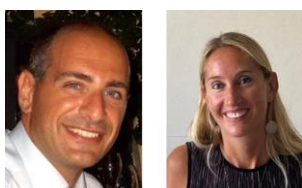


Demography and the current account: A case-study of Italy



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Abstract

This policy brief examines how demographic trends influence medium-term current account (CA) benchmarks used by international institutions, i.e. CA “norms”, to assess external imbalances. It shows that population projections from different sources (e.g. UN and Eurostat) can lead to large variations in CA norm estimates. For Italy and other major euro-area economies, using alternative projections to the more pessimistic UN ones, lowers CA norms significantly. The note also improves a standard CA model by adding labour-market indicators. This adjustment further reduces CA norms, especially for Italy. These findings highlight the sensitivity of CA norms to underlying demographic data choices and to alternative model specifications. They also stress the need for caution when using these norms for policy evaluation and assessments of external imbalances.

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Introduction

Evaluating global external imbalances has recently gained renewed interest, particularly in light of rising geopolitical tensions. Institutions like the International Monetary Fund (IMF) and the European Commission (EC) regularly assess countries' external sectors, focusing on indicators such as the current account (CA) balance, real effective exchange rate, and net international investment position. A key tool in this process is the IMF's External Balance Assessment (EBA), which estimates country-specific CA "norms", namely equilibrium values based on macroeconomic fundamentals and policy settings.

A key driver of CA balances is demography, which influences national savings according to life-cycle models. The IMF's EBA model incorporates both current and forward-looking demographic variables, primarily sourced from UN population projections. These demographic inputs significantly affect CA norm estimates, especially for advanced economies like Italy.

This policy note, based on research in Depalo and Giordano (2025), investigates how sensitive CA norm estimates are to the choice of the source of demographic data (e.g., UN, Eurostat, Istat), and the inclusion of labour market variables (e.g., unemployment and participation rates), which may interact with demographic factors in shaping savings behaviour. Italy is used as a case study, with comparisons to France, Germany, and Spain.¹

Recent EBA estimates of the CA norm for Italy

In the EBA framework, CA norms are the benchmark levels consistent with the underlying macroeconomic and structural fundamentals at their actual values and with medium-term policies deemed desirable or appropriate by the IMF staff. The cyclically-adjusted CA balance is instead the headline CA balance stripped of cyclical and temporary factors. These two variables are estimated based on a cross-country regression CA model. The EBA CA gap is then computed as the difference between the cyclically-adjusted CA balance and the CA norm. In a final step, IMF staff judgement is applied in order to define the final EBA assessment of a given country, which may also involve the use of other external sector indicators that complement the model's outputs.

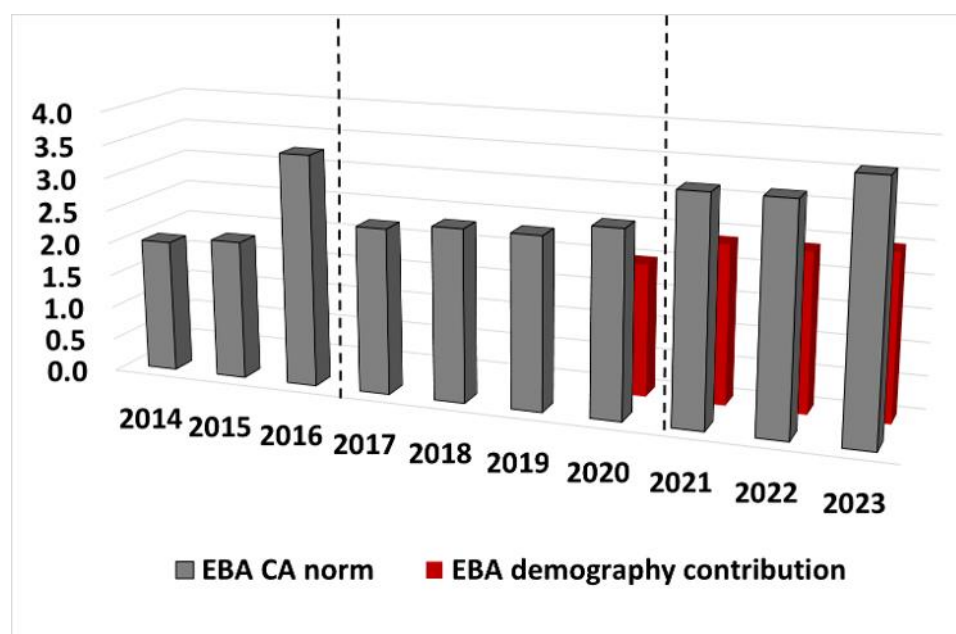
More in detail, the current EBA CA model is estimated for a sample of 52 countries using annual data for the 1986-2019 period. It relates the CA balance, in percentage of the country's GDP, to several country-specific macroeconomic determinants (Allen et al, 2023), which are grouped into cyclical and temporary factors (the output gap, the commodity terms-of-trade gap and changes in the real effective exchange rate), medium-term macroeconomic and structural fundamentals (the net foreign asset position, output per worker, expected real GDP growth, demographics, institutional quality and oil and natural gas reserves), and policy variables (fiscal policy, health spending, foreign exchange intervention interacted with capital controls and the credit gap). The IMF estimates a single model to fit all countries in order to guarantee multilateral consistency and even-handedness of EBA assessments.

Since 2018 (and therefore since the EBA assessment on 2017), the IMF's CA model's demographic block accounts for the effects of a country's demographic features on its saving decisions according to a life-cycle overlapping generations model (Dao and Jones, 2018; Cubeddu et al., 2019). The EBA model includes both static and dynamic dimensions of demography. The static effect captures the impact of the age composition of a country's population on saving: generally, countries with a relatively high share of young or elderly population tend to dissave, while countries with a higher proportion of prime-aged population will tend to save more. This is captured by three variables, all measured relative to the world average: annual growth rate of the population (to proxy for the share of young people), the old-age dependency ratio (OAD; namely the ratio of population aged over 65 divided by population between 30 and 64 years old), and the share of prime-aged savers (aged 45-64) as a share of the total working age population (aged 30-64). The dynamic effect captures the impact of longevity: countries where prime-aged savers expect to live longer (or have longer retirement periods) will need to save more, particularly if future generations cannot provide old-age support. This is captured by the life expectancy of a current prime-aged saver (again relative to the world average) and its

¹ This note is based on public data and information available in June 2025.

interaction with future (i.e. 20 years ahead) OAD in order to capture non-linearities. The gray bars in Figure 1 depict the IMF's EBA estimates of Italy's CA norms since 2014. In 2014-15 the norm was estimated at around 2 per cent of GDP, after which it gradually increased over time, with few exceptions linked to methodological changes depicted by the vertical dashed lines. By 2020 Italy's CA norm was estimated at 2.8 per cent. After the final methodological update as of 2021, Italy's CA norm rose further, reaching 3.8 per cent in 2023.

Figure 1. The IMF's EBA CA norm estimates for Italy and the contribution of demographics (percentage shares of GDP)



Sources: IMF External Sector Report, various years. Notes: The first vertical line in the left hand-side panel highlights the significant methodological change adopted in EBA assessments as of 2017 (Cubeddu et al., 2018), which makes the estimated CA norm thereafter not comparable to previous years; the second vertical line highlights the more recent, less impactful methodological update (Allen et al., 2023).

Based on the most recent editions of the IMF's *External Sector Report* in which this information is available (i.e. since 2020), the red bars document the contribution of the demographic block to Italy's CA norm. The role of the demographic variables considered jointly to Italy's EBA CA norm increased over time, reaching a maximum of 2.5 per cent of GDP in 2023 and contributing by nearly two thirds to the total norm. This contribution is high even in an international comparison (IMF, 2024). Also, it is elevated in comparison with other international institutions' estimates based on similar reduced-form CA models. For example, the EC estimate for Italy's CA norm for 2023 was 1.8 per cent of GDP, with an estimated contribution of demographics of 1.5. Demography thus continues to weigh heavily on Italy's CA norm according to this alternative model, but in absolute terms its contribution is much lower.

Demographic projections for Italy according to alternative data sources and their impact on the CA norm

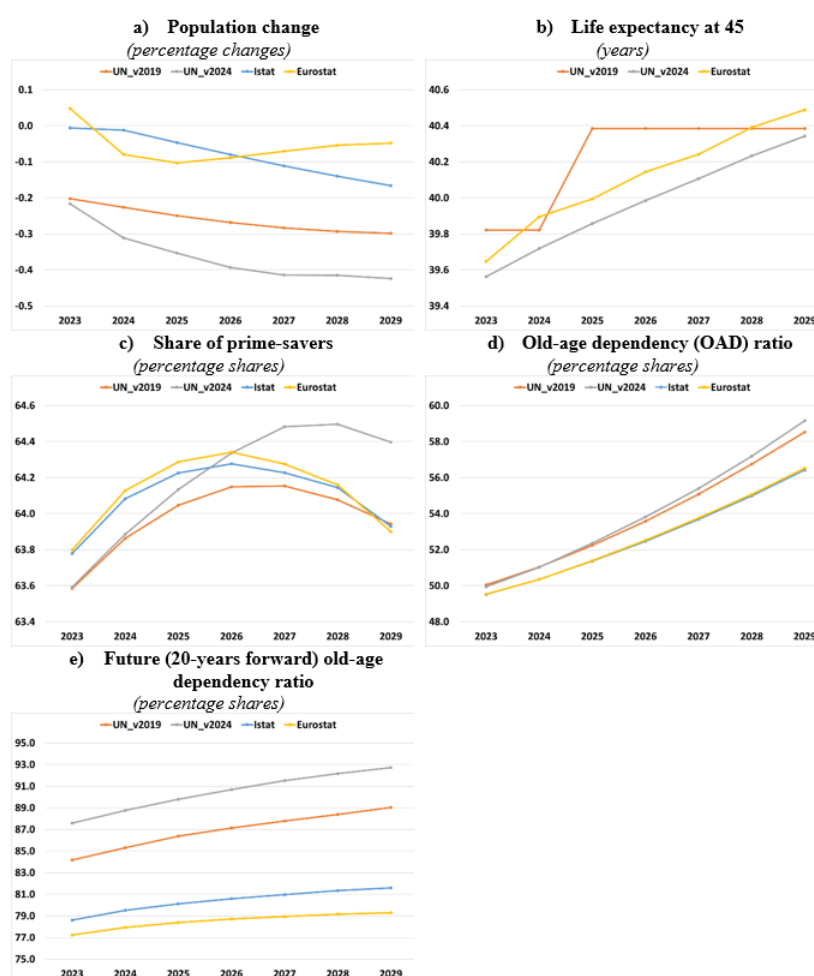
As documented in the 2024 *External Sector Report* (IMF, 2024), for the most recent years the IMF employed *Population prospects* (UN, 2019) to construct the demographic variables in the EBA CA model. In this section we compare these projections to those of two other institutions that produce estimates for Italy, namely Eurostat and the Italian statistical institute (Istat). We then compute the demographic variables in the EBA model for Italy across the different sources and assess their impact on the IMF's CA norm estimate.

The approaches to the population projections until the end of the century of the UN, Eurostat (Eurostat, 2024), and Istat (Istat, 2024) differ along various dimensions. The first is the reference population (from 237 countries of the UN to 30 for Eurostat to just one for Istat). The second is the frequency of publication and therefore of update (every 5

years for the UN against a higher frequency for Istat and every year for Eurostat). Other differences are related to the statistical methodology (either deterministic or probabilistic models), the underlying data, whose comparability becomes trickier as the number of countries increases, and the assumptions underlying projected data, with the most complex being those related to international migration patterns (UN, 2024) and the use of expert-based opinions.

Since notable methodological differences exist between the three institutions' approaches, it is unsurprising that resulting demographic projections differ. Although all forecasts indicate a gradual decline in Italy's population over the next sixty years, the UN medium-variant projections report a significantly more pronounced decline. Similarly, Italy's OAD ratio increase is much larger in the case of UN forecasts, reaching an exceptional 98 per cent by 2080, a share that is 10 percentage points higher than for Istat and Eurostat. UN medium-variant forecasts are indeed more conservative regarding net migration, aligning with the lower bound of Istat's confidence interval, whereas Eurostat's inclusion of a replacement migration component leads to a more optimistic scenario, occasionally exceeding Istat's upper confidence bound. In Figure 2 we report the five variables (in absolute terms, not relative to world averages) included in the demographic block of the EBA CA model, until 2029, computed for Italy across two UN vintages (2019 and 2024), Eurostat, and Istat. Whilst the projections from all the sources reach the same qualitative conclusions, quantitative differences are in some cases substantial, even within the next five years. Given the underlying methodological approaches, Eurostat and Istat projections, based on deterministic models, are always closer together than when compared to UN, based on probabilistic methods. The gap in the predictions across UN and Eurostat are common to all main euro-area countries.

Figure 2. Key demographic variables for Italy according to alternative data sources

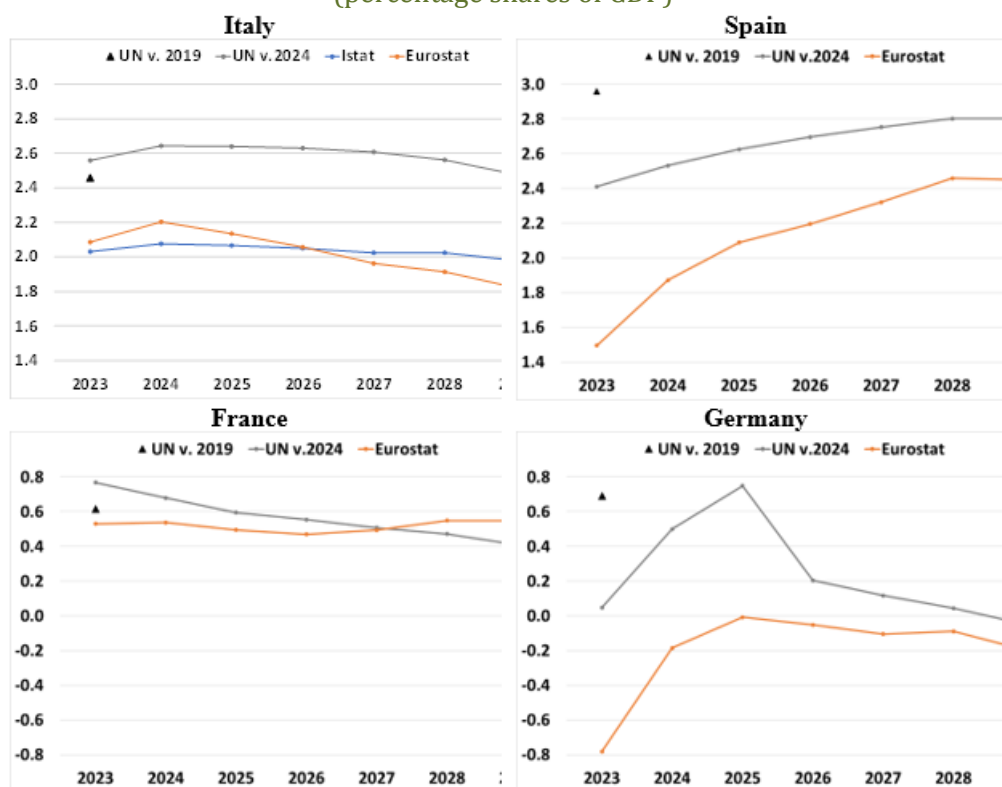


Source: authors' calculations on UN, Istat and Eurostat data. Notes: UN projections refer to the medium-fertility scenario. Istat does not publish projections for life expectancy at 45 and is therefore not reported in panel b. The Istat and Eurostat contemporaneous OAD ratios are very similar to the extent that the two series are not easily distinguished in panel d.

We next assess the impact of the alternative demographic projections on the CA norm both for Italy and the other main euro-area countries. We use the different sources to compute Italy's demographic indicators relative to world averages and compute the corresponding contributions to the CA norm by employing the fixed coefficients of the current EBA CA model. We measure the contribution of the demographic block not only for 2023, but also for the years up to 2029, assuming the EBA coefficients are not re-estimated. Our results, based on the 2019 UN vintage for 2023, replicate very closely the EBA demographic contributions for that year reported in the 2024 *External Sector Report* (IMF 2024). They are however included in Figure 3 only as a benchmark for 2023; indeed, since the 2025 *External Sector Report* (IMF, 2025) employs the more updated 2024 UN data vintage, we use the latter dataset as the new IMF benchmark for 2024 onwards.

The contribution of the demographic variables to the CA norm varies considerably in size according to the population projection source. For Italy, all three sources suggest a small rise in the contribution in 2024 and then a mildly downward trajectory until 2029. However, the contributions are between 0.5 and 0.7 per cent of GDP lower over the whole horizon when employing Istat or Eurostat projections, respectively, relative to those based on 2024 UN forecasts. The contribution based on Eurostat data is significantly lower than that based on 2024 UN also for Spain, although the differential narrows over time (from 0.9 per cent of GDP to 0.4 in 2029). Despite demography being less relevant for France and Germany's external imbalances, even for these economies the Eurostat-based estimate is again generally lower than the UN one.

Figure 3. The contribution of the EBA demography block to the main euro-area economies CA norms, according to different demography projections (percentage shares of GDP)



Source: authors' calculations on UN, Istat, Eurostat and IMF EBA data.

Potential econometric issues of the demographic block in the EBA model and their impact on CA norms

In this section we discuss potential model misspecification of the EBA CA model, which could lead to a further bias in the CA norm estimates. In particular, the IMF CA model may neglect some relevant determinants that interact with demography to affect saving decisions. According to the life-cycle hypothesis (Modigliani and Brumberg, 1954; 1980), individuals finance their consumption during retirement with saving during working years. Accordingly, the existing empirical literature finds that the elasticity of consumption to income is well below one (for the European Union, Carta and Depalo, 2025; for Italy, De Bonis et al., 2023; using micro level data, further evidence is in Battistin et al., 2009, and Ventura e Horioka, 2020). This is consistent with the view that current labour income is not intended to fund current consumption alone. Our intuition is that a reduction in unemployment or an increase in employment and labour market participation could place more individuals in the accumulation phase. The resulting increase in overall income (as labour market income is one of its main components) is partly allocated to building the stock of wealth needed to sustain consumption during retirement, which results in an increase in private savings.

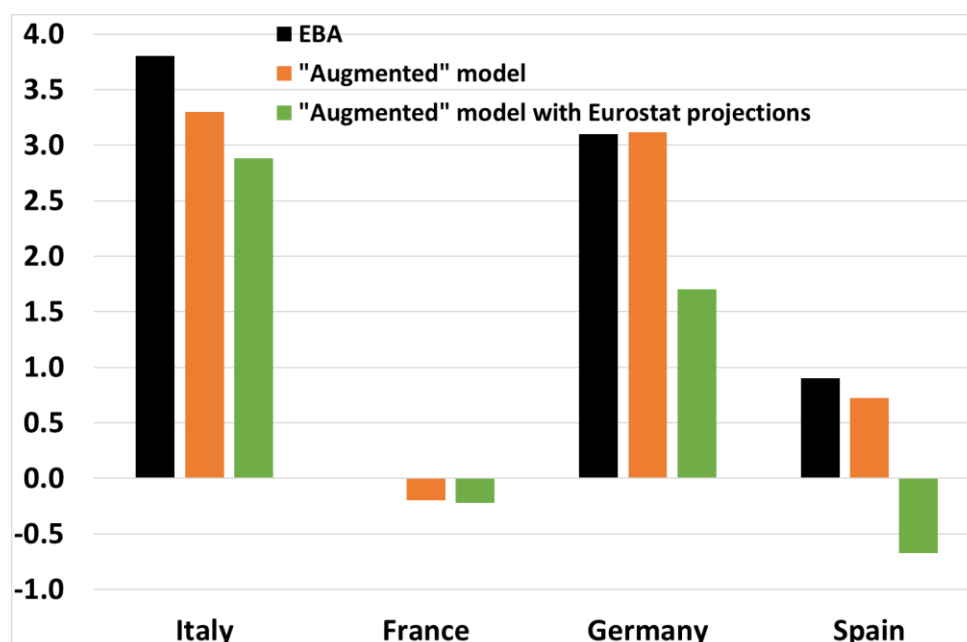
If the intuition is true and if labour-market features are relevant for the CA norm and correlated with other explanatory variables, then the EBA CA model may suffer from what is defined as an omitted variable bias. That is, on top of not capturing the direct effect of labour-market conditions on the norm, the chosen model specification would imply that all other estimated coefficients are biased; jointly, these limitations would jeopardize the estimated norm.

We consider the unemployment rate and the labour participation rate as (relatively easily accessible) key indicators of the labour market; when computed at annual frequency and relative to world averages, they may be considered as slow-moving, structural features of the labour market in a given economy. In all main euro-area economies, and Italy in particular, unemployment rates are higher than the world average, whereas the labour force participation rates are lower. Looking forward, even though the two labour-market characteristics are improving, their gap with the rest of the world is unlikely to narrow, because in emerging economies both indicators improve faster.

When we augment the IMF's CA model specification with the unemployment rate and/or the labour participation rate and re-estimate the model, the coefficients of the benchmark specification generally change only marginally, while those related to the demographic block change markedly. In particular, the magnitude of the OAD ratio and population growth coefficients decreases substantially and so does the associated statistical significance. Furthermore, the unemployment rate and the labour participation rate coefficients are found to be statistically significant. The former variable is negatively correlated with the CA balance, whereas the latter is positively. This result is consistent with the empirical evidence of an elasticity of consumption to income lower than one.

Figure 4 compares the EBA CA norm estimates for 2023 from the 2024 External Sector Report (IMF, 2024) of the four main euro-area economies (black bars) to those stemming from the "augmented" CA model specification (orange bars). Accounting for labour-market indicators, the norm estimate drops in all four main euro-area countries, particularly so in the case of Italy. All other things equal, Italy's CA norm would have been 0.5 percentage points lower, standing at 3.3 per cent of GDP. By further including Eurostat demographic projections in lieu of the 2019 UN projections employed in IMF (2024; green bars), the norm estimates are further narrowed across the board, going down to 2.9 per cent of GDP specifically in the case of Italy.

Figure 4. Estimates of the 2023 EBA CA norm of the main euro-area countries according to different models and projections
(percentage shares of GDP)



Source: IMF (2025) and authors' calculations on ILO, IMF WEO and IMF EBA data.

Conclusions

Demographic characteristics of a given country significantly affect saving decisions, and therefore its CA balance. For several advanced economies including Italy, CA norms – which are estimated by several international institutions as benchmarks against which actual CA balances are appraised – are indeed largely driven by the contribution of demographic variables. In its annual External Balance Assessment (EBA) the IMF measures the latter variables with UN population projections.

This policy note documents how: (i) UN forecasts point to more pessimistic long-term demographic outcomes for Italy than Eurostat and Istat; (ii) by keeping all other things equal in the IMF EBA model, the estimated contributions of the demographic variables to the CA norm differ significantly according to the demographic projections considered, also for the other main euro-area economies, with UN-based estimates markedly in the upper range; (iii) the inclusion of the unemployment and the labour participation rates as additional explanatory variables in the EBA model impacts only the coefficients of the demographic block, therefore implying a significant interplay between demographics and labour-market characteristics in affecting households' saving behaviour, and further narrows CA norm estimates, especially for Italy.

These results suggest that model-based point estimates of the CA norm should be considered with greater caution in the evaluation of external imbalances. The use of long-term demographic projections leads to high uncertainty around CA norm point estimates. Clearly, UN projections – which are the only ones available for a large set of countries and which are constructed consistently – are the only possible source for the EBA and for any other institution. However, cross-check estimates based on Eurostat projections, which are available for a significant subset of EBA countries, could be conducted. Moreover, in future revisions of the EBA and similar CA models it could be worth exploring the possibility of incorporating labour market indicators into the models to improve the robustness of external sector assessments.

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