA-NEI indicator (consumer prices excluding imported energy goods) will be published on 30 November.

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The international framework

The global economy continues to expand amid geopolitical tensions.

Global economic activity is showing remarkable resilience despite ongoing geopolitical tensions. The latest forecasts from the International Monetary Fund (IMF) indicate global GDP growth of 3.1 per cent for the current year (down from +3.5 per cent in 2025), accelerating to 3.4 per cent in 2027. The resilience of the global economy is mainly attributable to two factors: on the one hand, the energy sector's ability to adapt rapidly to the new environment through the diversification of supplies and the use of stocks; on the other, the strong boost to economic activity and trade generated by the very sustained growth in investment in technology sectors and, above all, in AI.

The outlook remains characterised, however, by elements of fragility, such as reduced scope for economic stimulus policies due to high public debt in major economies and supply-side constraints. In the commodities sector, particularly energy commodities, stock drawdowns and supply-chain bottlenecks are amplifying the impact of tensions on prices. At the same time, growth appears heavily dependent on the technology sector and AI, increasing the risks of concentrating activity in these sectors, where prospects for high returns on investment appear difficult to quantify. As a result, resilience is uneven, with individual countries' international performance shaped by varying exposure to geo-economic shocks and the extent of high-tech innovation penetration.

Growth in the volume of global trade in goods and services – which was particularly robust in 2025 due to front-loading (the bringing forward of raw material purchases in the face of uncertainty over the application of US tariffs) – is forecast to slow in 2026 (+4.5 per cent, down from +5.0 per cent in 2025), influenced by the evolution of geo-economic tensions but supported by flows linked to the strong growth in AI investment. In 2027, a partial normalisation of energy markets and falling inflation are expected to accelerate trade modestly (+4.8 per cent) (Table 2).

TABLE 2. MAIN VARIABLES RELATING TO THE GLOBAL ECONOMY AND MAJOR ECONOMIES

Years 2025–2027, levels and year-on-year percentage changes

	2025	2026	2027
Brent crude oil (dollars per barrel)*	69.0	97.8	96.1
USD to Euro exchange rate*	1.13	1.15	1.13
Natural gas price (TTF, EUR/MWh)*	36.4	58.8	60.9
Global trade in volume** ***	5.0	4.5	4.8
GROSS DOMESTIC PRODUCT **			
World	3.5	3.1	3.4
Developed countries	2.0	2.1	2.8
USA	2.3	2.3	2.3
Euro Area	1.2	1.1	1.2
Emerging and developing countries	4.5	3.7	4.4
China	5.0	4.5	4.0

Source: Istat data processing.
(*) Source: Oxford Economics, October 2026
(**) IMF, World Economic Outlook, October 2026
(***) Global export of goods and services in volume

The international economic cycle reflects divergent trends across the major economies.

In the United States, GDP growth in the third quarter of 2026 remained solid (+0.8 per cent quarter-on-quarter, following +0.8 per cent and +0.5 per cent in the first and second quarters respectively), underpinned by resilient household consumption and a boost from private investment, particularly in the technology and AI sectors; for 2026 and 2027, the IMF forecasts growth of 2.3 per cent in both years, supported by fiscal policies and accommodative financial conditions, as well as strong investment in high-tech sectors.

GDP growth in China showed greater momentum in the third quarter (quarter-on-quarter growth of +1.2%, compared with +0.9% recorded between April and June, and +1.3% in the first quarter), whilst still maintaining an overall growth trajectory below the government's target of 5.0%. The IMF estimates that the Chinese economy will slow significantly over 2026–2027 (from +5.0% in 2025 to +4.5% in 2026 and +4.0% in 2027) due to higher energy prices and persistent structural problems (i.e., the property sector crisis, weak domestic demand, high local government debt and an ageing population).

Finally, in the euro area, GDP growth slowed slightly in the third quarter (+0.4 per cent quarter-on-quarter, following +0.6 per cent in the second quarter and stagnation in the first three months of the year), weighed down by rising energy prices, deteriorating consumer confidence, and difficulties in the major European economies. Overall, growth forecasts for the euro area point to substantial stability for this year and next (+1.1% and +1.2% respectively, following +1.2% in 2025). In 2027, economic growth is expected to slow down in both Germany (from 1.3% to 1.1%) and Spain (from 2.5% to 1.5%), whilst a moderate acceleration is forecast for France (from 0.4% to 0.7%).

With regard to the main international exogenous variables, in the first ten months of 2026 the euro's exchange rate against the dollar showed high volatility, with a trend towards gradual depreciation over the course of the year caused by less favourable growth prospects compared with the United States, significant uncertainty regarding the fiscal sustainability of some major euro area economies, and the deterioration in terms of trade resulting from the energy shock. The average exchange rate for 2026 would, however, be influenced by the high levels seen in the first part of the year, resulting in a 2.1 per cent appreciation (1.15 dollars per euro, compared with 1.13 dollars in 2025). In 2027, these conditions are expected to ease very gradually, favouring a partial recovery in the euro's exchange rate; however, this will not be sufficient to prevent a depreciation (-1.9 per cent, to $1.13 per euro).

Throughout 2026, the energy sector was characterised by high volatility and a widespread upward trend in prices, driven mainly by persistent geopolitical risks and the gradual depletion of global stocks. Brent crude prices trended upward, except in the summer months, rising above the $100 per barrel mark, driven by tensions in the Middle East, supply constraints, and bottlenecks along strategic sea routes. At the same time, the natural gas market experienced sharp fluctuations linked to uncertainty over supply flows and rising logistics costs. Overall, the performance of both commodities (Figure 1) was a key factor pressuring production costs and raising global inflationary risks, forcing major monetary policy authorities to adopt a restrictive stance. This year, both the Federal Reserve and the ECB raised their official interest rates again between June and September, before adopting a wait-and-see approach in the autumn months.

For 2027, based on the assumption of an easing of geopolitical tensions in the Middle East and a gradual restoration of normal trade routes through the Strait of Hormuz, a moderate fall in the price of Brent is forecast over the course of the year, which is expected to have only a limited impact on the average price (96.1 dollars per barrel, down from 97.8 dollars in 2026). Natural gas prices in Europe (TTF benchmark) are expected to remain high (€60.9 per MWh, up from €58.8 in 2026) due to structural supply constraints, storage dynamics, and logistical bottlenecks.

The risks to the baseline scenario remain skewed to the downside. Persistent geopolitical tensions could reignite inflationary pressures through supply constraints and logistical disruptions. At the same time, a downward revision of productivity and profitability growth expectations linked to the use of artificial intelligence could trigger sharp corrections in the financial markets. Finally, the outcome of the US mid-term elections could alter the legislative balance and, consequently, influence the trajectory of US fiscal and trade policies, with repercussions for global trade and the value of the dollar throughout 2027.

Economic developments in 2026 and forecasts for the Italian economy

In the first two quarters of 2026, cumulative GDP growth – seasonally adjusted and on a chained basis with 2020 as the base year – stood at +0.9 per cent. Investment was the strongest component of demand (+4.1 per cent year-on-year), followed by consumption (+1.0 per cent). Foreign trade also performed well, with imports (+4.0 per cent) growing faster than exports (+3.4 per cent). In the third quarter, GDP remained unchanged from the previous three months, confirming 2026 growth at 0.8 per cent.

On the supply side, the manufacturing sector continues to show signs of weakness. Industrial production in the manufacturing sector increased in September (+1.2 per cent month-on-month, seasonally adjusted), offsetting the decline in August (-1.2 per cent); however, on average for the third quarter, the trend remains negative (-0.4 per cent). Industrial turnover by volume also showed a negative trend, with a month-on-month contraction of -3.9 per cent in August on the domestic market – marking five consecutive months of decline – and -2.7 per cent on the export market, following the recovery recorded in July. Signs of a slowdown are also emerging from the construction sector (output down 3.2 per cent in the June–August period compared with the previous three months), which nevertheless still recorded overall growth in the first eight months of the year (+1.2 per cent compared with the same period last year), and from the services sector (output down 0.3 per cent month-on-month in August; -0.2 per cent on average for the June–August quarter) (Figure 2).

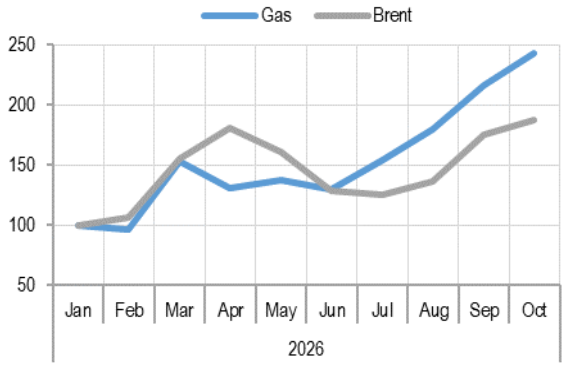
The latest business confidence survey data show mixed signals. In October 2026, the consumer confidence index fell (from 91.2 to 90.3), mainly reflecting a deterioration in assessments of the general economic situation, expectations regarding unemployment and views on the advisability of purchasing durable goods. By contrast, the composite business confidence indicator rose (from 95.9 to 96.6), driven mainly by improved confidence in market services and, to a more limited extent, in construction. Overall, consumer sentiment has deteriorated since the start of the year, while for businesses this trend, albeit less pronounced, is evident only in market services.

In the forecast scenario, the international outlook remains influenced by the conflict in the Middle East and the resulting pressure on energy prices, factors that contribute to high uncertainty and fuel upside risks to inflation.

Over the two-year forecast period, the Italian economy is expected to continue to benefit from resilient domestic demand, albeit at a slower pace than in 2025. Household consumption, despite the pressures exerted by rising prices on real wage growth, would be supported by the drawdown of savings and the favourable performance of the labour market. Investment would continue to benefit, albeit to a progressively lesser extent, from projects still being completed under the National Recovery and Resilience Plan (PNRR), while being affected by high uncertainty in the geopolitical scenario and rising energy costs. Exports and imports, meanwhile, would continue to benefit from the positive trend in international trade.

In 2026, GDP is projected to grow by 0.9 per cent, driven exclusively by domestic demand, which would contribute 1.2 percentage points, against a negative contribution from inventories (-0.3 percentage points) and a zero contribution from net external demand. In 2027, Italian economic growth is expected to slow further to 0.6 per cent. Here too, domestic demand would be the main driver (+0.6 percentage points), while net external demand would contribute a small positive amount (+0.1 percentage points), and inventories would remain slightly negative (-0.1 percentage points).

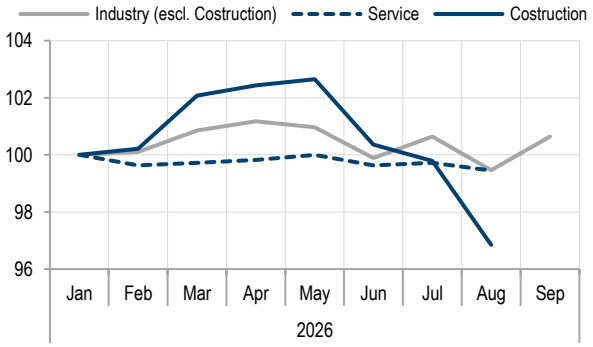
FIGURE 1. BRENT OIL AND NATURAL GAS PRICES.
Indices January 2026=100



Source: World Bank

Source: Istat

FIGURE 2. INDEX OF INDUSTRIAL PRODUCTION, SERVICES AND CONSTRUCTION. Seasonally adjusted data, base index January 2026=100.



Source: Istat

Consumption driven by savings

In the second quarter of 2026, consumer spending slowed (from +0.4% to +0.2% quarter-on-quarter), falling below the rate seen in France (+0.3%) and Spain (+0.4%), but remaining higher than that in Germany (+0.1%). The cumulative growth rate for 2026 stands at +0.8 per cent. Over the same period, general government expenditure remained unchanged, whilst it increased in the other major European countries (+0.6 per cent in Spain, +0.4 per cent in France, +0.1 per cent in Germany).

Italian household expenditure within the economic territory also slowed in the second quarter (+0.2 per cent quarter-on-quarter, down from +0.5 per cent in the first three months of the year), with the slowdown affecting durable goods in particular (from +1.4 per cent in the first quarter to +0.5 per cent in the second). Non-durable goods were weaker, with a slight contraction (−0.1%) after the increase at the start of the year (+0.3%). Services also slowed, with increases of half those in the first quarter (+0.3% and +0.6%, respectively). Semi-durable goods bucked the trend, recovering (+0.5%) after a decline of the same magnitude in the first three months of the yea

In the second quarter of 2026, consumer households' gross disposable income also showed a more moderate trend (+0.4% compared with the previous quarter, down from +1.2% in the first three months of the year). Purchasing power contracted by 0.9 per cent, following a 0.4 per cent increase in the first quarter, affected by the sharp rise in prices. Against this backdrop, the propensity to save fell from 7.9 per cent in the first three months to 6.7 per cent, 1.3 percentage points below the 2025 average (Figure 3).

Household and private social institution (ISP) consumption is forecast to slow in real terms in 2026 (+1.0 per cent, down from +1.2 per cent in 2025). Consumption growth is expected to be supported by the drawdown of savings, with the propensity to save therefore expected to fall. In 2027, household and PSI consumption growth is expected to slow further (+0.6%). Slower price growth and a stronger per capita wage trend (2.7 per cent, up from 2.5 per cent in 2026) would help ease the significant pressure on household purchasing power from the resurgence of inflation in 2026. The rise in expenditure would therefore continue to be accompanied by a further reduction in the savings rate. Public sector consumption is also forecast to slow slightly, rising by 0.3 per cent (down from +0.4 per cent in 2026).

Slowdown in investment growth.

In the second quarter of 2026, investment rose significantly (+3.4 per cent compared with the same period in 2025). Investment in machinery and equipment rose 1.1 per cent year on year; investment in buildings rose 8.3 per cent; while investment in housing decreased (-1.3 per cent).

As for Financing conditions, according to the ECB's Bank Lending Survey, in the third quarter of 2026 Italian banks reported tighter contractual terms for loans to businesses, mainly due to rising interest rates and higher margins on riskier loans. During the same period, demand for credit for fixed investment deteriorated.

In the second half of 2026 and in 2027, investment growth is expected to slow, reflecting the gradual fading of the stimulus effects linked to the PNRR, whose originally scheduled implementation phase ended in June, although some measures remain to be completed even in 2027. Capital accumulation is also likely to be affected by high uncertainty in the geopolitical landscape, which could lead firms to postpone or scale back investment plans, and by rising energy costs, which, by squeezing profit margins, could further dampen the propensity to invest.

More specifically, investment in housing is expected to continue to decline, whilst investment in non-residential buildings and other infrastructure projects is expected to continue to benefit – albeit to a progressively lesser extent – from the measures still underway under the PNRR. Investment in plant, machinery and equipment, as well as in intellectual property, is expected to remain positive, albeit affected by greater uncertainty and deteriorating financing conditions.

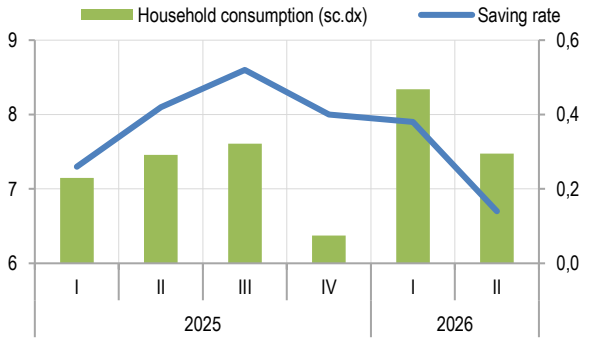
Over the two-year forecast period, these trends would result in gross fixed capital formation growing at progressively slower rates: following the 3.9 per cent increase recorded in 2025, growth would stand at 2.9 per cent in 2026, before slowing further to 1.0 per cent in 2027.

Slower growth in foreign trade.

Exports of goods and services showed strong growth throughout 2026: in the first six months of the year, they rose by 3.4 per cent (seasonally adjusted and calendar-adjusted figures, chained to a 2020 base) compared with the same period the previous year; imports grew at an even faster pace, rising by 4.1 per cent.

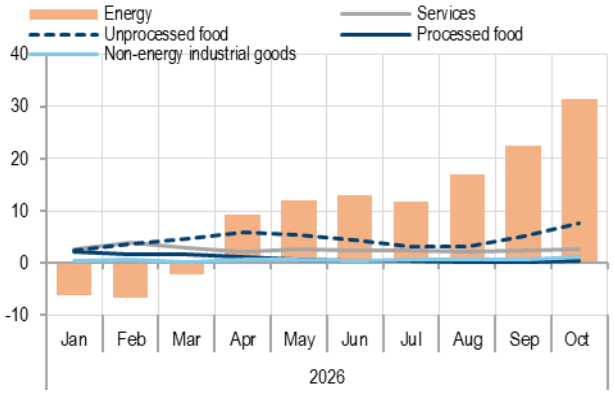
These trends appear to align with the resilience shown by international trade amid the consequences of geopolitical tensions. For the second half of the year, however, both exports and imports are expected to show a less dynamic trend, with imports from abroad still on a slightly stronger growth path than exports. In 2026, exports are therefore projected to grow by 3.0 per cent, while imports are expected to grow by 3.3 per cent.

FIGURE 3. HOUSEHOLD CONSUMPTION EXPENDITURE AND SAVING RATE. Chained values and index base 2021=100.



Source: Istat

FIGURE 4. CONSUMER INFLATION IN ITALY. Harmonised Index of Consumer Prices (HICP), year-on-year changes



Source: Istat

Labour Market Dynamics Are Slowing

In the second quarter of 2026, the positive trend in the labour market continued, with a quarter-on-quarter increase in hours worked and full-time equivalent (FTE) units for the economy as a whole (+0.4 per cent for both), The improvement did not extend to all sectors; it was more pronounced in construction (+1.7 per cent for FTE and +1.2 per cent for hours worked) and more modest in services (+0.5 per cent and +0.6 per cent respectively); by contrast, the trend was negative in the manufacturing sector (-0.3 per cent for both).

In September, the number of people in employment remained broadly stable for the fifth consecutive month following the growth seen in the early months of 2026; the employment rate, therefore, remained unchanged at 63.0 per cent. The unemployment and inactivity rates also remained unchanged from the previous month, standing at 6.3 per cent and 32.7 per cent, respectively.

In the second quarter of 2026, the seasonally adjusted vacancy rate in enterprises with employees stood at 1.5 per cent, down slightly from the previous quarter (-0.1 percentage points). This trend is attributable exclusively to the services sector (where the indicator fell by 0.2 percentage points), while industry remained unchanged. A similar picture emerges when considering firms with at least 10 employees, where the vacancy rate fell to 1.3 per cent (-0.1 percentage points compared with the previous quarter); in services, the decline was more pronounced (-0.2 percentage points), whilst in manufacturing it was more modest (-0.1 percentage points).

These trends appear to point to a moderation in firms' hiring intentions, particularly in the services sector, suggesting a possible slowdown in the contribution of labour demand to employment growth in the coming quarters, albeit against a backdrop of conditions that remain broadly stable in the industrial sector.

In October, employment expectations weakened compared with the previous month in both the manufacturing sector (the employment balance fell from 3.3 in September to 2.9 in October), construction (from 5.1 to 3.1) and market services (-1.2 from 1.2).

Against this backdrop, growth in full-time equivalent (FTE) jobs is expected to slow over the two-year forecast period (to +0.9 per cent in 2026 and +0.5 per cent in 2027, following +1.2 per cent in 2025), with growth in 2027 lagging behind GDP. The unemployment rate is expected to fall slightly in 2026 and 2027 (6.0 per cent and 5.9 per cent respectively, down from 6.1 per cent in 2025).

Sharp rise in inflation.

In September and October, the upward trend in inflation, which had already become apparent in previous months, accelerated sharply: the year-on-year change in the Harmonised Index of Consumer Prices (HICP), after standing at +4.2 per cent in September, rose to +5.6 per cent in October (preliminary figure), following an average increase of 3 per cent over the previous five months (Figure 4). The cumulative inflation rate for 2026 as at October stands at +3.4 per cent, a marked increase compared with February 2026, when the cumulative rate was zero.

This trend widened the inflation differential relative to the euro area average (where the index rose by +4 per cent) in the October figure, with the gap being more pronounced than in Germany (+2.8 per cent), France (+3.8 per cent) and Spain (+4.9 per cent).

The acceleration in inflation is largely due to the energy prices (+22.6 per cent in September, +31.4 per cent in October) and the more moderate price trends for services (+2.5 per cent and +2.8 per cent) and fresh food (+5.1 per cent and +7.6 per cent). Inflation in the core HICP component (excluding the most volatile items such as energy and unprocessed food) rose (from +1.5 per cent in September to +1.9 per cent in October), with the year-on-year rate for this component at 1.8 per cent in October.

Prices of imported energy products rose sharply year-on-year (by +34.1 per cent in August and +20.4 per cent in July), driving the overall rise in import prices (from +5.0 per cent in July to +7.3 per cent in August) and, subsequently, that of industrial producer prices (+10.9 per cent in August and +13.8 per cent in September).

These recent rises are affecting firms' expectations of price increases over the next three months across all sectors (the proportion of manufacturing firms intending to raise prices rose from 17.8 per cent in September to 19.8 per cent in October; in construction, from 14.1 per cent to 20.3 per cent; in market services: from 8.2 per cent to 14.6 per cent; in retail trade: from 17.2 per cent to 19.1 per cent).
Based on these trends and taking into account expectations regarding the trend in international commodity prices and their subsequent pass-through to the prices of final goods, a sharp acceleration (+3.3 per cent) in the household consumption deflator is expected in 2026 (up from +1.5 per cent in 2025), followed by a partial deceleration in 2027 (+2.8 per cent). The GDP deflator, partly due to the sharp rise in import prices, is projected to be significantly lower than the household consumption deflator in 2026 (+2.1 per cent), before accelerating in 2027 when a slowdown in imported input prices is expected (+2.4 per cent).

Revisions to the previous forecast framework

The current forecast scenario updates the estimates for the two-year period 2026–2027 published in June 2026. Compared with that exercise, the price of oil has been revised upwards (+$4.3 per barrel in 2026 and +$13.8 per barrel in 2027); global trade growth is also projected to be stronger (+2.6 percentage points in 2026 and +1.8 percentage points in 2026 compared with the assumptions made in June)[2]. In light of these revisions, growth in exports of goods and services (up by 1.9 percentage points in 2026 and 0.5 percentage points in 2027, respectively) and in imports (up by 1.6 percentage points in 2026 and 0.2 percentage points in 2027) is now stronger. Investment has been stronger than expected during the year, leading to an upward revision for both years (+0.7 percentage points in 2026 and +0.5 percentage points in 2027). Labour market trends, by contrast, were less dynamic, leading to an upward revision of the unemployment rate (+0.5 p.p. in 2026 and +0.4 p.p. in 2027). The rise in energy commodity prices has led to a more dynamic inflation profile, with an increase in the estimated household expenditure deflator (+0.4 p.p. in 2026 and +0.8 p.p. in 2027). Overall, the GDP growth forecast has been revised up by 0.2 percentage points for 2026 and down by 0.1 percentage points for 2027.

[2] Due to the early release of the GDP forecasts, it was necessary to use the volume of exports of goods and services from the IMF's World Economic Outlook as the reference variable for world trade, as the estimate of this variable produced by DG-Ecfin was not available in time to be incorporated into Istat's forecasting model.

For technical and methodological clarifications

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ISTAT MACROECONOMETRIC MODEL

METHODOLOGICAL NOTE

Introduction

This note describes the main features of the economic forecasting model developed by Istat: the Macro Econometric Model for Italy (MEMo-It)[3] .The model includes 66 stochastic equations and 94 accounting identities with annual frequency, representing the Italian economic system by specifying behavioural equations for the economic agents (Households, Businesses, Public Administrations, and the Rest of the World). The time series of variables used in the model covers the period from 1970 to 2025. Where data were unavailable, ad hoc reconstructions were carried out.

The theoretical approach used in constructing the model is neo-Keynesian. In the model, short-term economic growth dynamics are driven by demand factors, while in the long term, the economy tends towards equilibrium conditions represented by potential output. The interaction between aggregate demand and supply occurs through the price system, which reacts to deviations of the actual unemployment rate from the natural rate of unemployment (NAIRU) and to imbalances between actual and potential output (output gap). The model is structured into blocks, where the direction of causality in behavioural equations and the framework of accounting identities have been predetermined[4].

The specification and estimation of the model follow three successive steps: (a) analysis of the integration and cointegration properties of variables for individual equations or blocks of equations and assessment of weak exogeneity for blocks of relevant variables; (b) two-stage single-equation estimation of the model's variables to account for endogeneity and measurement errors in the explanatory variables; (c) combining the individual equations and blocks of the model with three-stage estimation of their parameters to take into account the covariance between error terms belonging to different stochastic equations.

The model's dynamic properties are evaluated through a predefined sequence of shock experiments on selected exogenous variables relative to the baseline solution. These exercises use deterministic and stochastic simulation techniques. The standard errors obtained during the three-stage estimation of the complete model generate the stochastic solution, allowing for the quantification of forecast uncertainty.

In its current version, the model offers an aggregate description of the economic system. Future research directions for the model's development will focus on explicitly representing the behaviour of different economic sectors and on extending the model to intra-annual economic movements.

The rest of this note is organised as follows: the second paragraph describes the characteristics of the supply block, while the third and fourth paragraphs describe the price system and the labour market. The fifth paragraph illustrates the demand block broken down by individual agents. Finally, the sixth paragraph describes the model's database.

Supply

The supply side is integrated into the model through the "Solow model," which holds that the stocks of productive resources (capital and labour) and technological progress are the main determinants of economic growth. This provides the basis for estimating potential output, defined as the sustainable output level that does not cause inflation to rise. In the long run, the economic system converges towards the likely growth path determined exclusively by supply forces. In contrast, in the short run, it fluctuates around this path due to shocks generated by demand forces.

[3] The forecasting model was developed by a research group at Istat under the scientific coordination of Professor Roberto Golinelli, full professor of econometrics at the University of Bologna, Department of Economic Sciences

[4] The methodological foundations of the model follow the traditional approach of the Cowles Commission for Research in Economics (Klein, 1950; Fair, 2004), integrated with the fundamental works of Dickey and Fuller (1979), Engle and Granger (1987), Sims, Stock, and Watson (1990), and Johansen (1995) on estimation and inference with time series potentially generated by integrated and cointegrated stochastic processes; of Hsiao (1997a and 1997b) on the properties of estimators with instrumental variables in the context of non-stationary stochastic processes; and of Hendry, Pagan, and Sargan (1984), and Pesaran et al. (2001) on the importance of the dynamic specification of the model's equations

These fluctuations are captured by the deviations of actual output (Y_{EFF}) from its potential level (Y_{POT}), which can be summarised through the output gap, defined by the following expression:

$$GAP = Y_{EFF} / Y_{POT} - 1$$

The gap between actual and potential output is inversely correlated with the gap between actual unemployment (*UR*) and structural unemployment (*NAIRU*), according to the following relationship (Okun, 1962):

$$GAP = -b\ (UR - NAIRU)$$

Imbalances between actual and structural unemployment, and between actual and potential output, generate price changes that help rebalance the system.

In the model, potential output is measured following the production function approach, similar to the method suggested by the European Commission (see D'Auria *et al*., 2010)[5]. The central assumption is that a Cobb-Douglas production function can represent the economy's potential supply. Formally, this is expressed as:

$$Y_{POT} = f_{POT}\ (K, LP, HTFP)$$

where *LP* represents potential labour input, K is capital stock, and HTFP is the trend component[6] of total factor productivity (Solow residual). Potential labour input is obtained by filtering out the cyclical component from actual employment. The potential capital stock, *K*, is estimated using the perpetual inventory method (Goldsmith, 1951). The central assumption is that the potential capital stock coincides with the actual stock, assuming it represents full-employment utilisation of capital goods.

Prices and Wages

The mechanism for forming prices and wages drives actual demand for goods and services and employment to adjust, respectively, to the supply level (potential output) and possible employment, which in turn is defined by the interaction between *NAIRU* and a combination of labour force participation rate and demographic trends of the working-age population.

Using the "triangle" stylisation proposed by Gordon (1981, 1988), both the system's reference price variable (pivot) and per capita wages are affected by three main factors: (1) persistence, measured by their dynamics in previous years; (2) demand shocks, measured by the output gap and the excess of the actual unemployment rate over *NAIRU*; (3) other significant shocks, which in the Italian economic context include those arising from import prices, labour productivity shocks and labour market tensions during contract renewal phases.

The value-added deflator at factor cost (*PV*) is the model's *pivot* price:

$$dlogPV = f_{PV}\ (dlogPV_{-1}, GAP, WB/YU)$$

where $dlogPV_{-1}$ measures inertia, *GAP* measures demand shocks, and *WB/YU* (the real labour cost per unit of output, calculated as the ratio between employee income and GDP at current prices) measures productivity and labour cost shocks. The equation for *PV* can also be interpreted as a New Keynesian Phillips Curve (NKPC, Galì and Gertler, 1999), where expectations are assumed to be *backwards-looking*[7].

Nominal wage growth is explained by the household consumption deflator from the previous year (implying backwards-looking inflation expectations), the unemployment rate, labour productivity, and a variable measuring labour market tensions during contract renewal phases[8].

[5] See also De Masi (1997), Denis et al. (2006), and Giorno et al. (1995).

[6] The trend components of the variables used are obtained using the Hodrick-Prescott filter (1997).

[7] For a comparison between the triangle model and the NKPC, see Gordon (2011).

[8] The wage equation is inspired by the work of Phillips (1958), with its specification modified here to account for the inflation rate; for a discussion, see Golinelli (1998)

The import deflator is determined by the dollar price index of manufactured goods on international markets, Brent oil prices in dollars, and the nominal dollar-to-euro exchange rate[9]. Additionally, the import deflator's inflation rate from the previous year captures a persistence component.

The deflators for demand components depend on these variables and the average effective rates of indirect taxation, differentiated by value-added tax, other indirect taxes, and production contributions.

The Labour Market

The labour market block comprises three equations: labour demand, labour supply, and wages. The labour demand specification derives directly from the production function (Hamermesh 1996 and 1999). Under the assumption of perfect competition, where the labour factor is remunerated by its marginal product, the labour demand equation is obtained, which depends positively on output and negatively on the real wage. Consequently, private sector demand (*LDP*), expressed in terms of standard full-time equivalent (*FTE*), is defined by the following expression:

$$LDP = f_{LD}(Y, PY, \frac{WB}{LDD}, PV)$$

where *Y* is the value added at current prices, *PY* is the GDP deflator, *WB* represents the total amount of employee income at current prices before social security contributions, *LDD* defines the employee full-time equivalent in terms of production capacity, and *PV* is the value-added deflator at factor cost.

The public sector labour input ($\overline{\mathrm{LDG}}$) is exogenous. It follows that the total labour input (*LD*) used in the production process is composed of:

$$LD \equiv (LDP + \overline{\mathrm{LDG}})$$

Labour market equilibrium is achieved through the interaction between supply and demand. The model considers demographic factors and the relationship between business cycle fluctuations and participation rates (Lucas and Rapping, 1969) by using the labour force variable in the definition of the supply function.

Labour supply is defined as participation rates disaggregated by gender (*i* = F, M). More precisely, the participation rate ($PART_i$) is specified as follows:

$$PART_i = f_{LS}(\overline{POP_i}, WIPC, EMPR_i, PCH)$$

where POP_i is the population aged 15 to 64, disaggregated by gender, *WIPC/PCH* represents real per capita wages (*PCH* is the private consumption deflator), and $EMPR_i$ is the employment rate, which provides a summary measure of labour market conditions (Bodo and Visco, 1987). The two measures used in the model—standard full-time equivalent and resident employment—are consistent through a bridging equation. The unemployment rate is derived as an identity by combining information on resident employment and the labour force (supply function).

Demand

The model's demand side refers to the behaviour of economic agents: Households, Businesses, Public Administrations, and the Rest of the World. Households spend on consumption and residential investments, accumulating real and financial wealth. Businesses purchase all other investment goods (machinery, equipment, and others). Public Administration spending directly influences final demand through public consumption and investments. The Rest of the World determines the external component of demand, represented by net exports, i.e., exports minus imports.

Households

The permanent income hypothesis is the theoretical approach to determining household consumption (Friedman, 1957). A similar approach for Italy has been adopted by Rossi and Visco (1995) and, more recently, by Bassanetti and Zollino (2008). Actual consumption (CHO) is therefore modelled as a function of disposable income, wealth (both real and financial), and the interest rate:

$$CHO = f_{CHO}(YDH, HWFA, HWDW, PCH, IRN)$$

where YDH is the disposable income at current prices; $HWFA$ and $HWDW$ are financial and real wealth, respectively, also at current prices; PCH is the consumption deflator and IRN is the nominal long-term interest rate.

[9] Before introducing the euro, the reference exchange rate was between the US dollar and the Italian lira

The portion of disposable income not consumed contributes to real wealth accumulation. Additionally, the share of disposable income not allocated to consumption or residential investment (IRO) contributes to the growth of financial wealth. The two wealth stocks, valued at market prices, are modelled using a framework consistent with the permanent inventory approach (Goldsmith, 1951). The equations for residential investments, real wealth, and financial wealth are as follows:

$$IRO = f_{IRO}(YDH, PIR, IRN)$$

$$HWDW = f_{HWDW}(YDH, IRO, PIR, IRN)$$

$$HWFA = f_{HWFA}(YDH, CHO, IRO, IRN, COMIT)$$

where PIR is the deflator for residential investments; $COMIT$ is the stock market index, linking the dynamics of financial wealth not only to saved income not invested in tangible assets but also to capital gains/losses on securities.

Disposable income is defined as an identity, as the sum of various components related to the institutional household sector:

$$YDH = GOSH + WBH + IDH + SBH + OCTH - (SSH + DTH)$$

$GOSH$ is the gross operating surplus, WBH is the total wages and salaries net of those from the rest of the world, IDH represents income from interest and dividends, SBH refers to net social benefits, $OCTH$ stands for other transfers, SSH denotes net social contributions, and finally, DTH represents direct taxes paid.

Businesses

Businesses contribute to the model's stylised economic framework by investing in machinery, equipment, and other productive assets. These investments, expressed as a share of potential output, are influenced by factors such as persistence, the cost of capital, gross operating income (a summary measure of profits and self-financing), and the degree of uncertainty (measured by the conditional volatility of business-cycle disturbances).

The cost of capital represents the price of the productive services a capital asset generates. It is assumed to depend on the financing cost (or the opportunity cost of foregoing an alternative investment in the case of self-financing), the economic depreciation of the capital asset during its period of use, and the capital gains or losses arising from changes in the asset purchase price.

Public Administrations

The description of the public sector within the MEMo-It model follows an institutional approach. This is characterised by algebraic identities and relationships that stylise the accounting rules (SEC95) and the regulations governing the primary aggregates of the consolidated economic account of Public Administrations (PA).

The direct relationships between PAs and the rest of the economy manifest through their effects on total demand, driven by final consumption spending, public investments, and income from the public sector. PAs also influence prices through net indirect tax rates, unit labour costs via social contribution rates, and disposable income obtained through direct taxation and transfers.

Total PA expenditures are disaggregated into final consumption spending, production subsidies, interest payments, gross fixed capital formation, investment grants, and a residual exogenous variable capturing other expenditure items. The aggregate for final consumption spending consists of two components: direct spending and wage-related expenditures. The latter is derived from the per capita average wage in the public sector (estimated in the labour market block) and the number of public employees.

Both direct spending in volume and employee numbers are considered exogenous and serve as fiscal policy instruments. Public investments are also exogenous in real terms, with their deflator derived in the price formation block. Nominal social benefits are linked to the population's age structure and a price indicator. Production subsidies and investment grants are related to the private sector's value-added investments through coefficients expressing the percentage contribution to the private sector.

Total revenues are disaggregated into social contributions, indirect taxes, direct taxes, and residual exogenous items. Social contributions are calculated as the sum of those paid by employers, employees, and self-employed workers, using specific effective average rates as the basis.

Indirect taxes include revenues from Value Added Tax (VAT), the Regional Tax on Productive Activities (IRAP), excise duties on mineral oils and derivatives, and a residual exogenous component. The model calculates indirect taxes using appropriate, exogenous, effective average rates. Revenues from excise duties on mineral oils and derivatives are computed using two equations: estimating the energy intensity of GDP (based on persistence and oil price in euros per barrel) and multiplying an exogenous effective average rate by energy consumption.

Direct taxes are the sum of revenues from personal income tax, corporate income tax, substitute tax on interest, other capital income, and a residual exogenous component. The substitute tax on interest and capital income is estimated based on the previous year's revenue, GDP, changes in interest rates, and new financial activities approximated by household savings.

The fiscal balance of PAs is calculated as the difference between total revenues and expenditures. Public debt stock is determined by subtracting the previous year's budgetary balance from the debt stock, adding an exogenous adjustment variable to account for factors affecting debt independently of the fiscal balance (e.g., financial transactions, changes in financial instrument values, privatisations). Interest payments are calculated by multiplying the average cost by the debt stock. The average price of public debt is estimated based on short- and long-term interest rates.

Rest of the World

The specification of the external sector block is based on the accounting identity that defines the balance of transactions with the rest of the world:

$$ROWSALDO = (XO \times PX - MO \times PM) + (WB - WBH) + (APETIND - APUCP - TINDN) + ROWDT + ROWID + ROWSB + ROWOTH$$

where $(XO \times PX - MO \times PM)$ represents the trade balance in value (XO and MO are export and import volumes respectively, PX and PM are their respective prices); $(WB - WBH)$ are the net labour income from abroad, $(APETIND - APUCP - TINDN)$ are the net indirect taxes, $ROWID$ is the net capital income from abroad, $ROWDT$ are the current taxes on income and wealth, $ROWSB$ are the social benefits, and $ROWOTH$ are the other transfers[10].

The theoretical approach for determining the balance with the rest of the world in the model is grounded in the literature (Lane and Milesi-Ferretti, 2011; Obstfeld and Rogoff, 2010). The volume of goods and services imports is specified by an equation reflecting the interaction between domestic demand and international factors.

$$MO = f_{MO}(DDO, PM, GAP)$$

where DDO is real domestic demand, PM is the imports deflator, and GAP measures the effects of short-term cyclical fluctuations.

The equation for export volumes is expressed as follows:

$$XO = f_{XO}(WDXXTR, ITXRXER)$$

where *WDXXTR* represents the value of global exports, and *ITXRXER* is the real effective exchange rate. Net capital income (which primarily includes profits and dividends) is derived through the following function:

$$ROWID = f_{ROWID}(APSALDO)$$

where $APSALDO$ represents the balance of the Public Administration account. This variable is included because an improvement in the PA balance is expected to reduce the risk premium (Lane and Milesi-Ferretti, 2011; Caporale and Williams, 2002), thereby enhancing the balance of capital income, primarily by reducing the interest component.

Finally, the equation for other transfers (encompassing the balance of public and private transfers, both current and capital account) is given by:

$$ROWOTH = f_{ROWOTH}(ITALIA)$$

where $ITALIA$ approximates the share of Italian exports, which is assumed to have an inverse relationship with incoming transfers.

[10] The reference for compiling the Rest of the World accounts by Istat is the Balance of Payments prepared by the Bank of Italy, based on the concepts and definitions outlined in the 5th Edition of the International Monetary Fund's Manual. See Istat (2005), Part Two, Chapter 3 for more details

The time series used for model estimation and the treatment of exogenous variables

The model was developed using 139 basic annual time series covering 1970 to 2025 as input. The model estimation process generates 222 variables: 157 endogenous (66 stochastic and 91 identities) and 65 exogenous (including nine scenario variables).

A significant portion of the input variables comes from national accounts, which, in September 2026, released estimates related to the general revision of the National Accounts—with 2021 as the reference year—agreed upon at the European level, introducing innovations and improvements in methods and sources.

To estimate the model's relationships, a reconstruction covering the period from 1970 to 1995 was carried out. This task was facilitated by the model's compact size, as its current version does not include sectoral disaggregation. The reconstruction was conducted by leveraging time-series information from the previous classification of economic activities, with particular attention to rebuilding chain-linked values for the variables in the macroeconomic framework. This effort extended the new national accounting aggregates used in the model for specification and estimation purposes back to 1970. The forecasts were produced using demographic scenarios available on **demo.istat.it** for demographic variables and the assumptions outlined in the State Budget Forecast for 2025 for public finance variables.

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