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I. Introduction

The value added tax (VAT) is a broad-based tax on goods and services used or consumed within the European Union (EU). It is one of the main sources of revenue for EU Member States. In 2024, **VAT revenue represented 7.1% of the EU's gross domestic product (GDP) and 15.5% of total government revenue¹**, making it essential for funding public services and ensuring the fiscal stability of Member States. VAT is also important for the EU budget, as a share of its proceeds contributes to the EU's own resources. Moreover, VAT policy and administration influence how economies function and help shape the EU single market.

VAT is also a core revenue source in EU candidate countries and potential candidates. The average VAT revenue to GDP ratio in the group of participating countries was 11.3% and VAT proceeds contribution to total general government revenue ranged from 33% (Serbia) to 65% (Bosnia and Herzegovina)².

VAT revenue depends on three key elements: the size of the tax base, the standard VAT rate and the effectiveness of tax collection. Of these, VAT collection efficiency is especially important and varies widely across Member States. VAT is not collected in full from the reference tax base because of two reasons, namely the VAT compliance and policy gaps.

The **VAT compliance gap** represents the difference between the revenue that would be collected if all taxpayers were compliant with the tax rules and the actual revenue. This difference can be ascribed to a wide range of sources of forgone receipts, from the legal exploitation of loopholes in tax systems to evasion or organized large-scale tax fraud. Non-compliance can also be unintentional, resulting from administrative errors, omissions, non-fraudulent bankruptcies and other factors.

The **VAT policy gap** is the revenue loss due to policy decisions that narrow the tax base or reduce VAT liability for certain parts of the tax base, often referred to as VAT expenditures. These choices, reflected in the EU VAT Directive or national legislation, are typically implemented to provide certain incentives for taxpayers at the cost of VAT revenue. They may also be made due to difficulties in imposing payments on certain taxpayers or on specific types of goods and services.

To better understand and monitor the VAT collection efficiency, in 2009 the **European Commission** began estimating the VAT gap. From 2013, when the second report was published covering the period from 2000 to 2011, each autumn an updated analysis is released covering the VAT compliance and policy gaps in all EU Member States.

The VAT gap estimates presented in the Commission's reports use the so-called **top-down, consumption-side approach**. This method calculates the VAT Total Tax Liability (VTTL) – the amount that should be collected – using economic data from sources like Eurostat. This involves a complex process that brings together data from national accounts, tax returns and other sources, often requiring the calculation of around 10 000 parameters per year, including effective tax rates and deduction ratios.

¹ Eurostat [gov_10a_main].

² Excluding grants. Source: UNU-WIDER; depending on the country, the most up-to-date statistics used for the calculation refer to 2021, 2022 and 2023.

This year's report focuses on the period **2019-2023**. Notably, it introduces the analysis of EU candidate countries and potential candidates participating in the Fiscalis programme³. It provides annual estimates of the **VAT compliance gap** for each Member State and for the EU as a whole. It also includes '**fast estimates**' for 2024 for EU Member States, based on simplified methods using recent data. To allow comparisons over time, the results of previous studies have been adjusted using updated methods.

The **VAT policy gap** analysis presented in this report has undergone substantial revisions compared to previous studies. The new breakdown now distinguishes between elements that fall under the discretion of national administrations and those mandated by EU policy. Beyond this basic breakdown, the report further decomposes the policy gap to attribute forgone revenue to specific types of goods and services, sectors of economic activity, and categories of taxpayers. As in the VAT compliance gap analysis, the report focuses on the period 2019-2023, while also providing fast estimates for 2024 and backcasted estimates for earlier years.

In addition to the VAT compliance and policy gaps, the report presents other **indicators of collection efficiency**, including the 'actionable standard VAT rate' and the C-efficiency ratio. The former represents the VAT rate that would generate current revenue if all exemptions and reduced rates were removed, while the latter compares actual VAT revenue to potential revenue in an ideal system. Together, these indicators illustrate how revenue evolves over time depending on the size of the tax base, VAT rates and compliance levels. In addition to presenting granular statistics, the study investigates the sources of both non-compliance with VAT obligations and the VAT policy gap. It includes four **case studies** taking a closer look at specific issues. The first examines Member States that have experienced a post-COVID-19 increase in the VAT compliance gap, identifying common features among countries where non-compliance has recently risen. The second focuses on Italy, assessing the impact of the *Superbonus 110* scheme on VAT compliance and the parallel decline in the estimated VAT compliance gap following the introduction of this major subsidy programme. The third considers VAT receipt lotteries, reviewing the experience of Malta and Portugal, and the lessons learned from the adoption of these soft enforcement tools. The final case study investigates the drivers of changes in the VAT policy gap by decomposing the shifts observed in five selected Member States.

The estimates presented in this report rely on the most recent datasets available at the established cut-off date for data collection (15/07/2025), which is necessary to ensure timely finalisation of the analysis. National accounts and other underlying statistics are regularly updated and revised by statistical institutes and administrations, and such revisions may affect the resulting VAT gap estimates. For this reason, each annual edition systematically reassesses all data inputs and recalculates past estimates where needed, ensuring that the figures remain aligned with the best evidence available at the time of publication. The sources and vintages of data used are fully documented for transparency, and any revisions in future editions will continue to be clearly identified.

The report is structured into **eight chapters**. Following this introduction, Chapters 2 and 3 provide the economic and policy backgrounds, which are key drivers of the gaps analysed in subsequent sections. Chapter 4 examines VAT compliance gaps and the sources of their evolution. Chapter 5 turns to the VAT policy gap, exploring its components and the role of C-efficiency. Chapter 6 presents detailed estimates of both the VAT compliance and policy gaps in individual country chapters, outlines country-

³ Albania, Bosnia and Herzegovina, Georgia, Kosovo, Moldova, Montenegro, North Macedonia, Serbia and Ukraine. This designation is without prejudice to positions on status and is in line with UNSCR 1244/1999 and the ICJ Opinion on the Kosovo declaration of independence.

specific trends and offers analytical insights. Chapter 7 brings together the findings from the preceding chapters and provides a decomposition of VAT revenue components. Chapter 8 concludes with a description of the methodological approach.

The report is complemented by **nine annexes**. Annexes A and B provide details on recent changes in VAT rules in EU Member States, and in candidate countries and potential candidates. Annex C expands on Chapter 8 by presenting detailed methodological considerations regarding the limitations and challenges of the applied approach, as well as a breakdown of the VAT policy gap, whereas Annex D presents the review, assessment and refinements of the methodological approach. Annex E discusses data availability and reliability. Annex F contains simplified country chapters with estimates of the VAT compliance and policy gaps for four countries for which significant concerns about reliability remain. It also presents the macroeconomic background for Moldova, for which estimates of the compliance and policy gaps were not derived. Annex G presents the results of the analysis of past dissemination and visualisation practices. Annex H contains the external reviews of the inception and draft final reports prepared by two independent experts. The last annex, Annex I, provides a statistical appendix with country-level estimates, including the components of the VAT compliance gap and policy gaps.

II. Economic context

II.a. EU Member States

The 2019-2023 period covered by the fully-fledged VAT compliance and policy gap estimates was marked by significant global-scale events, including the COVID-19 pandemic, Russia's war of aggression against Ukraine, as well as high inflation and the subsequent cost-of-living crisis. Undoubtedly, those events had a major impact on the macroeconomic situation, affecting the structure and scale of consumption, the profitability of businesses, government spending, debt levels and the direction of policies, including tax policy. In real terms, after the post-COVID-19 rebound and amid ongoing supply shocks, the EU economy stalled in 2023, with average GDP growth at 0.3%. A moderate recovery is expected in 2024, with projected growth at 1.0%. However, economic performance varied substantially across Member States. The slowdown was widespread and only a few countries recorded stronger growth in 2023 compared to 2022. In nine Member States, in 2023 real GDP contracted, with the sharpest declines observed in Estonia (2.7%), Ireland (2.5%) and in Finland, Austria and Germany (around 1%).

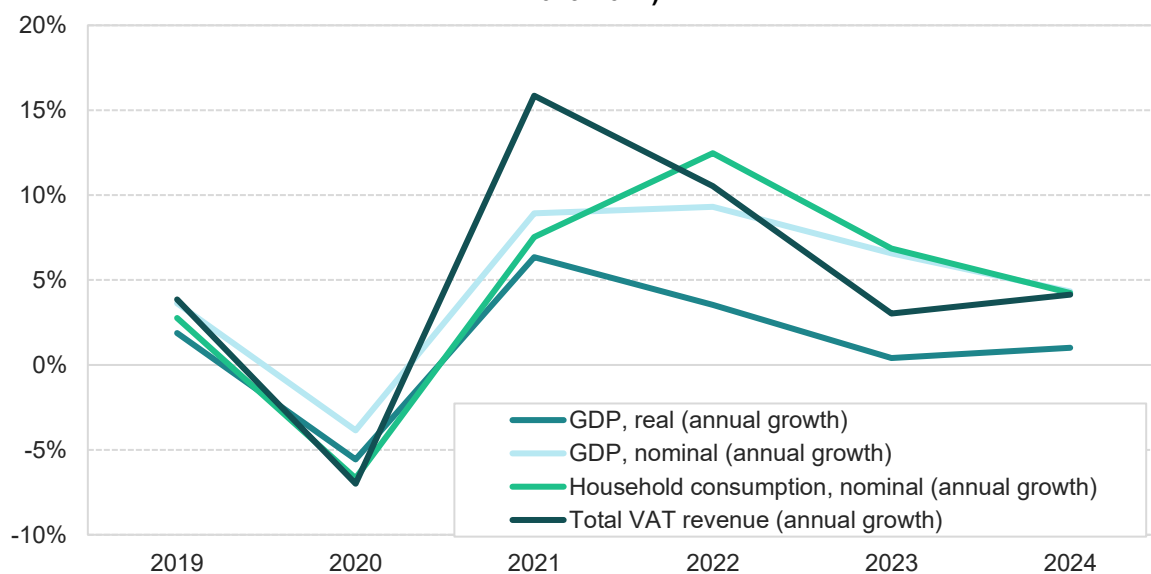
This wide variation in economic performance can be attributed to several factors: divergent monetary policy responses across non-euro area Member States, differing exposure to supply chain disruptions, particularly in economies with a large manufacturing base, the degree of dependence on fossil fuels and vulnerability to the energy price crisis. Variations in fiscal policy, including the degree of fiscal tightening following pandemic-related support measures, also played a role.

While real values (i.e., volumes) are typically used to assess economic activity, VAT revenue calculations and VTTL estimates are based on nominal values. During the period under consideration, inflation became a major issue as early as in 2022, driven by multiple factors including the expansionary fiscal and monetary policies implemented during the COVID-19 pandemic, disruptions to global supply chains and the energy crisis stemming from Russia's full-scale invasion of Ukraine. Given this context, the present analysis focuses on nominal values, which are directly linked to VAT revenue and VAT gaps, while providing real growth rates where relevant.

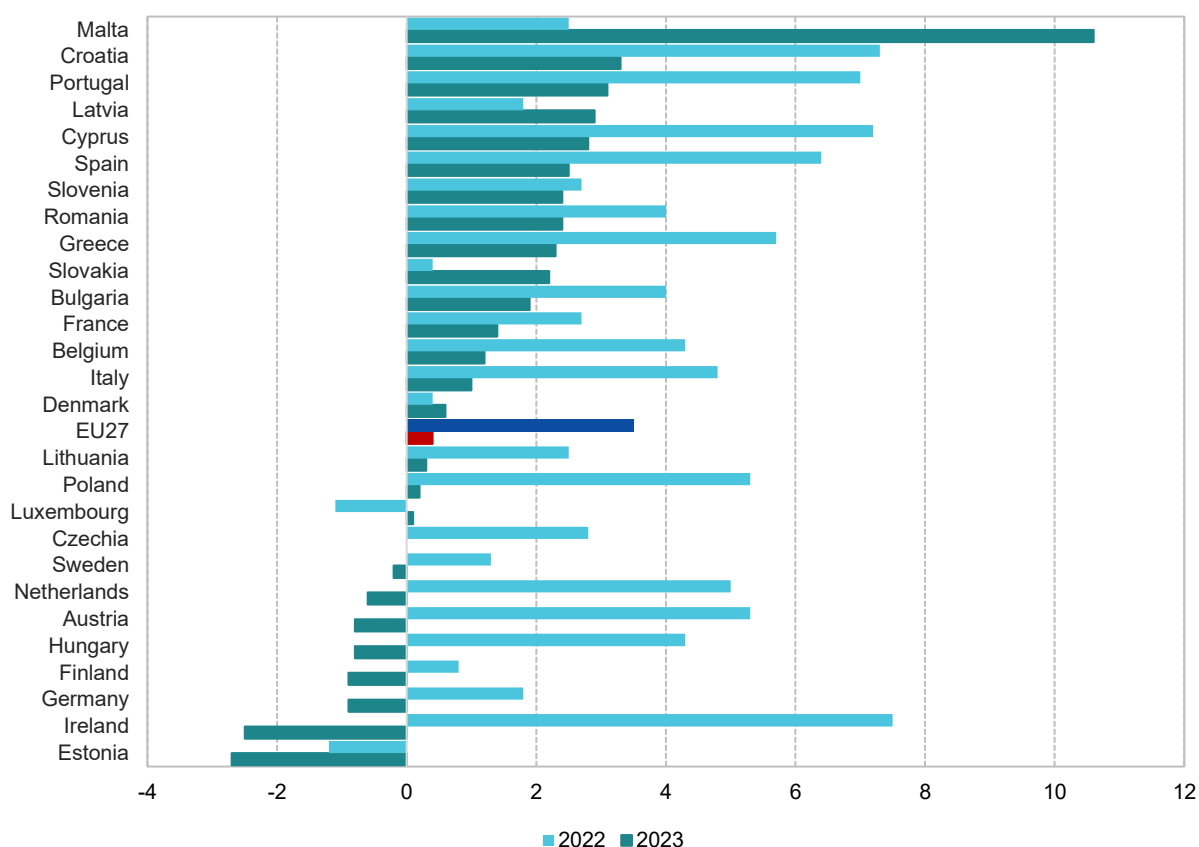
The COVID-19 pandemic and the subsequent introduction of restrictions led to a sharp reduction in economic activity, including household consumption, which in turn caused a decrease in VAT revenues (see Figure 1). Starting in 2021 and continuing in 2022, EU27 economies rebounded as restrictions were gradually lifted and normal business activity resumed. VAT revenue rose in nominal terms by approximately 15.9% in 2021 and 11% in 2022, outpacing cumulative household consumption growth in those years.

In 2023, however, VAT revenue growth slowed to 3.5%, signalling a clear deceleration in the pace of recovery. Importantly, this figure does not account for consumer price inflation, which stood at 6.4%. This means that, in real terms, VAT revenue declined compared to 2022, signalling a drop in collection efficiency and/or effective VAT rates. Preliminary data for 2024 indicate a slight increase in the VAT revenue growth rate up to the rate of growth of the tax base.

Figure 1. Growth in VAT revenue, GDP and household final consumption (EU27, % growth, 2019-2024)



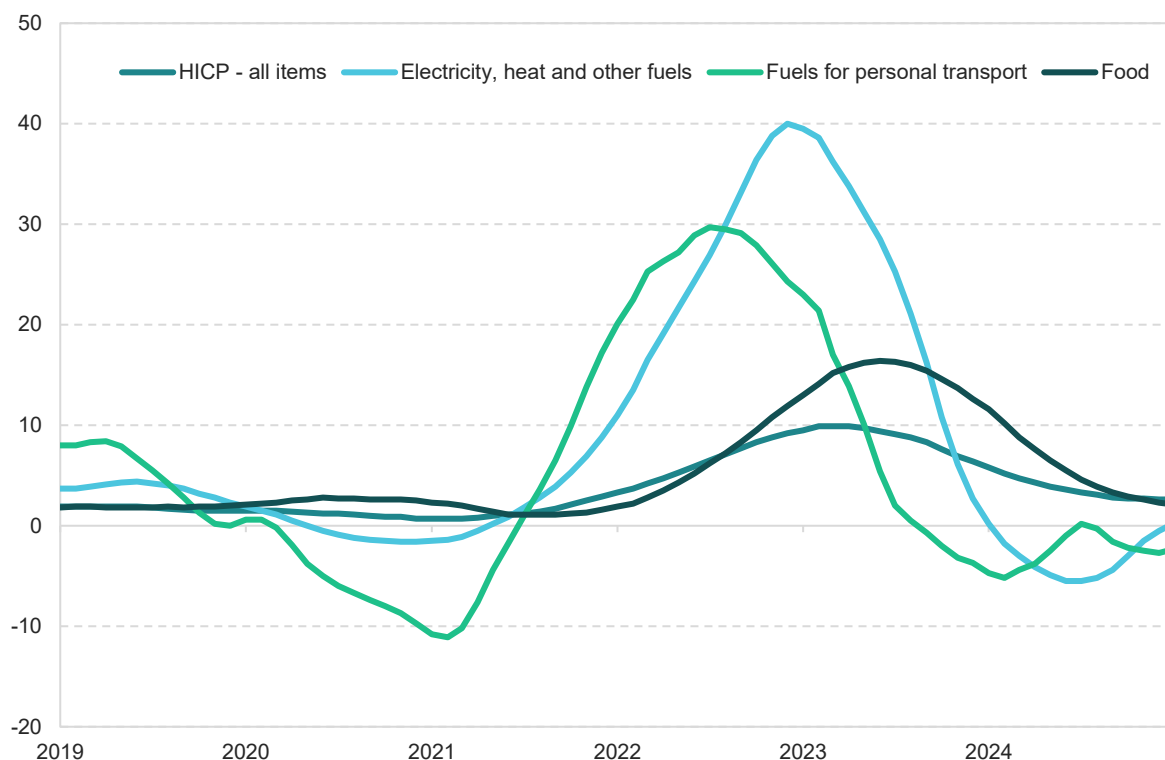
Source: own elaboration based on Eurostat (nama_10_gdp and gov_10a_main).

Figure 2. Real GDP growth rate (2022-2023)

Source: own elaboration based on Eurostat (nama_10_gdp).

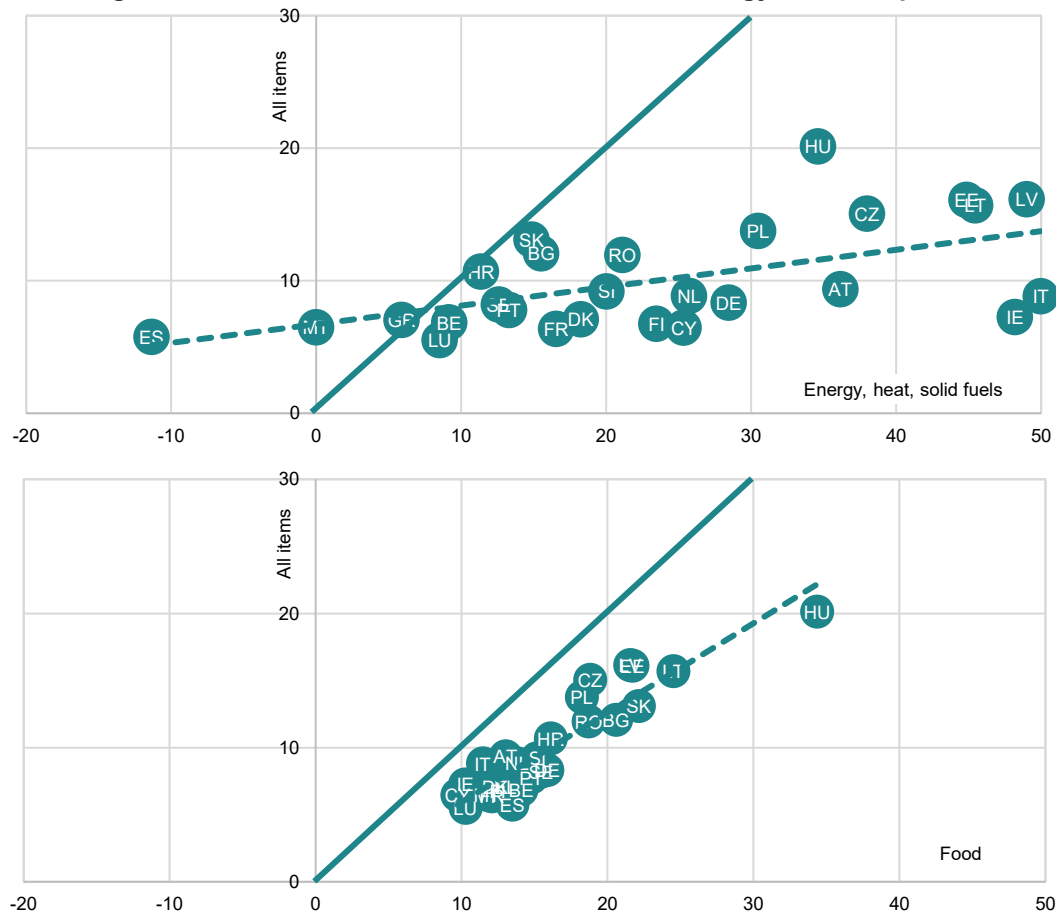
Inflation measured by the harmonised index of consumer price (HICP) (all items) at the EU level peaked in 2022 at 9.2% and remained elevated in 2023, standing at 6.4%. In addition to demand-side factors, such as strong consumption growth in preceding years supported by expansionary monetary and fiscal policies, significant supply-side pressures also played a role. In this vein, the main drivers of inflation were the energy-related shocks triggered by Russia's full-scale invasion of Ukraine and the resulting sanctions, which caused abrupt disruptions in global fuel markets, including oil, gas and coal.

In 2023, food inflation peaked, driven by global market trends and partly by spillover effects from energy prices, including higher costs for fuel, fertilizers and other inputs. These developments contributed to the ongoing cost-of-living crisis, and were among the key factors behind the sluggish growth of private consumption in both 2023 and 2024 (Figure 3).

Figure 3. HICP inflation and its components (2019-2024)

Source: own elaboration based on Eurostat (prc_hicp_mv12r).

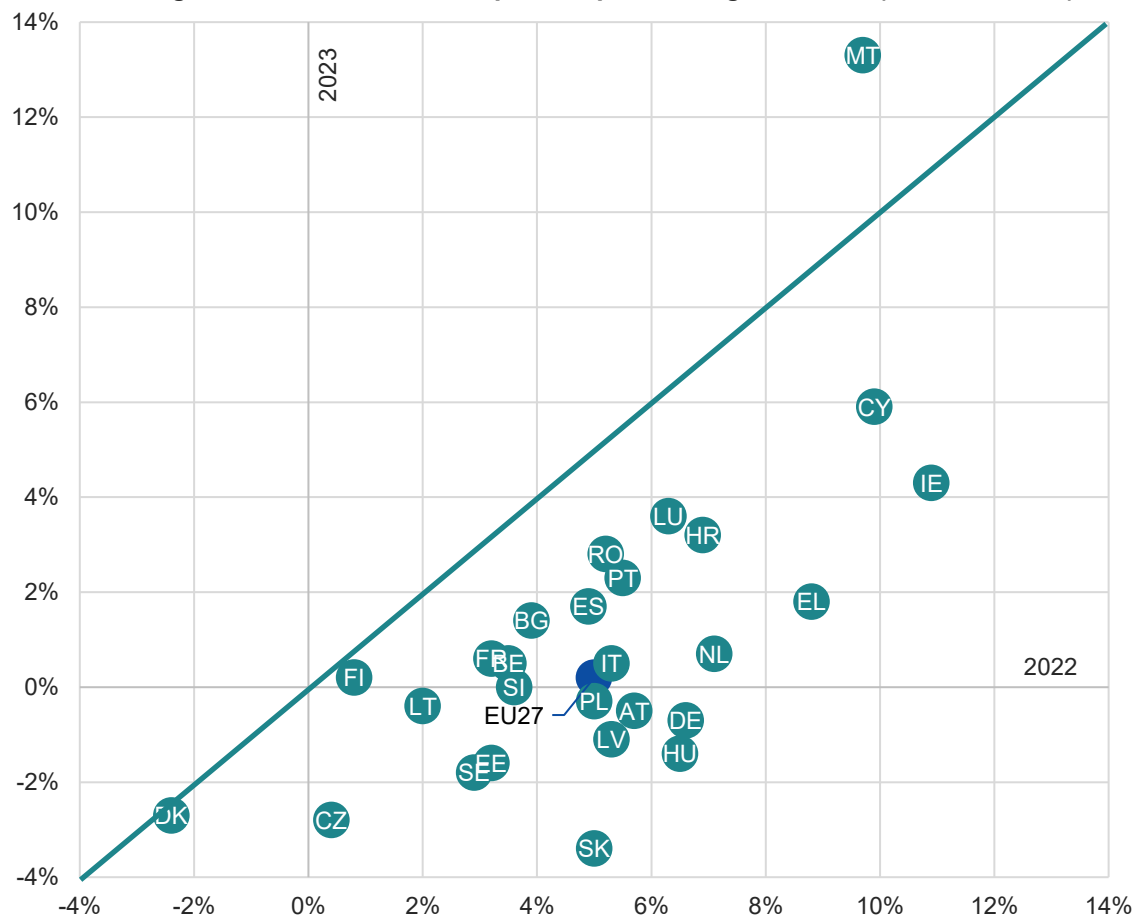
Inflation was widespread across EU Member States, but its intensity varied significantly. In general, higher inflation rates were observed in the Central and Eastern European EU Member States. Two main factors contributed to this pattern: (1) lower average incomes in Central and Eastern European countries result in higher expenditure shares on goods and services with the most volatile prices (i.e., food and energy), making overall inflation more pronounced; and (2) high reliance on fossil fuels (including imports from Russia) exposes Central and Eastern European countries to elevated energy prices. This is due to both the direct impact of Russia's war of aggression against Ukraine and the indirect effect of CO₂ emissions costs, which amplify the energy price burden (see Figure 4).

Figure 4. HICP inflation in 2023 and its drivers: energy and food prices

Source: own elaboration based on Eurostat (prc_hicp_mv12r). The dotted lines reflect linear regressions of all items of the consumer price index (CPI) on the respective explanatory variables. The solid 45-degree lines indicate a hypothetical one-to-one relationship between all items CPI and the respective explanatory variables.

The aforementioned slowdown in the growth of nominal household consumption in 2023 was partly due to the reduction of HICP inflation compared to 2022. However, it also reflected a slowdown in real household consumption, driven by weak income growth and the cumulative effects of past inflation. This slowdown is apparent at the EU27 level and across nearly all EU Member States, with the exception of Denmark and Malta.

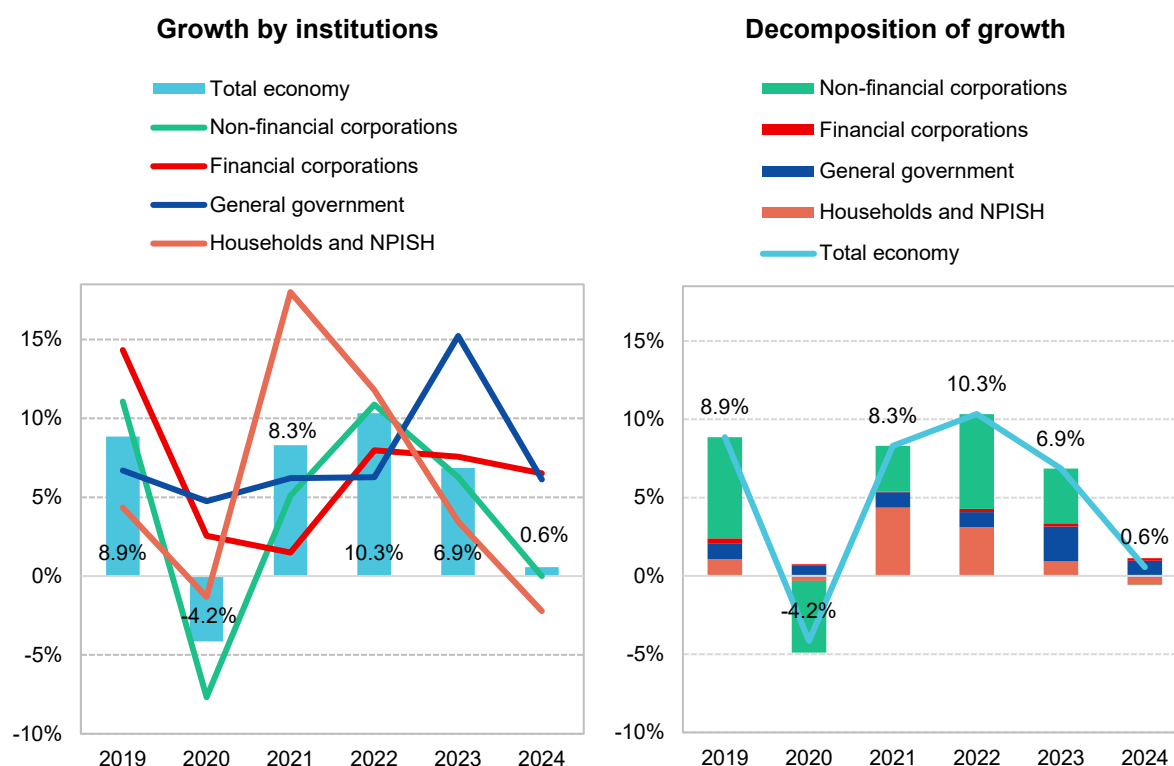
The reduced pace of household consumption growth contributed to weaker VAT revenue growth. This effect was further amplified by policy measures introduced to alleviate the cost-of-living crisis – particularly the application of reduced VAT rates on energy and/or food in selected EU Member States.

Figure 5. Real final consumption expenditure growth rate (2022 and 2023)

Source: own elaboration based on Eurostat (nama_10_gdp). Note: the solid line represents a 45-degree angle. Countries above the line experienced an acceleration in the growth of final consumption expenditure between 2022 and 2023, while countries below the line saw a slowdown.

Between 2019 and 2024, nominal investment (gross fixed capital formation, GFCF) growth in the EU27 varied notably across sectors, with public investment playing a stabilising role, particularly during the pandemic period. The strong post-pandemic recovery was supported by the EU's Recovery and Resilience Facility. General government investment growth surged to 15.2% in 2023 before moderating in 2024 to 6.1% (Figure 6).

As investment by non-financial corporations, households and non-profit institutions serving households (NPISH) slowed, public investment accounted for over one-third of the overall growth of nominal investment in 2023. The ongoing economic slowdown in the EU27 and high inflation dampened investment activity, with elevated uncertainty and tighter financial conditions particularly impacting households and non-financial corporations, resulting in weak or negative growth (at just 0.6% in 2024).

Figure 6. Growth in nominal investment (2019-2024)

Source: own elaboration based on Eurostat (nasa_10_nf_tr).

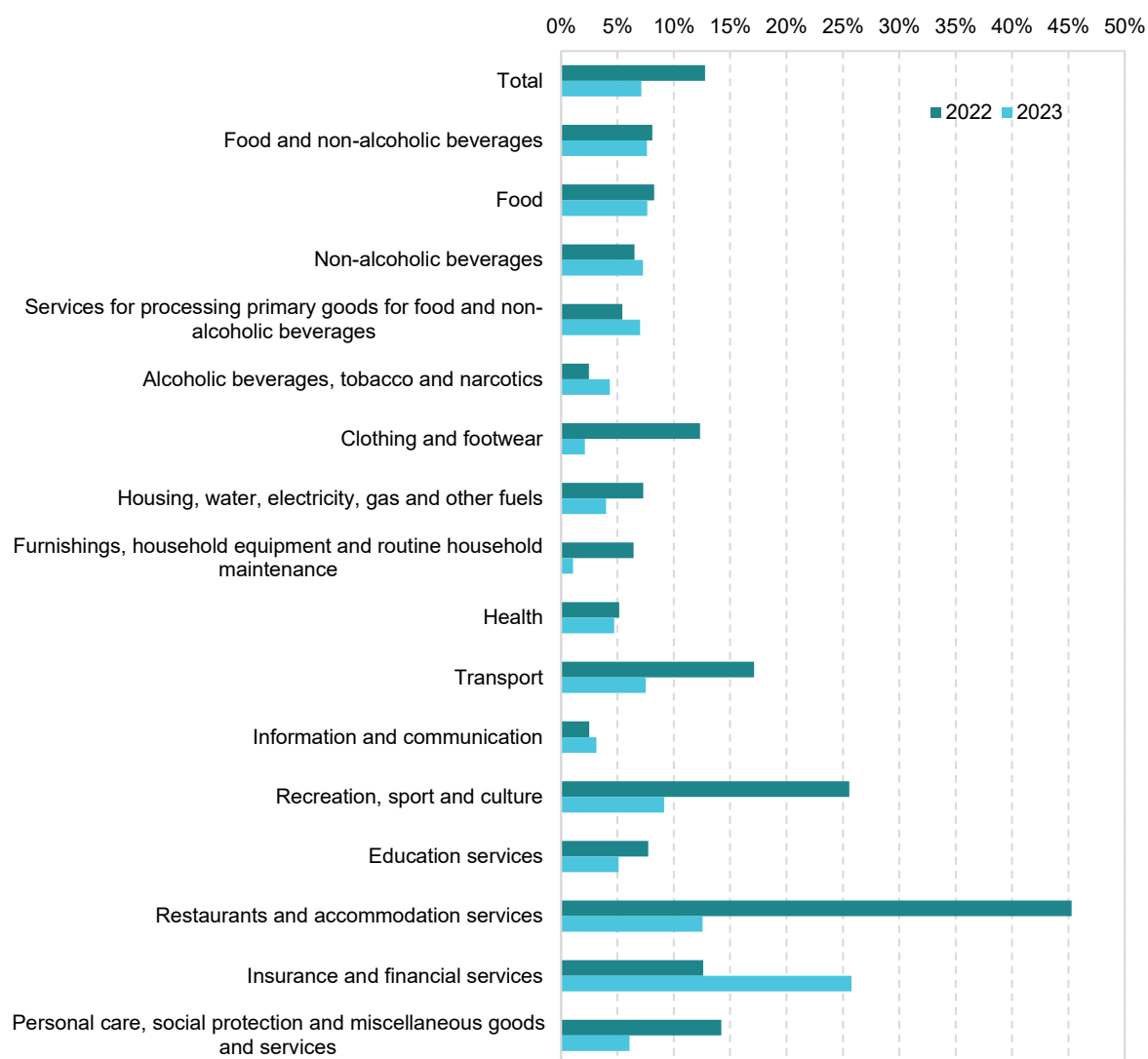
Nominal household final consumption showed significant variation between 2022 and 2023 (Figure 7). Notably, the fastest-growing categories in both years include financial services, restaurants and hotels, as well as recreation, representing a mix of services that may both increase and decrease VAT compliance. However, the latter group of services exhibited a marked deceleration in 2023 compared to the previous year.

Moderate growth was observed in essential categories like food and non-alcoholic beverages (from 8.1% in 2022 to 7.6% in 2023) and transport (from 17.1% in 2022 to 7.5% in 2023), both of which showed a clear downward trend. The lowest growth rates in 2023 were seen in furnishings, household equipment and routine household maintenance (1%), indicating subdued consumer spending in these areas.

Overall, the data reflect shifting consumer priorities and broader economic adjustments across the EU27 between the two periods, with a trend toward higher spending on everyday necessities and lower spending on durable goods (Figure 8). Despite the recent slowdown, categories such as insurance and financial services, food and non-alcoholic beverages, and restaurants and accommodation services have seen substantial cumulative increases in nominal household spending since the pre-pandemic year of 2019 – largely driven by changes in both absolute and relative price levels. Those consumption patterns can influence VAT compliance through the volume and types of transactions, i.e., the relatively fast growth of expenditure on manufactured goods can be expected to increase the average VAT

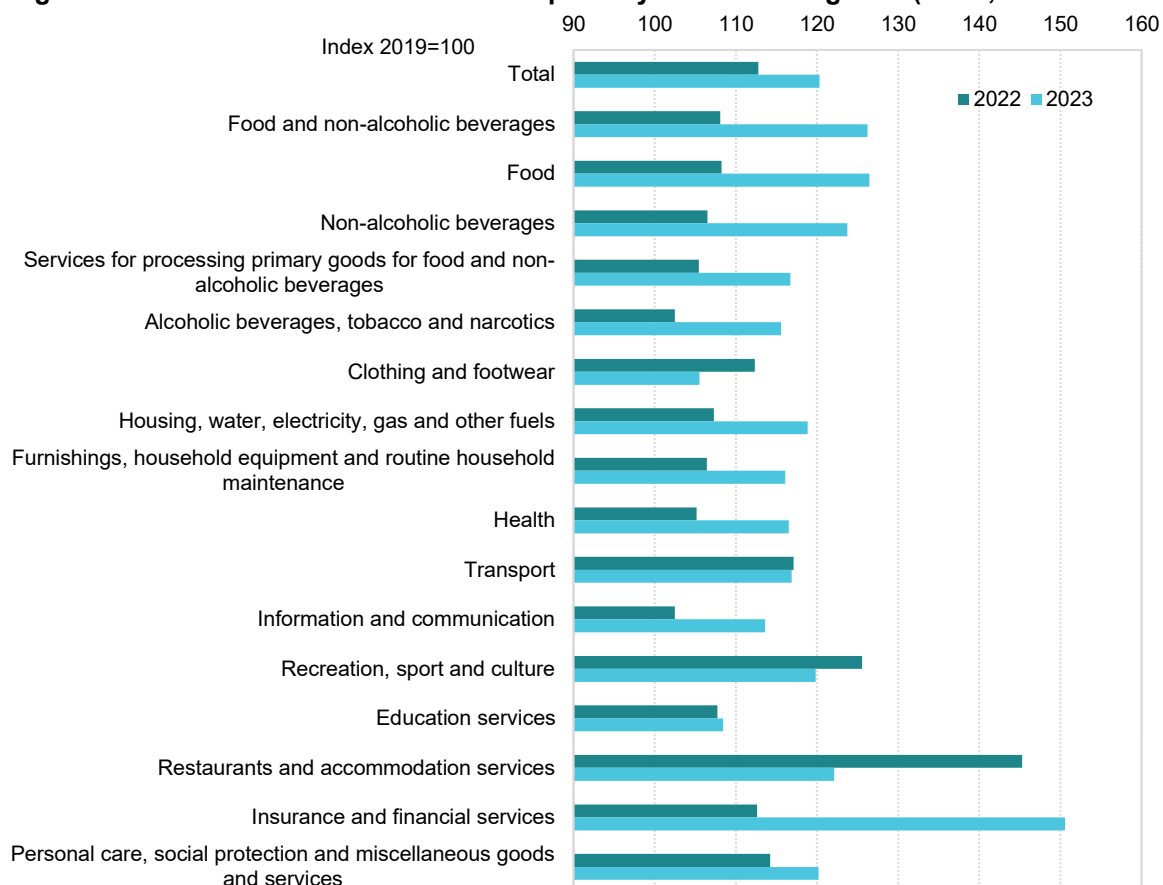
compliance level, while increased spending on hospitality and other services is expected to impact VAT compliance negatively⁴.

Figure 7. Growth in nominal household final consumption by COICOP categories (EU27, % annual growth, 2022 and 2023)



Source: own elaboration based on Eurostat (nama_10_cp18).

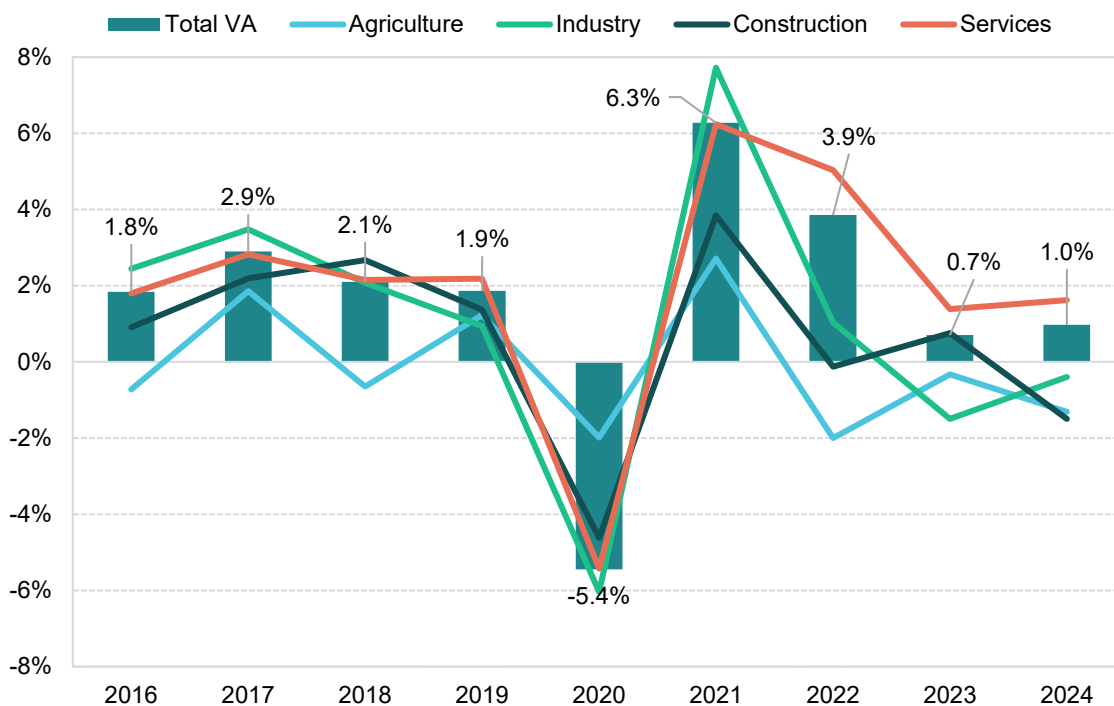
⁴ While no solid empirical evidence exists on the relationship between the share of such services and VAT compliance, the share of cash transactions in total transaction value is correlated with changes in the VAT compliance gap. See also Alognon et al. (2021) and Madzharova (2014).

Figure 8. Nominal household final consumption by COICOP categories (EU27, 2022 and 2023)

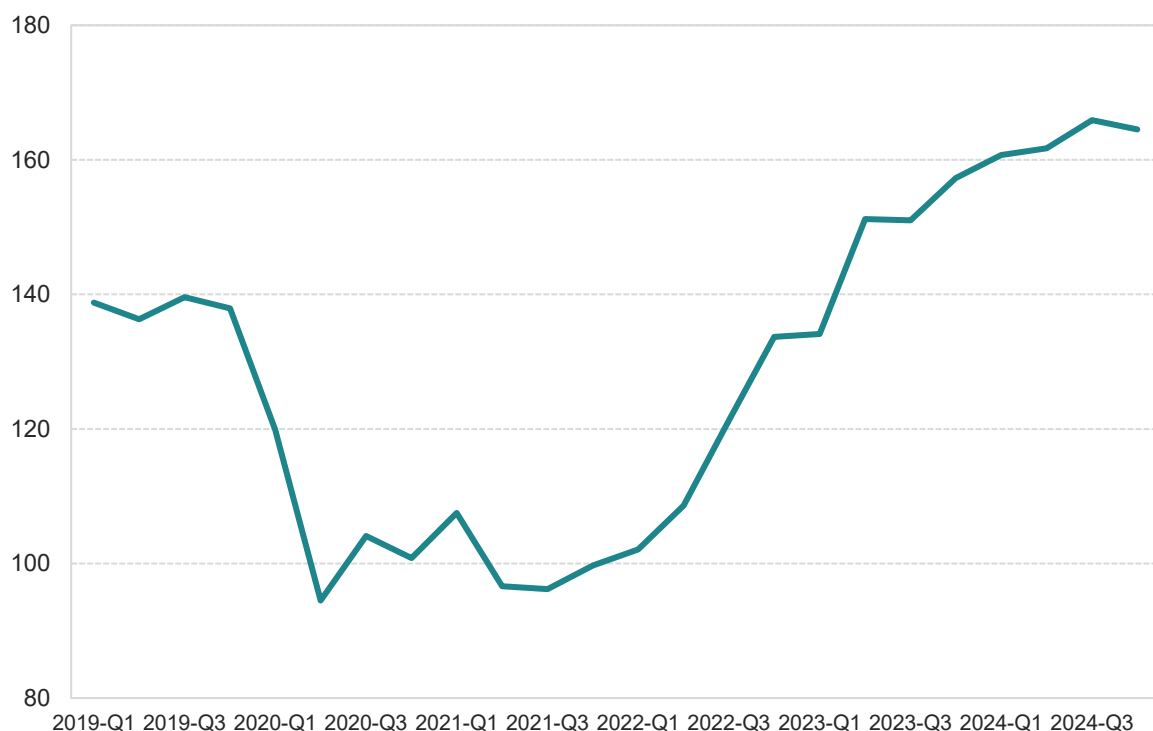
Source: own elaboration based on Eurostat (nama_10_cp18).

In the pre-pandemic period, the EU economy showed signs of deceleration of growth in industrial sectors, while services continued to expand (Figure 9). After a significant dip in activity in 2020, both manufacturing and services rebounded significantly in 2021. In the subsequent years, however, industrial activity experienced a significant slowdown, with output contracting by 1.5% in 2023 and 0.4% in 2024, compared to growth at 1% in 2022. Meanwhile, the services sector maintained solid performance in 2022 (5% growth), and continued to expand in both 2023 and 2024.

Nevertheless, by 2023, all key sectoral growth drivers in the EU economy had weakened considerably. This deterioration was reflected in a rising number of bankruptcies in 2022 and 2023 (Figure 10), suggesting significant financial challenges stemming from both negative supply factors and weak demand.

Figure 9. Growth in real value added by sector (EU27, % growth, 2016-2024)

Source: own elaboration based on Eurostat (nama_10_a10).

Figure 10. Bankruptcy declaration index (EU27, 2021 = 100, 2019-2024)

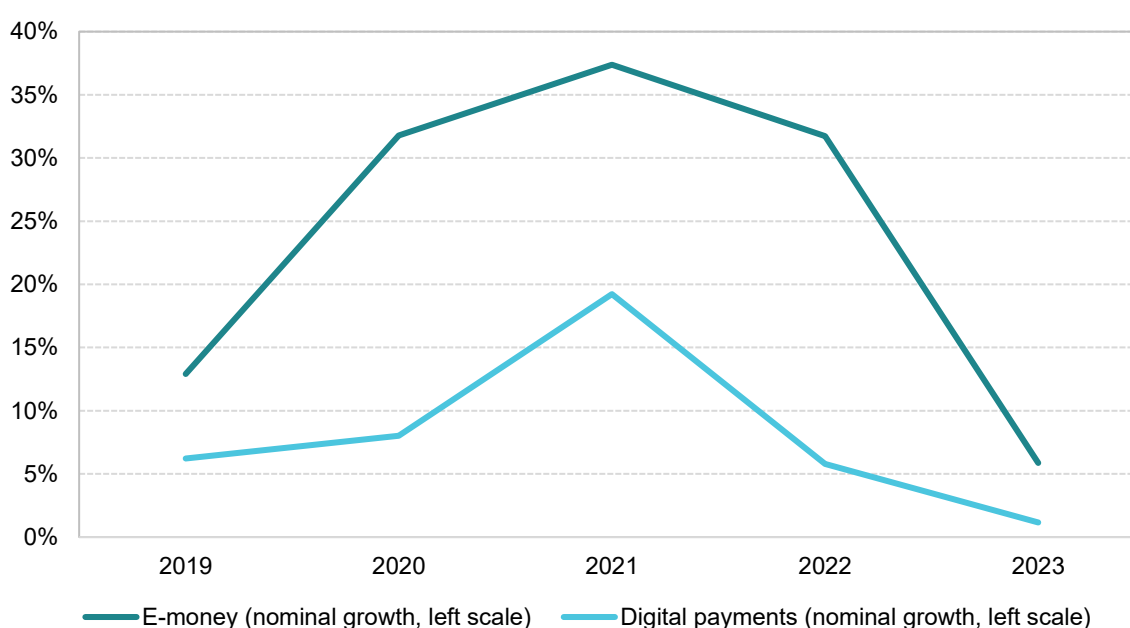
Source: own elaboration based on Eurostat (sts_rb_q).

During the COVID-19 pandemic the EU Member States saw a significant increase in digital (non-cash) payments. The survey results presented in ECB (2024) show that the most dramatic change occurred between 2019 and 2022, when the share of cash transactions in total transactions at point of sale dropped from 72% to 59% in terms of number and, more slowly, from 47% to 42% in terms of value.

The trend continued between 2022 and 2024, but a slower pace. During the same period, other forms of payments, such as application payments (i.e., forms of e-money) also gained in importance. The results presented in European Commission (2024) show that greater prevalence of e-money payments is associated with higher VAT compliance.

While the aforementioned survey is useful for illustrative purposes, comparable annual data showing the importance of digital payments in overall payments at points of sale are lacking. Consequently, the study team resorted to the data on payments from the European Central Bank, which include all transactions, not just at points of sale. While the shares of the various forms of payment in all transactions are not comparable with the data from points of sale, the trends seem to confirm the message from the survey, i.e., the growth of both e-money and digital payments was largely subdued in 2023 (and lower than the growth rate of nominal GDP), contributing negatively to VAT compliance.

Figure 11. Value of e-money and digital payments, growth (EU27)



Source: ECB payments data. 'E-money is broadly defined as an electronic store of monetary value on a technical device that may be widely used for making payments to entities other than the e-money issuer. The device acts as a prepaid bearer instrument which does not necessarily involve bank accounts in transactions' ([ECB website](#)). The digital payments aggregate takes into account payments with cards, e-money, direct debits and bank transfers.

Below is a summary of the evolution of selected economic indicators likely to affect the VAT compliance gap. These measures are presented either as growth rates (2023 vs. 2022), or as shares (e.g., the contribution of services to GDP). In both cases, the interpretation as regards the expected impact on the VAT compliance gap relies on the change between 2022 and 2023.

The expected impact of each indicator on the VAT compliance gap is classified as follows:

Decrease – a factor likely to reduce the VAT compliance gap, given the most recent developments of this factor;

Neutral – no expected effect;

Increase – a factor likely to widen the VAT compliance gap, given the most recent developments of this factor.

In the assessment of the expected impact, we assume that other explanatory factors remain broadly stable (*ceteris paribus*).

This categorisation is based on the following assumptions:

- **GDP (real growth rate); final consumption expenditure (nominal growth rate):** Stronger economic growth tends to reduce the VAT compliance gap, since favourable economic tailwinds generally lower the incentive to evade tax obligations (see e.g., European Commission, 2022). In 2023, both indicators decelerated compared to 2022, suggesting that, *ceteris paribus*, this slowdown may have contributed to an **increase in the VAT compliance gap**.
- **Household final consumption of food and non-alcoholic beverages (nominal growth rate):** Spending on food and non-alcoholic beverages typically mitigates non-compliance, as these are easily taxable goods, low risk items. An accelerated growth broadens the VAT base in a transparent way, helping to reduce the VAT compliance gap (see e.g., Lv, 2020). The sharp drop in the growth rate of household consumption of these products implies a less favourable structure of consumption, which could have exerted upward pressure on the VAT compliance gap, i.e., contributed to an **increase in the VAT compliance gap**.
- **Services share in GDP (nominal growth rate), services susceptible to non-compliance (nominal growth rate):** A larger services sector, particularly as regards services susceptible to non-compliance such as recreation, restaurants and accommodation, tends to increase enforcement challenges compared to goods. An increase in the service share of GDP is therefore expected to contribute to a widening of the VAT compliance gap (see e.g., Cevik et al., 2019). In 2023, the overall share of services in GDP decreased slightly, and the growth of services susceptible to non-compliance even considerably. This suggests a (mild) narrowing effect, i.e., a **decrease in the VAT compliance gap**.
- **Tourism activity – nights spent (growth rate):** Higher tourism activity often expands cash-based operations and informal operations, complicating VAT collection. The pronounced slowdown in tourism growth in 2023 likely reduced these risks and supported an improvement in VAT compliance, i.e., likely contributed to a **decrease in the VAT compliance gap**.
- **Bankruptcy declarations (growth rate):** Rising bankruptcies complicate the recovery of VAT liabilities and increase the risk of unpaid VAT liabilities. Moreover, a higher incidence of bankruptcies signals broader economic instability, which undermines revenue predictability and creates additional challenges for tax administration. The strong year-over-year growth in bankruptcies signals heightened compliance challenges, contributing likely to an **increase in the VAT compliance gap**.
- **Digital payments (nominal growth rate):** digital payments are associated with the traceability of transactions and discouragement of VAT non-compliance. A faster growth of digital payments can therefore be linked to a lower VAT compliance gap (see e.g., Bohne et al. (2023)). The slower growth observed in 2023 may have dampened this positive trend, thereby limiting potential gains in VAT compliance and leading to an **increase in the VAT compliance gap**.

Table 1. Factors affecting VAT compliance gap (2022-2023)

Variable	2023	Change from 2022 to 2023	Expected impact of the change on 2023 VAT compliance gap
GDP, real growth rate	0.4%	-3.1pp	Increase
Final consumption expenditure, nominal growth rate	6.6%	-3.9pp	Increase
Household final consumption of food and non-alcoholic beverages growth, nominal	12.5%	-32.7pp	Increase
Services susceptible to non-compliance, nominal growth rate	8.2%	-5.7pp	Decrease
Services share in GDP, level	72.6%	-0.1pp	Decrease
Tourism activity (nights spent), growth rate	6.8%	-43.4pp	Decrease
Bankruptcy declarations, growth rate	28.2%	13.0pp	Increase
Digital payments growth, nominal	1.2%	-4.6pp	Increase

Source: own elaboration based on Eurostat.

To better illustrate the macroeconomic developments described above, Table 2 presents the main components of national accounts and inflation for all EU Member States over the 2022–2023 period. The table summarises both real and nominal growth rates of GDP, household final consumption and investment (gross fixed capital formation), together with consumer price inflation. These indicators provide a concise overview of the differing economic trajectories across Member States and form the empirical basis for the macroeconomic background analysis discussed in the following sections, especially in country chapters.

Table 2. Main components of national accounts, inflation (growth rates, %, 2022-2023)

	GDP, real		GDP, nominal		HH final consumption, real		HH final consumption, nominal		Investment (GFCF), real		Investment (GFCF), nominal		Consumer Price Inflation	
	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023
Belgium	4.3	1.2	11.4	5.8	3.5	0.5	14.2	6.6	1.7	3.5	11.1	8.4	10.3	2.3
Bulgaria	4.0	1.9	20.6	10.0	3.9	1.4	20.5	9.7	6.5	10.2	26.0	20.9	13.0	8.6
Czechia	2.8	0.0	11.8	8.6	0.4	-2.8	15.0	5.7	6.3	4.2	17.9	9.6	14.8	12.0
Cyprus	7.2	2.8	14.4	6.7	9.9	5.9	16.7	9.9	10.8	10.7	20.6	13.0	8.1	3.9
Denmark	0.4	0.6	10.9	-1.5	-2.4	-2.7	5.3	0.3	1.8	-3.8	10.3	0.3	8.5	3.4
Germany	1.8	-0.9	8.3	5.8	6.6	-0.7	13.9	6.1	-0.1	-2.0	10.5	3.8	8.7	6.0
Estonia	-1.2	-2.7	15.4	5.7	3.2	-1.6	21.1	7.2	-14.4	2.3	-3.1	6.7	19.4	9.1
Ireland	7.5	-2.5	16.1	0.8	10.9	4.3	19.3	13.6	2.8	13.4	11.2	18.6	8.1	5.2
Greece	5.7	2.3	12.6	8.3	8.8	1.8	15.1	6.6	16.4	6.6	21.9	10.0	9.3	4.2
Spain	6.2	2.7	11.2	9.1	4.9	1.7	11.7	7.3	3.3	2.1	12.4	5.3	8.3	3.4
France	2.7	1.4	5.8	6.5	3.2	0.6	8.3	7.7	-0.4	0.4	5.8	3.5	5.9	5.7
Croatia	7.3	3.3	15.9	15.4	6.9	3.2	18.3	11.9	10.4	10.1	19.5	20.0	10.7	8.4
Italy	4.8	1.0	8.4	7.2	5.3	0.5	12.5	5.5	7.4	10.1	13.7	11.6	8.7	5.9
Latvia	1.8	2.9	11.8	9.1	5.3	-1.1	19.8	7.8	-1.6	9.9	12.3	16.9	17.2	9.1
Lithuania	2.5	0.3	19.0	9.4	2.0	-0.4	20.9	8.5	5.2	9.3	19.0	15.3	18.9	8.7
Luxembourg	-1.1	0.1	5.1	7.0	6.3	3.6	12.5	8.3	-13.9	-5.1	-3.9	3.6	8.2	2.9
Malta	2.5	10.6	7.7	16.3	9.7	13.3	15.6	20.5	14.4	-15.9	20.3	-10.9	6.1	5.6
Netherlands	5.0	-0.6	11.5	5.7	7.1	0.7	15.2	7.7	3.4	1.5	10.3	5.0	11.6	4.1

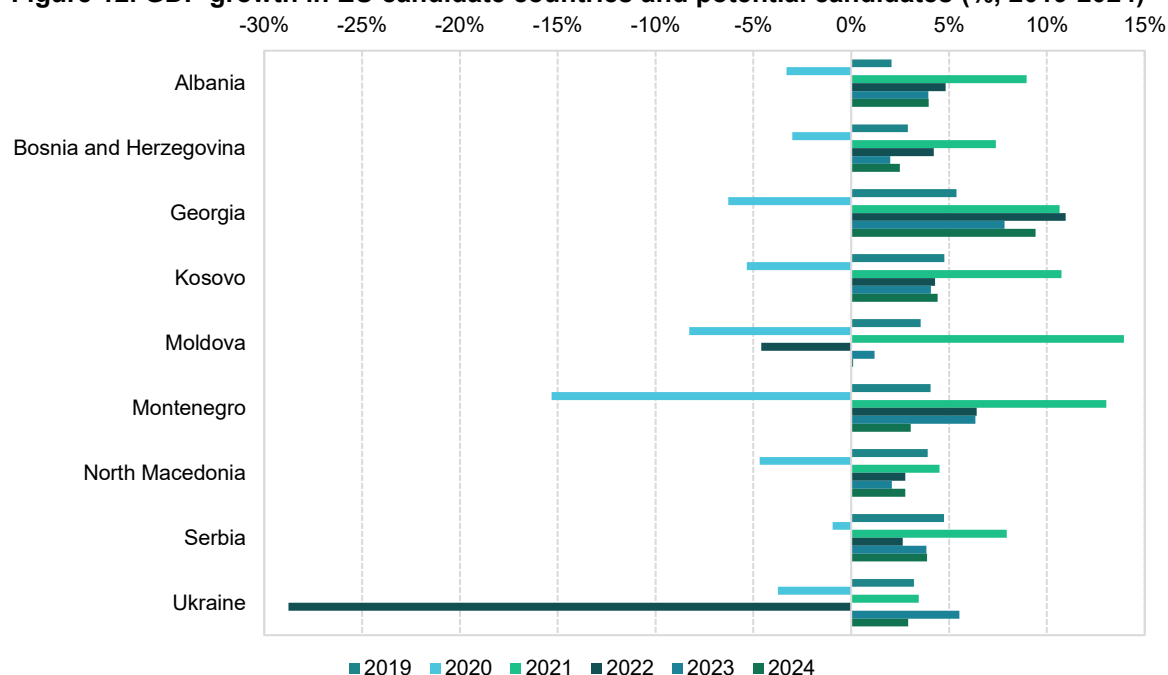
	GDP, real		GDP, nominal		HH final consumption, real		HH final consumption, nominal		Investment (GFCF), real		Investment (GFCF), nominal		Consumer Price Inflation	
	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023
Austria	5.3	-1.0	10.3	5.6	5.1	-0.7	13.3	7.6	0.4	-3.2	8.6	3.3	8.6	7.7
Poland	5.3	0.2	16.5	10.1	5.0	-0.3	19.8	9.1	1.7	12.7	13.1	20.0	13.2	10.9
Portugal	7.0	2.6	12.7	9.8	5.5	1.9	13.3	6.3	3.3	3.6	13.1	7.2	8.1	5.3
Romania	4.0	2.4	16.5	15.5	5.2	2.8	19.8	12.8	5.4	14.5	19.7	24.4	12.0	9.7
Slovenia	2.7	2.4	9.3	12.6	3.6	0.0	13.6	7.6	4.7	5.5	19.0	10.6	9.3	7.2
Slovakia	0.4	2.2	8.0	12.5	5.0	-3.4	17.5	6.5	4.3	4.0	15.3	13.4	12.1	11.0
Finland	0.8	-0.9	7.0	2.5	0.8	0.2	7.1	4.6	1.5	-7.4	8.0	-3.0	7.2	4.3
Sweden	1.3	-0.2	7.4	5.6	2.9	-1.8	9.8	4.8	0.2	0.1	9.4	4.9	8.1	5.9
EU27 (total)	3.5	0.4	9.3	6.6	5.0	0.2	12.6	6.9	2.0	2.1	10.5	6.5	9.2	6.4
EU27 (median)	3.4	1.1	11.4	7.8	5.1	0.5	15.0	7.6	3.3	3.8	12.7	9.0	9.0	5.9

Source: own elaboration based on Eurostat.

II.b. EU candidate countries and potential candidates

Compared to current EU Member States, EU candidate countries and potential candidates experienced relatively faster growth in 2023, with an average real GDP growth rate of approximately 4%. However, considerable variation across countries exists. The highest growth was observed in Georgia (7.8%), Montenegro (6.3%) and Ukraine (5.5%). By contrast, Moldova stood out as an outlier, with real GDP growth of just 1.2% in 2023, the lowest among this group, following a sharp contraction in the previous year. Moldova's weak performance was largely due to regional instability stemming from Russia's war of aggression against Ukraine and a significant decline in agricultural output. In Ukraine, the direct impact of the war led to a dramatic GDP contraction of 28.8% in 2022, followed by a modest recovery in 2023.

When compared to EU Member States, several candidate countries and potential candidates demonstrated stronger real GDP growth in 2023. Many Western European economies, such as Germany, Finland and Ireland, experienced stagnation or even contraction.

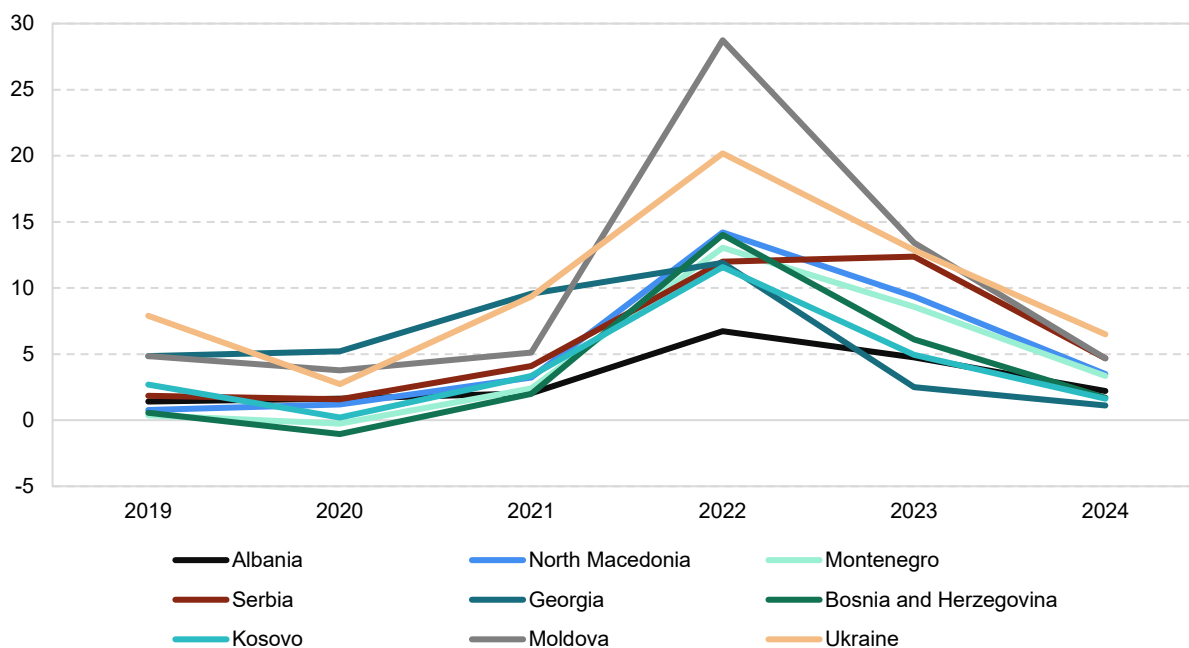
Figure 12. GDP growth in EU candidate countries and potential candidates (% , 2019-2024)

Source: own elaboration based on World Bank.

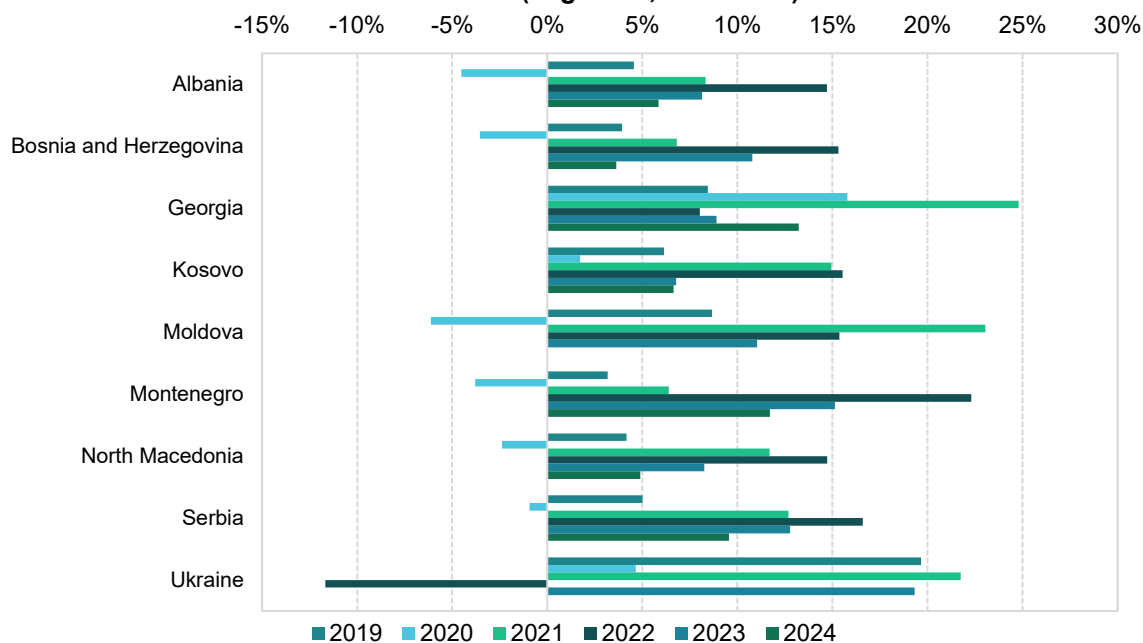
Between 2019 and 2024, EU candidate countries and potential candidates experienced significant economic fluctuations. Inflation rose sharply in most countries during 2022, peaking at over 14% in North Macedonia, and Bosnia and Herzegovina, and reaching as high as 28.7% in Moldova. As in the Central and Eastern European EU Member States, these inflation spikes were driven by the energy crisis, and exacerbated by the overall economic and political instability in Eastern Europe. Inflation slowed down in 2023 and 2024, albeit unevenly, with Ukraine and Moldova recording the highest rates.

High inflation contributed to the rapid growth of the nominal values of tax base components. In most candidate countries, 2022 saw the highest rate of growth in nominal household final consumption. Notable exceptions include Ukraine, where Russia's war of aggression began. In the remaining countries (except Georgia where nominal growth rates remained similar), nominal consumption growth slowed down in 2023, mirroring the trends observed in the Central and Eastern European EU Member States. Furthermore, Ukraine, Moldova and Georgia household consumption growth in real terms declined in 2022 as the effect of ongoing geopolitical and economic turbulences.

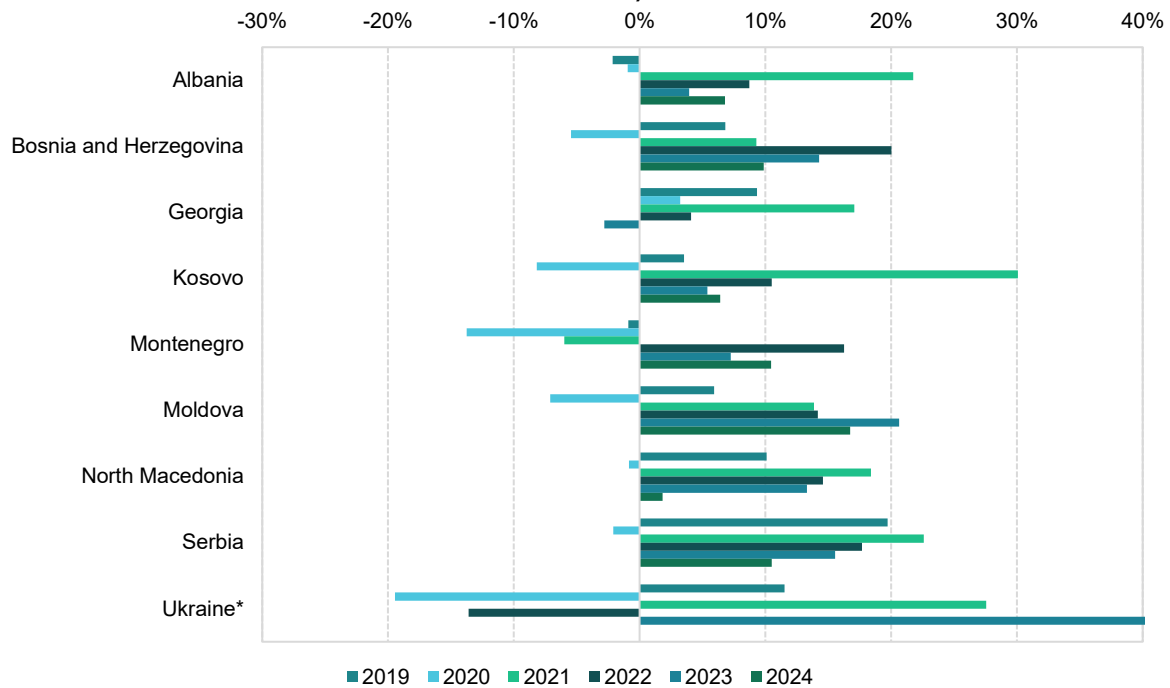
In 2023 investment performance was uneven across EU candidate countries and potential candidates. Real growth rates were generally lower than in the previous year but remained positive. Ukraine stood out, registering a 65.9% increase in real GFCF in 2023, after a 33.9% contraction in the previous year. Georgia also experienced a significant acceleration in investment, while Moldova recorded investment stagnation following a decline of 10.5% in 2022. Nominal investment trends largely followed the real GFCF growth patterns, although some deviations are visible due to differences in investment goods price dynamics.

Figure 13. Annual CPI in EU candidate countries and potential candidates (% , 2019-2024)

Source: own elaboration based on World Bank.

Figure 14. Growth of household final consumption in EU candidate countries and potential candidates (% growth, 2019-2024)

Source: own elaboration based on Eurostat (nama_10_gdp), Geostat and the National Bureau of Statistics of the Republic of Moldova.

Figure 15. Growth of nominal GFCF in EU candidate countries and potential candidates (% , 2019-2024)

Source: own elaboration based on Eurostat (nama_10_gdp), Geostat and the National Bureau of Statistics of the Republic of Moldova. (*) In Ukraine in 2024 the growth rate of nominal GFCF was 112%.

Table 3. Main components of national accounts in EU candidate countries and potential candidates (growth rates, %, 2022-2023)

	GDP, real		GDP, nominal		HH final consumption, real		HH final consumption, nominal		Investment (GFCF), real		Investment (GFCF), nominal		Consumer price inflation	
	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023
Albania	4.8	3.9	18.5	20.6	6.1	3.1	14.7	8.1	1.6	1.7	8.7	4.0	6.7	4.8
Bosnia and Herzegovina	4.2	2.0	16.5	9.4	1.8	1.0	15.3	10.8	0.3	12.1	20.0	14.3	14.0	6.1
Georgia	11.0	7.8	20.0	11.0	-2.8	4.7	8.0	8.9	9.9	29.4	14.2	20.6	11.9	2.5
Kosovo	4.3	4.1	11.8	8.8	3.4	3.1	15.5	6.8	-3.2	4.5	10.5	5.4	11.6	4.9
Moldova	-4.6	1.2	13.4	10.6	-4.8	-1.7	15.4	11.0	-	0.0	4.1	-2.8	28.7	13.4
Montenegro	6.4	6.3	19.6	17.5	9.7	6.5	22.3	15.1	0.1	6.9	16.3	7.2	13.0	8.6
North Macedonia	2.8	2.1	11.9	10.1	5.5	1.1	14.7	8.4	3.7	5.7	14.6	13.4	14.2	9.4
Serbia	2.6	3.8	13.5	18.4	3.5	0.6	16.7	13.0	2.2	9.7	17.8	15.7	12.0	12.4
Ukraine	-28.8	5.5	-8.9	8.8	-28.7	4.3	-16.2	2.7	-33.9	65.9	-18.1	82.4	20.2	12.9

Source: Eurostat (nama_10_gdp), Geostat, the National Bureau of Statistics of the Republic of Moldova and the World Bank.

III. Policy context

III.a. Changes in VAT policy in the EU and EU Member States

In this section, a summary of changes in EU VAT regimes throughout 2023 and 2024 is presented. This analysis, necessary to calibrate the parameters of the VTTL model, was carried out with the use of questionnaires aimed at EU Member States' tax and statistical authorities⁵, European Commission's sources and specialised repositories for EU VAT⁶. These changes are enumerated in Table 110 (for 2023) and Table 111 (for 2024) in Annex A.

During the period in scope of the analysis, most of the changes introduced by Member States focused on preferential VAT treatment, and the scope and structure of reduced rates (including zero-rating). On the one side, this was a response to the economic crises of the last five years. Following the COVID-19 pandemic and the energy crisis triggered by Russia's war of aggression against Ukraine, many EU countries introduced temporary VAT reductions and exemptions as part of their fiscal response to these crises. These measures were intended to provide immediate relief to businesses and households facing higher costs of living and operating costs.

On the other side, this was a direct consequence of the so-called Reduced VAT Rates Directive⁷, adopted in April 2022, which introduced significant changes to the EU VAT rate structure. This directive allows EU Member States to apply reduced and zero VAT rates to any supply for which derogations exist at the national level, thus giving Member States more flexibility, within the scope and quantitative limits of the directive. Key changes include the possibility for Member States to apply up to two reduced rates of no less than 5% to specific categories, including, e.g., essential goods, but also to goods and services linked to the achievement of the EU Green Deal objectives, such as the installation of solar panels or efficient heating systems or the supply of renewable energy sources. In addition, Member States can apply super-reduced or zero rates to any good or service that benefits from this treatment in at least one Member State.

⁵ Information on changes to the VAT national rules was provided for the following countries: CY, DE, EE, IE, EL, ES, HR, LV, LT, MT, AT, SI and FI.

⁶ Sources: (1) European Commission, (n.d.), Taxes in Europe Database v3. Directorate-General for Taxation and Customs Union, retrieved from https://ec.europa.eu/taxation_customs/tedb/#/home; (2) Eurofiscalis, (n.d.), VAT rates in UE, retrieved from <https://www.eurofiscalis.com/en/vat-rates-in-ue/>; (3) Marosa, (n.d.), EU VAT, retrieved from <https://marosavat.com/>; (4) KPMG, TaxNewsFlash-Indirect Tax, retrieved from <https://kpmg.com/xx/en/home/insights/2018/05/taxnewsflash-indirect-tax.html>; (5) Tax Foundation, (n.d.), EU VAT Rates & EU VAT Directive, retrieved from <https://taxfoundation.org/blog/eu-vat-rates-eu-vat-directive/>; (6) Access2Markets, EU Commission, Changes in VAT rates in certain EU Member States applicable on 1 January 2024, retrieved from <https://trade.ec.europa.eu/access-to-markets/en/news/changes-vat-rates-certain-eu-member-states-applicable-1-january-2024>; (7) Global VAT Compliance, <https://www.globalvatcompliance.com/>; (8) KMLZ, VAT Newsletter: Overview of the changes in VAT law for 2023, retrieved from https://www.kmlz.de/en/VAT/Newsletter_58_2022; (9) Lithuanian National Radio and Television, <https://www.lrt.lt/>; (10) Ministry of Finance Republic of Latvia, Changes in taxation in 2023, retrieved from <https://www.fm.gov.lv/en/changes-taxation-2023>; and (11) EY, Zmiany w stawkach VAT od 2023 roku, retrieved from https://www.ey.com/pl_pl/insights/tax/tarcza-antyinflacyjna-oraz-zmiany-w-stawkach-vat-w-2023.

⁷ Council Directive (EU) 2022/542 of 5 April 2022 amending Directives 2006/112/EC and (EU) 2020/285 as regards rates of value added tax.

Box 1. The Reduced VAT Rates Directive

The Reduced VAT Rates Directive introduced a number of new provisions concerning the use of reduced rates by Member States. First, it limited the categories of products to which reduced or super-reduced rates/zero-rating can be applied (down to 24 and 7, respectively), a limit which will be progressively enforced by 2032. Specific limitations for certain supplies were also provided. This is the case for fossil fuels and pesticides, which shall not benefit from reduced rates from 2030 and 2032 onwards, respectively, and housing, with a minimum reduced rate of 12% from 2042 onwards. Secondly, subject to the above limitations, Member States can opt to adopt national derogations on reduced rates and zero-rating that are currently applied by other Member States, thus expanding the list of supplies which can benefit from a preferential VAT treatment.

During 2023 and 2024, most Member States removed at least some of their emergency measures, restoring the preceding VAT rates, especially with respect to energy products⁸. However, in a non-negligible number of cases, relevant measures were introduced, extended or made permanent, especially those introduced to provide relief from inflation. The preferential VAT treatment covered, e.g., natural gas (e.g., in Bulgaria, Croatia and Italy), foodstuffs (e.g., in Bulgaria, Poland and Spain), construction works (in Belgium) and fertilisers (in Poland).

In addition to the preferential VAT treatment for specific products, throughout 2023 and 2024, Cyprus, Czechia and Malta made changes to the categories of goods and services eligible for reduced VAT rates, while also modifying the rate structure by introducing or removing categories of reduced rates. Furthermore, notable changes regarded the introduction of zero-rating for essential goods (e.g., food, hygiene and medical products) in countries like Cyprus, Spain, Ireland and Poland, and zero-rating for solar panels in Germany, Ireland, Austria and the Netherlands, again in accordance with the Reduced VAT Rates Directive.

Finally, and importantly, in three EU Member States, the standard VAT rate rose. Estonia and Finland increased their standard VAT rates from 20% to 22%, and from 24% to 25.5%, respectively⁹. In Luxembourg, the temporary decrease expired and the standard rate returned to 17% (from 16%). Furthermore, efforts to relieve the tax and administrative burden on small and medium-sized enterprises (SME) were made, with Bulgaria, Latvia, Italy and Portugal introducing or raising their VAT registration thresholds, thereby allowing micro businesses to benefit from VAT exemption. This is linked to the implementation of the VAT SME Directive¹⁰, which was transposed during this period. Although the directive did not require adjusting the threshold, a number of countries did so in the context of the transposition process.

On a related aspect, Italy also increased the turnover thresholds determining the VAT payment periods. The changes increased the turnover threshold for supplies of services to EUR 500 000 compared to EUR 400 000 and for supplies of goods to EUR 800 000 compared to EUR 700 000. In 2024, Germany increased the turnover limit for using the cash accounting regime from EUR 600 000 to EUR 800 000.

⁸ Some of these measures were removed in the following countries: CY, DE, ES, FI, IE, IT, LU, LV, LT, PT, RO, SI and PL.

⁹ As of January and September 2025, respectively.

¹⁰ Council Directive (EU) 2020/285 of 18 February 2020 amending Directive 2006/112/EC on the common system of value added tax as regards the special scheme for small enterprises and Regulation (EU) No 904/2010 as regards the administrative cooperation and exchange of information for the purpose of monitoring the correct application of the special scheme for small enterprises.

As for compliance measures, in 2023 a significant change occurred in Poland, where VAT groups were introduced. Poland also provided for the option to tax financial services from 2024 onwards. Optional reverse charge on intra-EU supplies was introduced or expanded in a few Member States (e.g., Germany and Hungary) and the trend also extended to domestic supplies (e.g., construction services in Belgium and waste services in Spain). In Malta, new penalties and requirements were introduced for submitting VAT forms and information, including, e.g., recapitulative statements and VAT returns. In Belgium, changes to the VAT statute of limitations led to a modification of the standard period, which was extended to four years if a VAT return is filed late or not at all, to seven years for cases involving incorrect VAT exemptions or deductions and to ten years in instances of fraud.

E-reporting and e-invoicing requirements are another area undergoing rapid change. In Portugal, local e-invoicing requirements and SAF-T were extended to foreign VAT-registered businesses. The SAF-T and e-Transport systems started being deployed in Romania for larger taxpayers and higher-risk transactions. Spain extended VAT deferments by waiving the requirement for guarantees when the deferred amount does not exceed EUR 50 000 and increasing the time lapse for granting or repaying VAT deferments. In Croatia, starting from 2024, taxable persons registered for VAT purposes are required to submit electronically the notice regarding adjustments of the taxable base.

As a result of efforts to implement Council Directive 2020/284¹¹, several countries implemented compliance measures related to payments intermediated by payment service providers in the context of cross-border transactions with a view to combating cross-border VAT fraud. For instance, Slovenia introduced ad-hoc recording and notification obligations for payment service providers on payments made to suppliers of cross-border supplies of goods and services. Similarly, Latvia also implemented rules aimed at payment service providers to keep records of, store and provide information on payees and cross-border payments. Austria and Croatia also aligned with the directive by including such provisions in their respective national laws.

In 2023 and 2024, several EU countries also made adjustments related to the recovery of VAT on bad and lost debts. For instance, Bulgaria introduced defined procedural steps for recovering VAT on bad debts. Similarly, Spain and Slovakia simplified the requirements for the same process. In Slovakia, additional flexibility was provided by expanding the range of circumstances under which VAT could be reclaimed. In 2023, Latvia lowered the threshold for VAT bad debt claims, allowing more businesses to reclaim VAT on previously ineligible debts. Furthermore, in 2024, the threshold for lost debt eligible for VAT recovery was increased from EUR 430 to EUR 1 000 (excluding VAT).

III.b. VAT rules in EU candidate countries and potential candidates

General considerations

All nine EU candidate countries and potential candidates covered by the study have a long-established VAT system. Former Soviet countries (Ukraine, Moldova and Georgia) introduced VAT shortly after their independence, in 1992-93. Balkan countries (Serbia, Bosnia and Herzegovina, Montenegro, North Macedonia, Kosovo and Albania) did so more recently, mostly in the early 2000s.

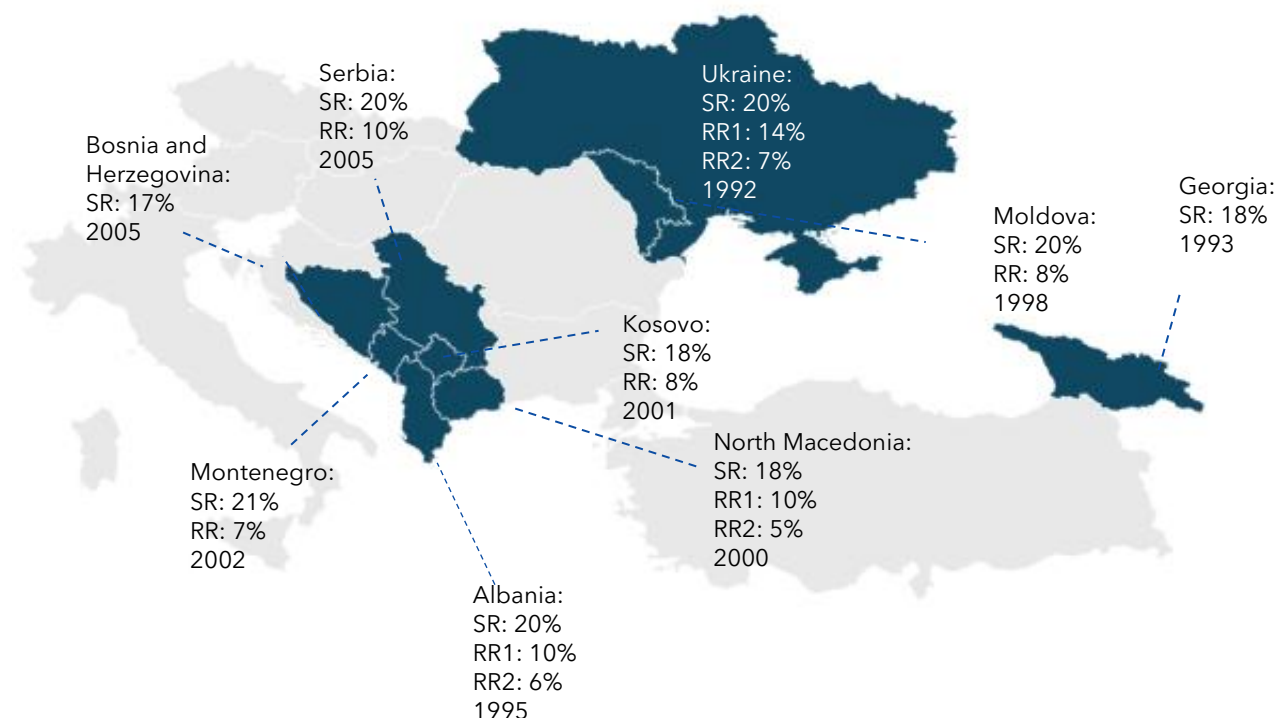
The systems are largely inspired by, and thus fairly similar to, the EU VAT system. National laws often copy the structure, the jargon and many of the provisions of the VAT Directive. The scope of the

¹¹ Council Directive (EU) 2020/284 of 18 February 2020 amending Directive 2006/112/EC as regards introducing certain requirements for payment service providers.

domestic VAT systems is the same as in the EU and is homogenous among the countries. It includes: (1) local supplies of goods and services; (2) importation of goods; and (3) importation of services supplied to taxable persons. In Albania and Kosovo, the scope also explicitly includes international supplies of digital services to private consumers.

The standard statutory VAT rates fall within the range of EU rates, from 17% in Bosnia and Herzegovina to 21% in Montenegro. **All countries except for Georgia, and Bosnia and Herzegovina provide for one or two reduced rates, which vary from 5% to 14%.** Most of the systems considered were rather stable in the period of the analysis (2019-2023), except for variations to rates and exemptions, which were introduced, among others, in response to COVID-19, Russia's war of aggression against Ukraine and the resulting inflation spike.

Figure 16. Neighbouring countries in the scope of the study, year of introduction of VAT and current rates



Note: SR: standard rate; RR: reduced rate; RR1, RR2: first or second reduced rate. Source: own elaboration.

Scope of reduced rates

As in the EU, the reduced VAT rates often target essential goods and services, or goods and services with a social or cultural value. In a number of cases, reduced rates are introduced for specific sectors, tailored to the local economic environment, or to reduce prices for similar consumers. Essential goods and services include, among others, medical products and services, and agricultural and food products. The former category benefits from reduced rates in, e.g., Serbia, Ukraine, Kosovo and Montenegro, while the latter falls under reduced rates in Albania, Moldova and Serbia. Energy supplies, including natural gas, electricity and heating, are also commonly subject to reduced rates, as in Moldova, North Macedonia, Kosovo and Serbia. Some of these reduced rates on essential goods and energy-related services are a consequence of changes in tax legislation aimed at easing the effects of the COVID-19 pandemic and the energy crisis from 2020 to 2023.

Additionally, reduced rates are often related to public and passenger transport services, and cultural and entertainment services – like theatre, museums and concerts. Similarly, books, newspapers and educational materials often benefit from a similar treatment. Some countries also extend reduced rates to specific construction activities, including new residential buildings and sports facilities, such as North Macedonia and Albania.

Exemptions with no right of deduction

The main differences between the local and the EU VAT systems concern the scope of the exemptions and zero-rating, which is typically broader in EU candidate countries and potential candidates.

As in the EU, exemptions from VAT with no right of deduction commonly include merit goods and services, such as health and medical services, and education. Financial and insurance services are also exempt in most of the countries considered. Exemptions related to energy products and services exist in Albania, Moldova and Ukraine. As for essential goods, exemptions can be found in almost all countries, except for Serbia, Georgia and North Macedonia.

Exemptions for the supply of land and immovable property, including leasing, are similarly widespread, for instance in Albania, Moldova, Serbia and Kosovo, often with options to tax these supplies under certain conditions. In some countries, such as Albania and Georgia, selected construction and renovation services are also exempt. Postal services, cultural, funeral and religious services, and gambling or betting activities also frequently appear as exempt categories. Public transport and public broadcasting services are other common exemptions in most countries analysed. Additionally, some countries list more specific exemptions reflecting national priorities. For instance, Ukraine and Moldova include charity and humanitarian aid, while Georgia exempts the supply of goods originating from occupied territories as well as supplies to oil and gas operations. Agricultural machinery and equipment are exempt in Moldova and were so in Albania until 2021.

Exemptions with right of deduction (zero-rating)

As in the EU, zero-rated supplies include international transportation of goods and passengers, diplomatic supplies, and certain financial and intermediary services. In general, zero-rating is often used for exports, humanitarian aid and goods supplied within special economic zones or free trade areas.

Several countries apply zero rates to energy-related supplies such as natural gas, electricity, heating and renewable energy equipment, for instance Moldova, Georgia and Montenegro. In some cases, medicines, and health products and services are zero-rated, such as in Georgia, Ukraine and Montenegro.

As shown in Table 4 below, countries without reduced rates for energy, such as Albania, Georgia and Ukraine, provide relief through exemptions and zero rates instead, and vice versa. Similarly, countries like Georgia, and Bosnia and Herzegovina, which lack reduced rates for essential goods, include these under an exemption or zero-rating. When considering reduced rates, exemptions and zero-rating altogether, all countries facilitate access to medical care and medical products. Albania does not apply VAT reliefs to energy supplies for consumers, while Bosnia and Herzegovina is the only country not having reduced rates at all and not providing exemptions for any energy supply, agriculture or food product.

Table 4. VAT treatment for energy, and essential goods and services

Country	Energy			Essential goods and services		
	Reduced rates	Exemptions (no right to deduct)	Zero rate	Reduced rates	Exemptions (no right to deduct)	Zero rate
Albania		X (only for supplies to oil and gas companies)		X		
Moldova	X	X	X	X	X	
Georgia		X	X			X
Serbia	X			X		
Ukraine		X		X	X	X
North Macedonia	X			X	X	
Kosovo	X			X	X	
Bosnia and Herzegovina					X	
Montenegro	X		X	X		X

Source: own elaboration.

Inputs with limited right of deduction

Regarding inputs with limited right of deduction, four typical categories were identified among all candidate countries and potential candidates: transport services, passenger cars (often including fuel and related services), accommodation services, and restaurant and other food services. The limitations for these inputs are summarised in Table 5. Additionally, other limitations to the right of deduction exist in the national frameworks, but these are rather few (e.g., cultural services in Georgia and boats in several Balkan countries).

Most candidate countries and potential candidates allow VAT deduction for transport services, except for Serbia and North Macedonia. For passenger cars, deductibility is more limited and often restricted to specific industries, such as transport companies or car dealers. Accommodation services purchased for business purposes are generally deductible, with the exception of Albania, North Macedonia, and Bosnia and Herzegovina; when the expense is deemed to be for business entertainment, deduction is not possible in most countries. Restaurant and other food services show more variation: some countries, like Moldova and Kosovo, allow full deduction, while others either do not allow deduction at all or limit it to non-entertainment-related events. Similarly, deduction of input VAT incurred on representative and entertainment expenses is never allowed in those countries that explicitly mention this category.

Table 5. Limitations to the right of deduction

	Transport Services	Passenger cars	Accommodation services	Restaurant and other food services
Albania	Yes	No	No	No
Georgia	Yes	Yes	Yes	Partly
Moldova	Yes	Partly	Yes	Yes
Serbia	No	No	Yes	No
Ukraine	Yes	Yes	Partly	Partly
North Macedonia	No	No	No	No

	Transport Services	Passenger cars	Accommodation services	Restaurant and other food services
Kosovo	Partly (50%)	Yes	Yes	Yes
Bosnia and Herzegovina	Yes	Yes	No	Partly
Montenegro	Yes	No	Yes	No

Source: own elaboration.

VAT registration thresholds

VAT registration thresholds generally range from about EUR 20 000 to EUR 100 000, with most countries setting mandatory registration thresholds between EUR 30 000 and EUR 70 000. This means that taxpayers under this threshold are, by default, not required to charge output VAT and cannot deduct input VAT, unless they opt into the VAT system voluntarily. Albania also provides for a voluntary threshold of EUR 49 750, above which taxable persons can decide to be registered and to be treated as standard VAT taxpayers. Furthermore, Albania requires exporters, importers and non-established businesses to register regardless of thresholds, while Georgia mandates registration for suppliers of excisable goods even below the threshold. The above-mentioned information is presented in Table 6 below.

Table 6. VAT registration thresholds

SME thresholds	Threshold for mandatory registration	Taxable persons concerned
Albania	ALL 10 000 000 (EUR 99 500) <i>Voluntary registration threshold: ALL 5 000 000 (EUR 49 750)</i>	Exemption from registration does not apply to exporters, importers and non-established businesses
Georgia	GEL 100 000 (EUR 34 020)	Suppliers of excisable goods must register below the thresholds
Moldova	MDL 1 200 000 (EUR 61 700)	-
Serbia	RSD 8 000 000 (EUR 68 000)	-
Ukraine	UAH 1 000 000 (EUR 22 800)	-
Macedonia	MKD 2 000 000 (EUR 32 200)	-
Kosovo	EUR 30 000	-
Bosnia and Herzegovina	BAM 100 000 (EUR 51 100)	-
Montenegro	EUR 30 000	-

Source: own elaboration.

IV. VAT compliance gap in the EU, and in EU candidate countries and potential candidates

IV.a. Scale and evolution of VAT compliance

This section examines the scale and evolution of the VAT compliance gap in the EU, and in EU candidate countries and potential candidates, focusing on the period covered by the headline estimates between 2019 and 2023. It provides an overall perspective, while the individual country assessments in Chapter VI offer detailed insights into developments in each country. All EU figures presented here exclude Luxembourg, as the estimates of the VTTL and, in turn, the VAT gaps for this Member State fall outside plausible ranges (see Box 2). For similar reasons, the estimates derived for three EU candidate countries, namely Bosnia and Herzegovina, North Macedonia and Serbia, were not included in this chapter¹². All estimates in this section are based on the latest data available at the cut-off date for data collection (15/07/2025). As datasets are regularly revised, future editions will reassess and update the estimates accordingly.

Box 2. Approach to the estimation of EU-wide VAT compliance gaps

The EU VAT compliance gap is estimated in nominal terms as the aggregate of national VAT compliance gap estimates and, in relative terms, as a share in the aggregated EU VTTL. This ensures that the EU estimate reflects the relative size of Member States' economies. To complement this, the report also presents the median of national VAT compliance gaps, which is less affected by outliers and provides a more representative picture of the "typical" Member State.

Occasionally, results may fall outside plausible ranges, and if so, then often due to inconsistencies in the timing of when of VAT revenue and national accounts data are recorded, due to inherent limitations of certain statistics used to account for the entirety of economic activity, or timing differences in data revisions. Negative VAT compliance gaps – implying that collected VAT exceeds theoretical liability – are not feasible in practice but may occur temporarily under specific circumstances and are, in such cases, considered acceptable. For example, Ireland's 2021 estimate was affected by exceptional macroeconomic distortions, such as a surge in deferrals and temporary data reporting issues (e.g., during the COVID-19 pandemic). In the case of some EU candidate countries (North Macedonia and Serbia), data problems are of a more structural nature. In these countries: severely incomplete or outdated data have resulted in implausible negative estimates for several consecutive years. Nevertheless, country-specific results for these countries are included in Annex F for transparency, despite their limited reliability.

In this year's edition, Luxembourg's estimates show negative or near-zero VAT compliance gaps for several consecutive years. The sharp downward revision of these estimates compared with previous editions – where all results were positive – is due to a major upward revision of Luxembourg's VAT revenue data of up to 8.5% of revenues for recent years. Since the corresponding VAT liabilities from national accounts were not revised for these years, this led to negative VAT compliance gap estimates, which cannot be considered statistically plausible. As the estimation of the VAT policy gap depends on the accuracy of the estimated VAT liabilities, these inconsistencies also affect the credibility of Luxembourg's VAT policy gap estimates.

Luxembourg's particular economic structure further complicates estimation. Household final consumption accounts for less than 40% of total VAT liability (one of the lowest shares in the EU) while cross-border purchases by non-residents generate a large share of VAT revenues but it is

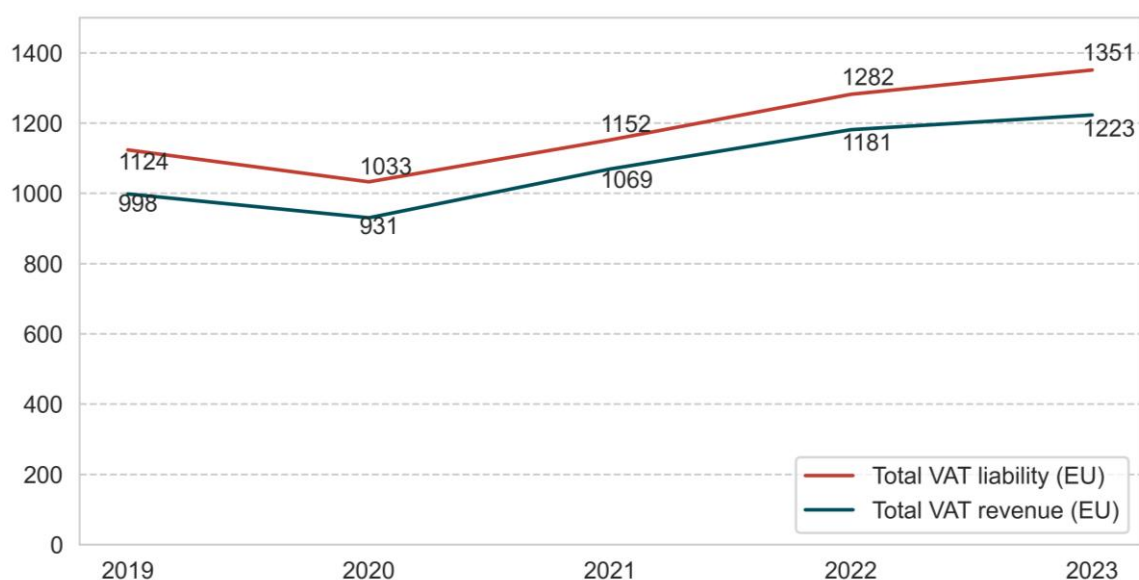
¹² See Annex F.

challenging to reflect them in domestic consumption. These structural features, combined with the recent data revisions, highlight particular methodological challenges in reconciling VAT revenue and national accounts data for Luxembourg, suggesting that further research and discussions are necessary.

Given these factors, and faced with implausible estimates for Luxembourg, Luxembourg's estimates have not been included in the EU-wide aggregates of the VAT compliance gap and VAT policy gap in this year's edition. However, the results for Luxembourg are presented in the country chapter section. The Commission will continue to work with the Luxembourg authorities to align data sources and improve the robustness of future estimates.

As shown in Figure 17, since the outbreak of the COVID-19 pandemic in 2020, both VAT revenue and VAT liability have gradually increased. However, from 2021 onwards, VAT revenue has grown at a slower pace than the estimated VTTL. Between 2021 and 2023, the VTTL rose by 17.3%, while VAT revenue increased only by 14.4%.

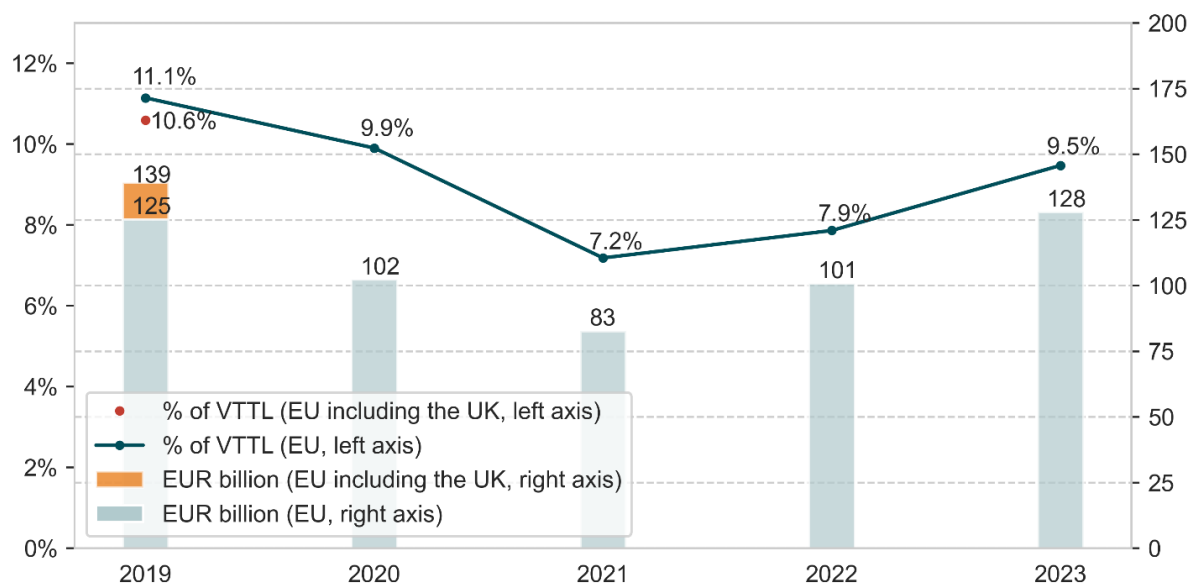
Figure 17. Evolution of VAT liability and revenue in the EU (EUR billion, 2019-2023)



Source: own calculations. Download underlying data [here](#).

Note: EU estimates exclude Luxembourg due to recent data revisions yielding results outside plausible ranges.

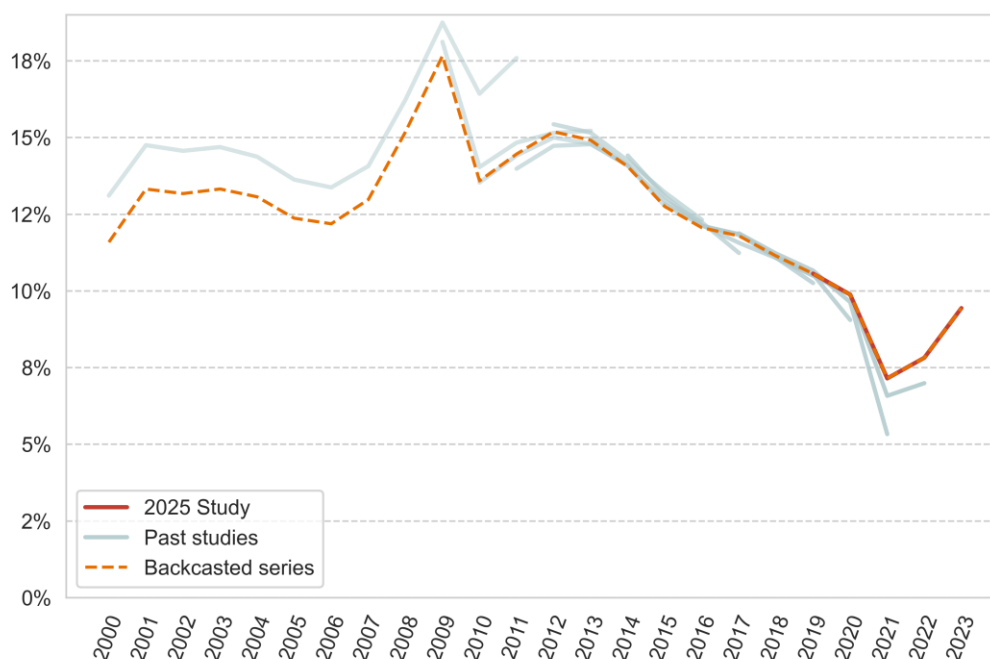
The difference in the growth rates of VAT revenue and the VTTL translated into an increase in the VAT compliance gap between 2021 and 2023. Overall, 2021 marked a turning point in the evolution of the VAT compliance gap in the EU (Figure 18 and Figure 19). After a long period of steady improvement, in 2021 the trend reversed clearly. This pattern had already been signalled in the 2024 study. However, the availability of a longer time series beyond the pandemic period – when estimates may have been less reliable – provides stronger confirmation of this finding.

Figure 18. Evolution of the VAT compliance gap in the EU (%/EUR billion, 2019-2023)

Source: own calculations. Download underlying data [here](#).

Note: EU estimates exclude Luxembourg due to recent data revisions yielding results outside plausible ranges.

An important consideration relates to the uncertainty around estimates for 2020-2022. The extraordinary measures introduced (and revoked) in those years, the difficulty with the accounting rules treatment of VAT deferrals and the lowered quality of national statistics impacted the reliability of the estimates for that period. Owing to that, revisions for those two years were also larger than those observed between previous studies (Figure 19). Benchmark revisions in national accounts for those years, in particular, and, to a much lesser extent, refined model parameters, resulted in significant upwards revisions for 2021 and 2022. More specifically, compared with the final results in the 2024 VAT gap study, the EU-wide VAT compliance gap estimates for 2021 and 2022 were revised upwards by 0.6pp and 0.9pp, respectively.

Figure 19. VAT compliance gap estimates from different editions of the study (2000-2023)

Source: own calculations. Download underlying data [here](#).

Note: EU estimates exclude Luxembourg due to recent data revisions yielding results outside plausible ranges.

In 2023 the VAT compliance gap amounted to EUR 128 billion, or 9.5% of the VTTL. Compared to 2022, the gap increased by EUR 27.2 billion and by 1.6pp of the VTTL (Table 7). In nominal terms, the 2023 VAT compliance gap exceeded the value estimated for 2019, the last pre-pandemic year. In relative terms, however, it was 1.6pp lower than just before the pandemic and also lower than in 2020.

The estimates of the VAT compliance gap at the Member State level ranged from 1 to 30% in 2023. In most (i.e., 17) Member States, the estimates ranged between 0 and 10%. In seven Member States, the estimated VAT compliance gap was between 10 and 20% (Figure 20).

The smallest VAT compliance gaps in the EU were observed in Austria (1%), Finland (3%) and Cyprus (3.3%). On the opposite side of the spectrum were Romania (30%) and Malta (24.2%). The median¹³ VAT compliance gap increased from 7.3% in 2022 to 8.2% in 2023. In both years, the median value was lower than the arithmetic average, as the estimates for Romania and Malta are substantially higher than the values estimated for the other Member States.

¹³ The EU median is the middle value of Member States' results when sorted by size. It is preferred over the arithmetic mean as it is less influenced by extreme values, providing a more robust and representative result for the EU.

Table 7. VAT compliance gap in EU Member States, and in EU candidate countries and potential candidates (2022 and 2023)

Country	2022				2023				VAT gap change (pp)**
	VTTL (EUR m)	Revenues (EUR m)	VAT compliance gap (EUR m)	VAT compliance gap (%)	VTTL (EUR m)	Revenues (EUR m)	VAT compliance gap (EUR m)	VAT compliance gap (%)	
EU Member States									
BE	40 808	36 031	4 777	11.7%	42 643	37 413	5 230	12.3%	0.6
BG	8 306	7 786	519	6.3%	9 105	8 324	781	8.6%	2.3
CZ	23 812	21 857	1 955	8.2%	25 946	23 859	2 087	8.0%	-0.2
DK	38 255	35 231	3 024	7.9%	37 434	34 120	3 314	8.9%	0.9
DE	310 182	289 641	20 541	6.6%	321 260	289 965	31 295	9.7%	3.1
EE	3 491	3 309	182	5.2%	3 874	3 476	398	10.3%	5.1
IE	19 217	18 769	448	2.3%	22 027	20 195	1 832	8.3%	6.0
EL	21 265	18 621	2 644	12.4%	22 288	19 756	2 532	11.4%	-1.1
ES	96 236	92 250	3 986	4.1%	101 596	93 825	7 771	7.6%	3.5
FR	209 942	199 272	10 670	5.1%	218 170	206 049	12 121	5.6%	0.5
HR	10 036	8 895	1 141	11.4%	11 366	10 492	875	7.7%	-3.7
IT	155 819	133 232	22 587	14.5%	166 211	141 199	25 012	15.0%	0.6
CY	2 888	2 706	182	6.3%	3 080	2 979	101	3.3%	-3.0
LV	3 762	3 689	74	2.0%	4 072	3 851	220	5.4%	3.5
LT	6 427	5 644	783	12.2%	6 958	5 911	1 048	15.1%	2.9
HU	17 532	17 100	432	2.5%	19 957	18 474	1 484	7.4%	5.0
MT	1 558	1 190	369	23.7%	1 674	1 269	405	24.2%	0.6
NL	77 905	70 458	7 447	9.6%	81 645	75 920	5 725	7.0%	-2.5
AT	36 590	35 497	1 094	3.0%	38 283	37 891	392	1.0%	-2.0
PL	53 683	47 672	6 011	11.2%	65 452	54 999	10 453	16.0%	4.8
PT	23 883	22 909	974	4.1%	24 987	24 086	900	3.6%	-0.5
RO	26 234	19 238	6 997	26.7%	30 651	21 449	9 201	30.0%	3.4
SI	5 145	4 713	432	8.4%	5 415	5 150	264	4.9%	-3.5
SK	9 672	8 556	1 116	11.5%	10 359	9 272	1 087	10.5%	-1.0
FI	25 604	25 061	543	2.1%	25 864	25 087	777	3.0%	0.9
SE	53 846	51 954	1 893	3.5%	50 844	48 132	2 712	5.3%	1.8
EU (total/average)*	1 282 099	1 181 280	100 819	7.9%	1 351 160	1 223 143	128 017	9.5%	1.6
EU (median)*				7.3%				8.2%	
EU candidate countries and potential candidates									
AL	2 026	1 609	417	20.6%	2 346	1 768	578	24.6%	4.1
GE	2 580	2 442	138	5.4%	3 135	2 967	169	5.4%	0
XK	1 372	1 214	158	11.5%	1 469	1 350	119	8.1%	-3.4

Source: own elaboration. Download underlying data [here](#).

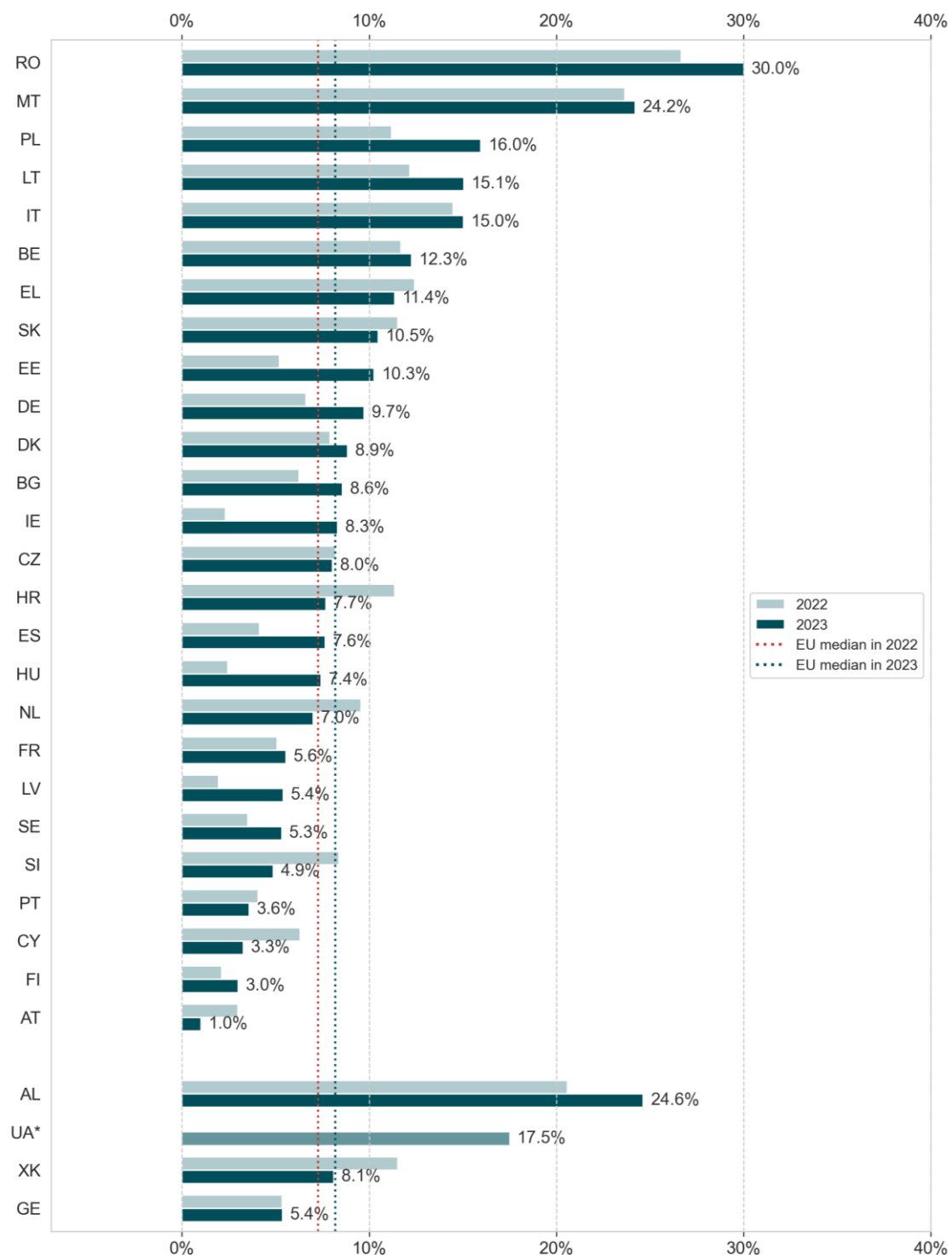
Note: "EU (average)" refers to the weighted average, calculated using each country's share in the EU VTTL as its weight. "EU (median)" represents a robust central estimate: half of the Member States score above it, and half below. Rounded changes may not equal the change between rounded values.

* EU estimates exclude Luxembourg due to recent data revisions yielding results outside plausible ranges.

** Figures may not sum or match exactly due to rounding.

For EU candidate countries and potential candidates with sufficiently reliable data, estimates fell within the range observed for EU Member States. In 2023, the estimated VAT compliance gap was 5.4% in Georgia, 8.1% in Kosovo and 24.6% in Albania. For Ukraine, the available estimate, derived only for the period before Russia's full-scale aggression, refers to 2021 and amounts to 17.5%.

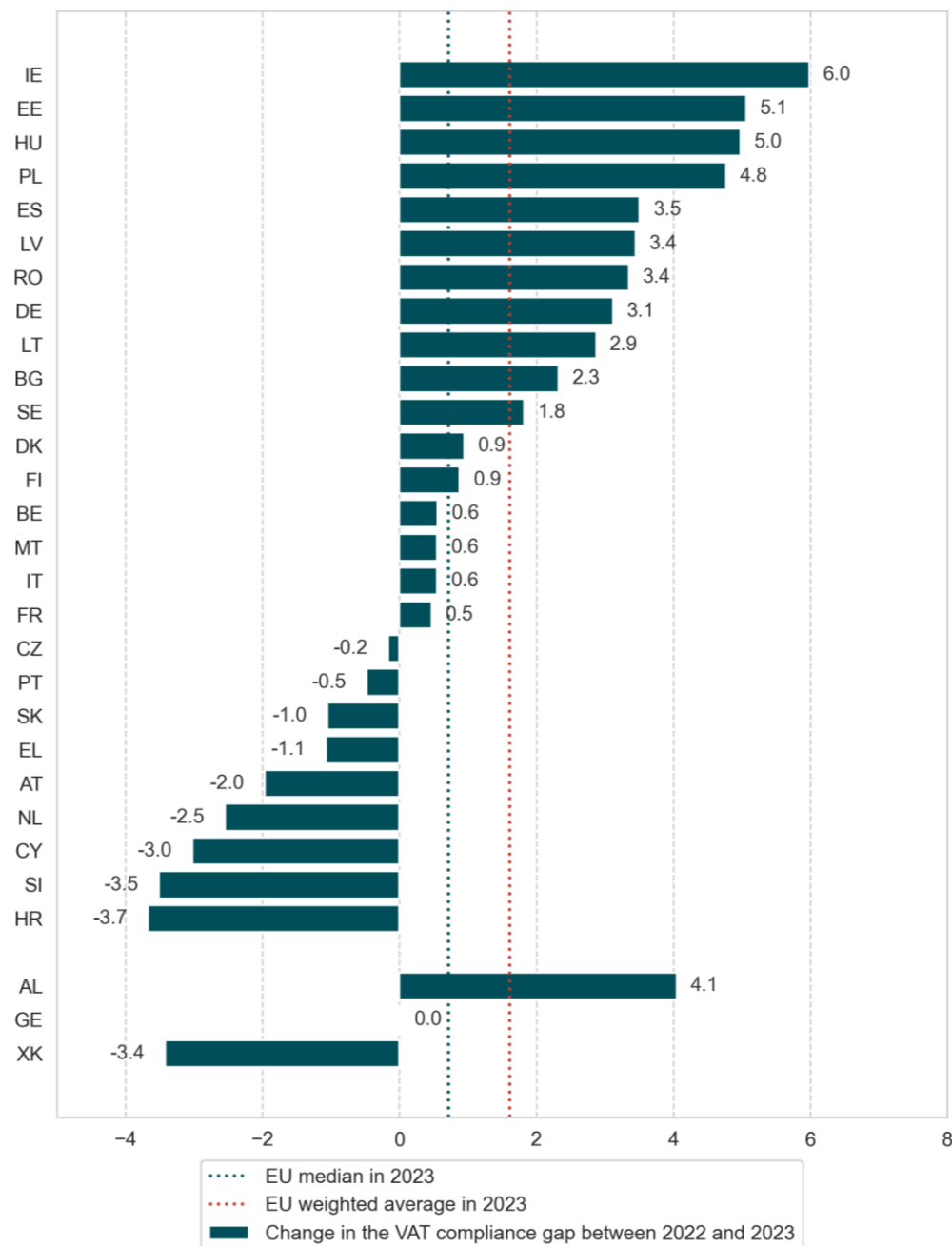
Figure 20. VAT compliance gap by country (as % of VTTL, 2023 vs. 2022)



Source: own elaboration. Download underlying data [here](#).

Note: "EU median" represents a robust central estimate: half of the Member States score above it, and half below. EU estimates exclude Luxembourg due to recent data revisions yielding results outside plausible ranges.

* For Ukraine, the estimates displayed refer to 2021.

Figure 21. Change in the VAT compliance gap by country (in percentage points, 2023 vs. 2022)

Source: own elaboration. Download underlying data [here](#).

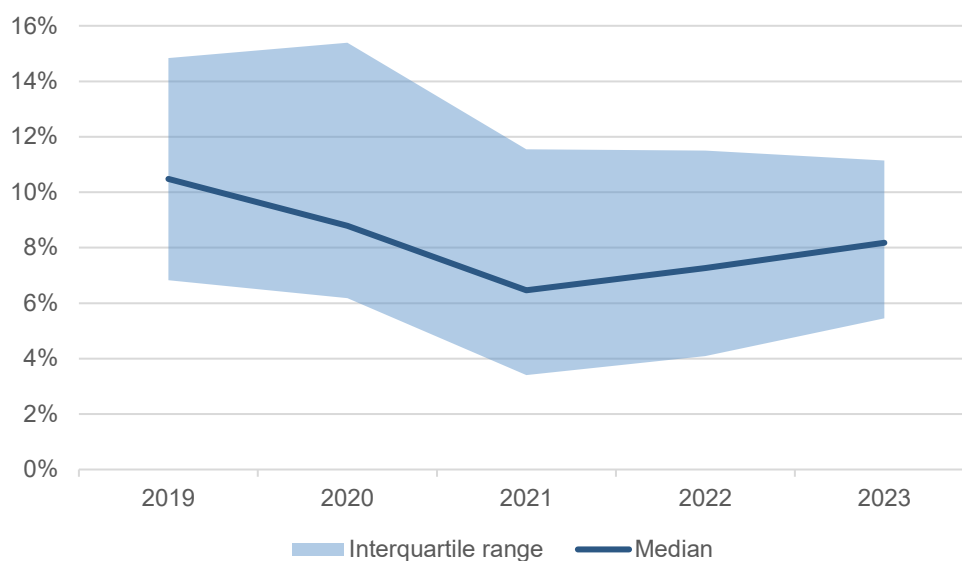
Note: "EU median" represents a robust central estimate: half of the Member States score above it, and half below. The weighted average was calculated using each country's share in the EU VTTL as its weight. EU estimates exclude Luxembourg due to recent data revisions yielding results outside plausible ranges.

With regard to the differences between the estimated VAT compliance gaps for 2022 and 2023, cases where the gap increased outnumbered those where it dropped (17 compared to 9, Figure 21). The highest increases were estimated for Ireland (6pp), Estonia (5.1pp), Hungary (5pp) and Poland (4.8pp). On the other side of the spectrum, the highest improvements in VAT compliance were observed in Croatia (by 3.7pp), Slovenia (by 3.5pp) and Cyprus (3pp). Across the three EU candidate countries and potential candidates covered, three different developments were observed: an increase (Albania), no change (Georgia) and a decline (Kosovo).

IV.b. Special topic: Member States with post-COVID-19 increase in the VAT compliance gap

The economies of EU Member States were exposed to an exceptional series of economic shocks between 2020 and 2023. During this period, VAT compliance gap estimates also exhibit considerable fluctuations. While the size and direction of these fluctuations vary across countries, a common pattern can be observed – a decline in 2021 followed by an increase in 2022 and 2023. The occurrence of such a pattern raises questions about the role of macroeconomic shocks and broader elements that might have contributed to it.

Figure 22. VAT compliance gap in EU Member States (% of VTTL, 2019-2023)



Source: own calculations.

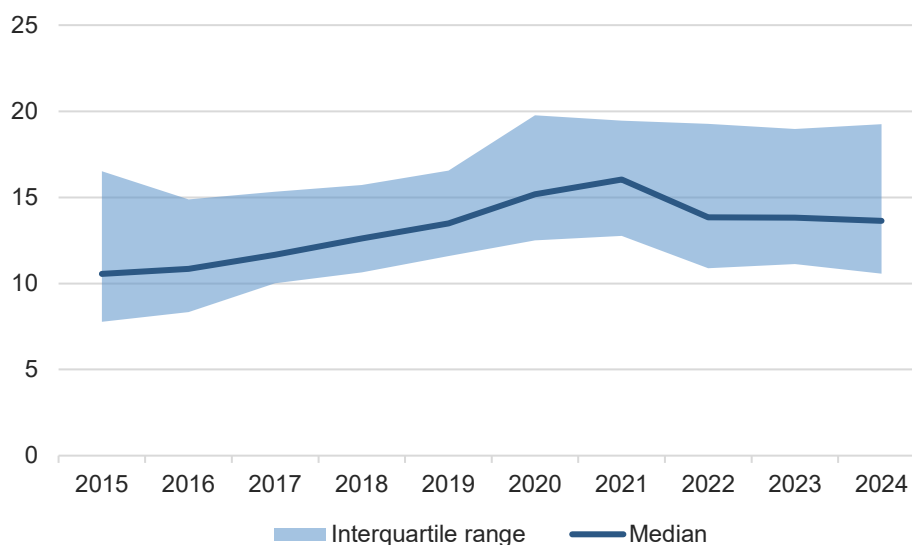
Several explanations are possible for the observed trends, three of which warrant particular attention. The first is the share of cashless payments in an economy, a factor with a well-established and intuitive impact on VAT compliance. VAT evasion typically takes the form of (1) underreporting sales; and (2) overreporting deductible inputs. Cash payments are inherently not traceable, which facilitates the first above-mentioned form of evasion, especially when complicity exists between the seller and the buyer. In contrast, cashless payments leave a digital trace, allowing tax authorities to cross-check reported sales against actual payments received.

Quite an extensive body of empirical literature already exists confirming the positive indirect impact of cashless payments on taxpayer compliance. Spinelli et al. (2024) conducted a systematic review of this literature, encompassing 26 papers published in peer-reviewed journals. They found that the literature is unequivocal in confirming that the use of cash promotes tax evasion and the shadow economy, whereas card payments tend to support VAT compliance. Most of the existing literature refers to payment cards as the primary form of cashless payments, with, so far, little evidence on the impact of digital wallets. This is because some of these wallets rely on account-to-account payments, whose traceability characteristics differ from those of card-based payments. As a result, effects may be different.

This topic was also discussed in last year's VAT gap study (European Commission, 2024), which confirmed that an increase in the share of digital payments is correlated with a decline in the VAT compliance gap.

Existing literature generally refers to the impact of digital payments on VAT compliance as one-directional, given that the share of digital payments has seen a steadily rising trend for years. However, the COVID-19 shock disrupted this trend. Digital payments initially spiked, to some extent somewhat artificially, as consumers were forced to make purchases online due to mobility restrictions. Yet, recent data shows that once these restrictions were lifted and the perceived threat of infection declined, the share of digital payments and e-commerce purchases declined in some countries.

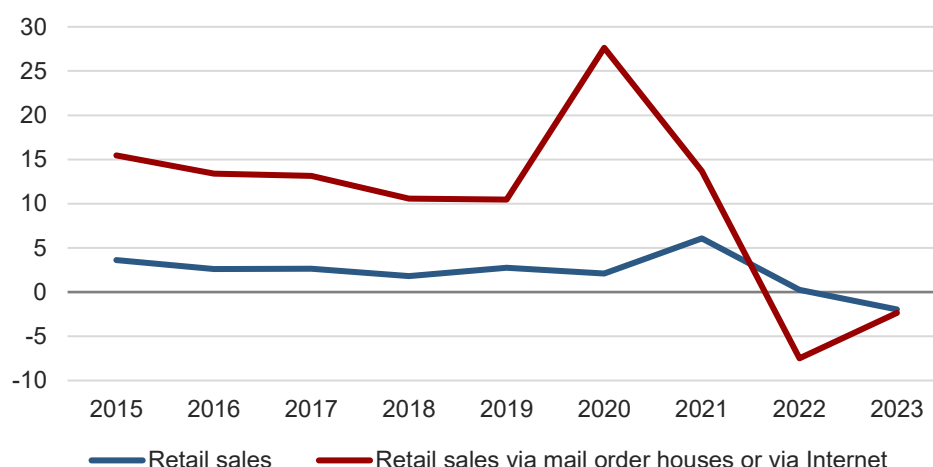
Figure 23. Card payments in selected EU Member States (% of GDP, 2015-2023)



Source: own elaboration based on ECB payments statistics. Note: the graph covers 24 Member States for which data is available for this period.

As noted, trends in cashless payments usually correspond to those in e-commerce activity. Eurostat data on the share of online purchases in retail sales shows a similar picture as ECB payment data – namely, an acceleration of online sales during the COVID-19 period and a subsequent decline (Figure 24).

Figure 24. Median growth rate of retail sales and mail order or Internet sales (y/y % increase in volume, 2015-2023)



Source: own elaboration based on Eurostat.

Note: The EU median is the middle value of Member States' results sorted by size. Medians are less influenced by extreme values, providing a more robust and representative result for the EU. The graph covers 24 Member States for which data is available for this period.

The decline in online purchases observed in 2022 may have been partly related to changes in consumption patterns in response to the price shocks triggered by Russia's war of aggression against Ukraine. In particular, to accommodate the increases in food and energy prices, consumers may have cut down on their purchases of goods more commonly purchased online, such as clothes or electronic goods.

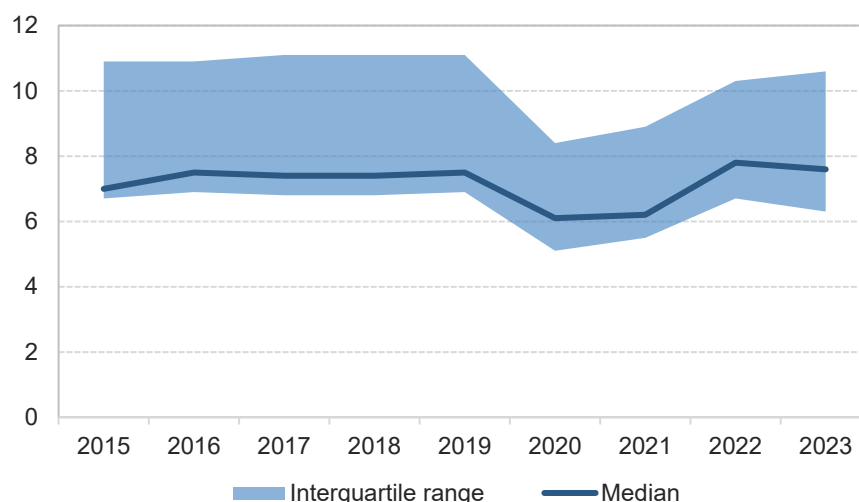
The second relevant trend is the share of services and goods in consumption. Another distinct feature of the COVID-19 period was shifts in consumption patterns related to mobility restrictions. Broadly speaking, these shifts entailed a reduction in the share of spending on services and a corresponding increase in spending on goods, in particular durables. The services most sensitive to COVID-related restrictions were naturally those of the in-person type, usually provided on a small scale, by small businesses or self-employed. This category of services happens to match quite closely those which are prone to underreporting. This leads to the hypothesis that the mobility restrictions in place during the COVID-19 pandemic led to a decline in the VAT compliance gap by reducing the share of consumption directed toward services at high risk of evasion.

The survey on undeclared work in the EU conducted by the European Commission in 2019 (European Commission, 2020) suggests that certain categories of goods and services are prone to underreporting. At least 20% of respondents from EU Member States believed that undeclared work may have occurred in the following areas: hairdressing or beauty treatments, home repairs or renovations, cleaning or ironing, repair services, buying food (e.g., farm produce) and buying other goods or services. Moreover, among persons who carried out undeclared activities, at least 10% reported their activity in the following sectors: construction, hospitality, personal services, retail or repair services and other sectors. Similar findings emerged from an OECD survey of tax administrations (OECD, 2017) listing the sectors in which the shadow economy is likely to be observed. The most commonly mentioned sectors were personal services (including house cleaning, beauty, catering, pest control and computer maintenance), hospitality, retail and construction (including home renovations).

While not all of the consumption areas mentioned above can be distinguished using available data, these indications were relied upon to select several service categories from Eurostat data on household

final consumption expenditure by purpose¹⁴. These were: recreational services, restaurants and accommodation services, personal care, other personal effects and other services. The share of these services in the consumption basket in recent years was then examined, with relevant data available for 19 EU Member States. In line with expectations, the share of these services clearly declined in 2020–2021 and rebounded in subsequent years, coinciding with the shifts in the VAT compliance gap.

Figure 25. Share of selected services in household final consumption expenditure by purpose (% , 2015-2023)



Source: Eurostat (nama_10_cp18). Note: recreational services, restaurants and accommodation services, personal care, other personal effects and other services were included.

One of the countries which exhibited the trend of a falling and subsequently rising VAT compliance gap was Denmark. This is particularly noteworthy, since Denmark has the simplest VAT regime of all EU countries, with just a single rate which applies to nearly all goods and services, and has remained unchanged since 1992. Moreover, Denmark had maintained a stable low VAT compliance gap for a number of years prior to 2020, indicating an efficient tax administration. Therefore, the swings in the VAT compliance gap are unlikely to have resulted from policy measures or a temporary improvement in tax collection capacity. In addition, the hypothesis related to the variation in the share of services in consumption, outlined above, also applied to a relatively limited extent to Denmark, since prior to 2020 the share of the selected services was the lowest among EU Member States and it also declined less than in other Member States. This would suggest that the observed fluctuations of the compliance gap between 2020 and 2023 may have been a reflection of other economic shocks. An alternative explanation, supported by the interviewed Danish authorities, points to an increase in the scale of errors and omissions, which led to corresponding revenue forgone. This suggests that the fluctuations in the VAT compliance gap could be attributed not to changes in the structure of consumption or policy measures, but rather to an increase in reporting inaccuracies and miscalculations in tax filings.

The third aspect to be considered is household financial assets. Another economic effect of the COVID-19 shock was its impact on household financial assets. In response to the reduction in economic activity arising from lockdown measures, fiscal and monetary policymakers launched large-scale support packages. According to the International Monetary Fund (2021), this massive policy support led to the

¹⁴ Eurostat, nama10_cp18.

easing of financial conditions and a boom in financial asset prices to levels meaningfully higher than those suggested by models based on fundamentals. The higher valuation of financial assets translated into an increase in the value of household financial assets which in turn drove household consumption.

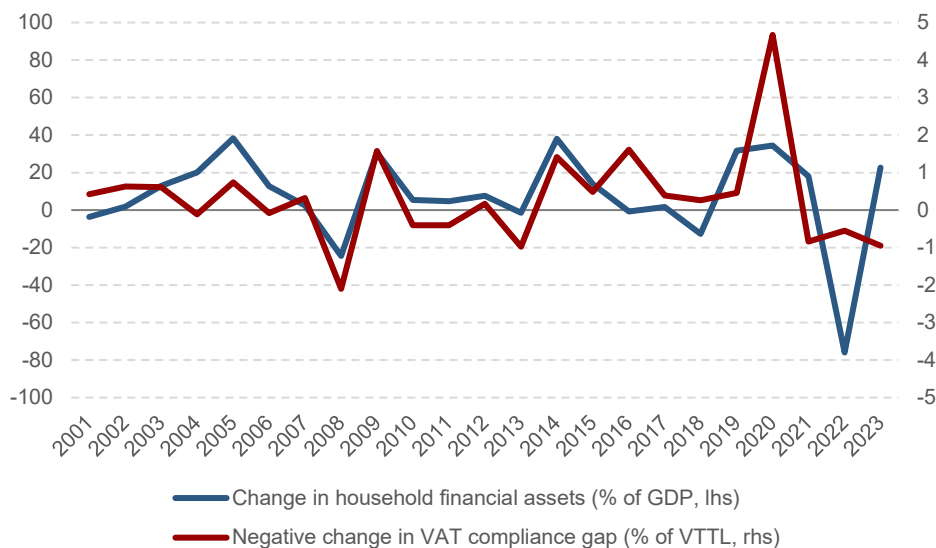
Denmark is a useful example of these developments, as Danish households hold the largest financial assets (in relation to GDP) of all EU Member States. A study conducted by the International Monetary Fund (2018) pointed to the importance of financial wealth effects, noting that they were an important amplifier of the downturn during the Great Recession, including in Denmark, where the drop of household consumption was among the sharpest in advanced economies. The COVID-19 and post-COVID-19 periods were also characterised by large swings in the value of household financial assets in Denmark, as they increased from 372% of GDP in 2019 to 425% in 2021, followed by a decline to 349% in 2022. The boom in the value of household financial assets in 2020-2021 was also observed in other Member States, as reflected in the ECB's Household Finance and Consumption Survey. The report discussing the 2021 wave of the survey (ECB, 2023) noted that between 2017 and 2021 household net wealth substantially rebounded from the previous years of decline and slow growth, and that household participation rates in more risky financial assets increased. When discussing the results of this survey for Germany, Bundesbank (2023) noted that between 2017 and 2021 share prices rose significantly, asset holdings increased considerably in almost all parts of the wealth distribution, and there was a striking increase in the share of households owning shares and investment fund assets. Bundesbank also noted that the high stock returns between 2017 and 2021, and additional savings during the pandemic may have been one reason for the heightened interest in stock market investment.

In principle, these financial wealth effects should be reflected in the value of household consumption in national accounts, on which the estimates of the VAT compliance gap are based. However, in practice, national accounts are estimated based on a variety of macro and micro data sources. None of these sources present a comprehensive picture; they are not fully consistent with one another and have to be reconciled. Against this backdrop, in 2011, a joint Expert Group launched by Eurostat and the OECD examined the available data sources, finding that differences between macro and micro statistics can be large, and that identifying and quantifying the many factors contributing to these differences is challenging (Fessau et al., 2013). Among the 21 countries included in the study, most reported better alignment between micro and macro sources for income than for consumption. The average gap between micro and macro sources for consumption, after accounting for known factors contributing to the differences as identified by the experts, was found to amount to almost 30%. This could suggest that in periods of large swings in the value of household financial assets, as well as other contemporaneous macroeconomic shocks, the national accounts consumption measure may not fully reflect the impact of these shocks.

In the particular case of Denmark, interesting evidence on the measurement of household consumption is provided by Abildgren et al. (2018). The authors explored different sources of consumption data, including a comparison between private consumption in national accounts statistics and a register-based measure of household consumption in the period 2003-2016. They found a high degree of correspondence between the two measures, but with some short-term deviations which, interestingly, occurred in periods of large swings in the value of household financial assets, namely in 2007-2009 and 2014-2016. This suggests that a large increase in the value of household financial assets, such as that observed in Denmark and several other EU Member States in 2020-2021, may boost private consumption in a manner not fully reflected in national account statistics. This, in turn, could cause VAT revenue to grow faster than its observable (based on national accounts statistics) tax base, resulting in an apparent reduction of the VAT compliance gap.

Based on this reasoning, the study examined whether the development of the VAT compliance gap is consistent with the hypothesis of household consumption in national accounts not fully reflecting swings in the value of financial assets. In the case of Denmark, a clear correlation (45%), with the expected sign, was found between the change in the value of financial assets and the change in the VAT compliance gap.

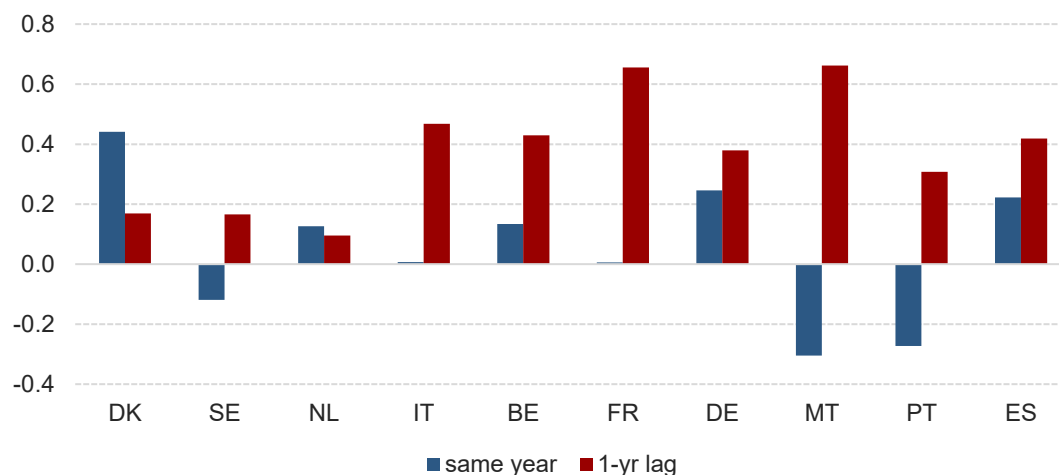
Figure 26. Negative change in the VAT compliance gap (in % of VTTL) and change in the value of household financial assets (in % of GDP) in Denmark



Source: own elaboration based on own calculation and ECB financial accounts.

As noted earlier, due to the size of household financial assets in Denmark, their impact on household consumption is likely to be stronger than in other EU Member States. However, among the 10 Member States with the largest household financial assets in relation to GDP (the lowest amounting to just under 200% of GDP), a visible correlation also exists between the change in their value and the VAT compliance gap, albeit stronger when financial assets are lagged by one year (see Figure 27). In all 10 countries, the value of household financial assets increased in 2020, not only in relation to GDP (which was usually declining due to the COVID-19 recession), but also in nominal terms. Taking into account the one-year lag, this is consistent with the almost EU-wide reduction in the VAT compliance gap in 2021.

Figure 27. Correlation between the change in household financial assets and the (negative) change in the VAT compliance gap among the 10 EU Member States with the largest household financial assets to GDP ratio



Source: own elaboration based on ECB financial accounts.

Note: based on series from 2001 to 2023.

IV.c. Special topic: impact of the *Superbonus 110* scheme on VAT compliance in Italy

In 2021, Italy experienced a very substantial reduction in the VAT compliance gap, by almost 5pp, which continued in 2022. This coincided with extraordinary growth in Italy's housing construction sector, largely driven by government support in the form of the *Superbonus 110* programme. Since the construction sector is widely perceived to be susceptible to shadow economy activity, government financial assistance, which incentivises the reporting of activity in this sector, may lead to a reduction in VAT evasion.

The *Superbonus* was introduced as a tax incentive for homeowners, non-profit, social and voluntary organisations, and public social housing bodies to incentivise energy-efficient and structural improvements to their properties. Launched in May 2020, as part of the so-called *Relaunch Decree*, a comprehensive package of measures introduced by the Italian government in response to the COVID-19 shock, the *Superbonus* built on pre-existing tax incentives for home renovation. However, the new elements introduced made the programme much more attractive than previous schemes, eventually leading to its widespread uptake.

The two features that made the *Superbonus* particularly appealing were the following.

- A 110 percent subsidy rate allowed households to obtain government financing for home improvements without the need for co-financing. This also reduced incentives for households to limit the cost of renovations, as they did not bear the financial burden directly.
- The possibility to transfer or monetise tax credits, either by selling them or using them to pay contractors directly, made it possible for households with liquidity constraints to obtain financing without putting their own resources up front. As a result, the programme was accessible to households from all income groups, marking an important change compared to previous tax incentives.

The Italian Ministry of Economy and Finance (MEF, 2023) highlighted that the main objectives of the programme included supporting countercyclical economic policy in the short-term, and advancing long-term goals such as improved energy efficiency, and innovation in construction and renovation materials. In addition, the Ministry's publication refers to the positive effects of such measures on public finances, namely through increased economic activity ('economic additionality') and the emergence of taxable base ('fiscal additionality'). Both factors are relevant for the analysis of the VAT compliance gap.

A few months prior to the *Superbonus*, Italy had introduced a similar measure, named *Bonus facciate*, through the 2020 Budget Law. This incentive offered a deduction from personal income taxes equal to 90% of expenses incurred in 2020 and 2021 for the recovery or renewal of the external facade of a large number of urban buildings. This measure remained in place in 2022, although the deduction rate was reduced to 60%.

While Italy had previously offered personal tax incentives to support renovations, the previous measures were less attractive for lower-income taxpayers and consequently had a limited uptake. This is reflected in the evolution of investment in dwellings in Italy between 2015 and 2019, which was lower than the euro area average. The introduction of the *Superbonus* and the *Bonus facciate* marked a turning point: take-up of both programmes was massive, and between 2021 and 2023 construction activity in Italy greatly outperformed the rest of the euro area (Figure 28 and Figure 29).

Figure 28 Value added in the construction sector (constant prices, 2019 = 100, 2015-2024)

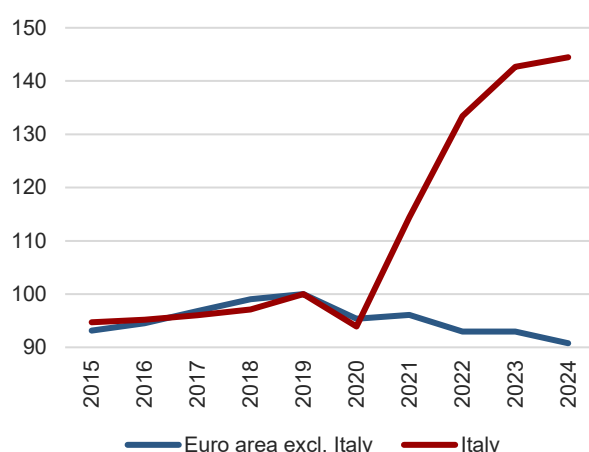
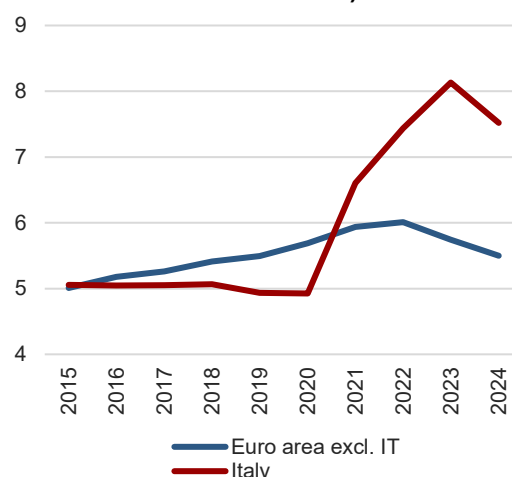


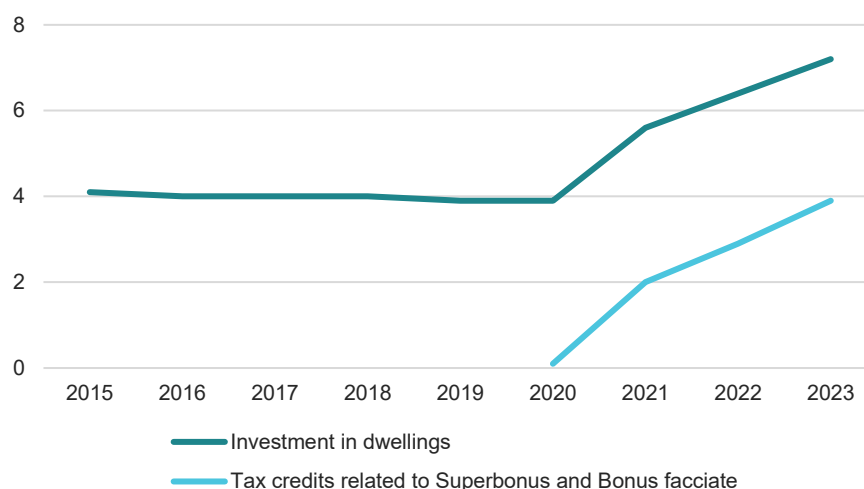
Figure 29 GFCF by households (% of GDP, 2015-2024)



Source: own elaboration based on Eurostat (nama10_a10 and nasa 10_nf).

Prior to 2020, investment in dwellings in Italy, relative to GDP, had remained broadly stable at around 4%. However, following the introduction of the incentive programmes, this figure surged to 6.4% in 2022 and 7.2% in 2023. The path of housing investment closely mirrored the amount of tax credits provided under the *Superbonus* and *Bonus facciate* programmes.

Figure 30. GFCF in dwellings and the value of tax credits related to *Superbonus* and *Bonus facciate* (% of GDP)



Source: Eurostat, Accetturo et al. (2024).

A key reason why a programme such as the *Superbonus* is likely to affect VAT compliance is that, according to the literature, the construction sector, and particularly home renovation services, tend to be highly susceptible to shadow economy activities and tax evasion across many countries. For example, according to a study of six European countries (including Italy) by Schneider (2013), the construction sector had by far the highest proportion of the shadow economy out of the ten considered, at well over 30%. The analysis performed by the OECD based on a questionnaire to tax administrations also listed the construction sector among the top three sectors where shadow activities are likely to take place. This finding is consistent with the results presented by the European Commission (2020), according to which a significant share of respondents (30% on average in the EU and 28% in Italy) reported paying for home repairs or renovations that they believed involved undeclared work. The possible reasons for the high share of the underground economy in home renovation services include the fact that home renovation services usually involve direct contact between the supplier and the consumer (investor), and the supplier is often a self-employed person. The scale of payments involved and their spread over the duration of the project facilitate the use of cash payments. According to estimates of the Italian National Institute of Statistics, in 2019, i.e., prior to the introduction of the *Superbonus*, the share of the underground economy in the construction sector in Italy was 20.9%, compared to a 10.9% share in the economy as a whole. In subsequent years, the share of the underground economy in the construction sector declined, reaching 17.5% in 2022.

As regards the impact of tax incentives for home renovation on shadow economy activity, the specific size of the incentive appears to play an important role. As noted above, an incentive as generous as the *Superbonus* is likely to result in a massive increase in new activity, possibly beyond what is actually warranted. As mentioned by experts, 'The short timeframe for the 110% tax incentive, coupled with numerous regulatory changes, encouraged companies to act quickly, sometimes beyond their capacity. Some interventions would have been better planned over a longer period. There was also speculative activity in certain cases, with numerous interventions on buildings that did not require significant improvements'. On the other hand, experts from the Ministry of Economy and Finance pointed to the research conducted by their economists (Manzo, Tellone, 2020) into the effects of a prior increase in the generosity of home renovation tax credits, which took place in 2012. They found that the policy change in question reduced the probability of not declaring the renovation by 38 to 41pp, depending on

the model specification. In the view of construction sector experts, the ongoing downscaling of tax credits to levels observed before the *Superbonus* is likely to largely eliminate the incentive for reporting construction jobs – ‘We are returning to a level where families benefit from not invoicing, especially for small jobs’.

On the other hand, the attractiveness of the *Superbonus* and the magnitude of the construction boom in Italy following its introduction may indicate that the programme resulted primarily in new economic activity, rather than in reporting of previously undocumented activity. This is also reflected in the results of Accetturo et al. (2024), who estimate the additionality of the programme at 73%, meaning that the vast majority of investments financed with the *Superbonus* would not have been undertaken in its absence. The study team conducted interviews with experts from the Italian construction sector, specifically from the Italian Confederation of Craft Trades and Small- and Medium-Sized Enterprises (CNA) and the Italian Association of Private Construction Contractors (ANCE), who also emphasised the impact of the *Superbonus* on real activity, rather than on tax compliance. As one expert noted, ‘Generally, the *Superbonus* has amplified production levels rather than eradicating undeclared activities, especially with the credit transfer system, which has significantly increased traditional business activity’. This assessment was broadly shared by experts from the Italian Ministry of Economy and Finance, although they did note that tax breaks for home renovation are also likely to have a positive impact on tax compliance.

Importantly, even though the introduction of the *Superbonus* resulted primarily in the generation of new home renovation activity, rather than disclosure of previously unreported activity, it still most likely had an impact on VAT compliance. This is because projects financed with the *Superbonus* may be assumed to have been fully documented and reported for VAT purposes, in contrast to home renovations that took place before its introduction, which, as noted above, were partly performed in the shadow economy. Considering that, as shown in Figure 30, in 2023 the value of tax incentives amounted to more than half of total housing investment, the impact on overall compliance may be expected to have been material. However, while the impact of the *Superbonus* on VAT compliance in the construction sector was likely substantial, this is not necessarily the case for overall VAT compliance, as the share of GFCF in the VTTL is relatively low in Italy. In 2019, before the introduction of the *Superbonus*, it was 11%, as compared to the EU median of 13%. This low share was partly a consequence of the lower-than-average share of GFCF in the GDP. Additionally, housing investment in Italy, including household investment in energy efficiency, is generally subject to a reduced VAT rate of 10%.

Estimating the precise impact of the *Superbonus* on the VAT compliance gap is likely not feasible due to the data limitations and the expected behavioural responses to such a large incentive programme. However, using the information available on the amount of tax breaks used, a rough calculation can be made of the direct impact of *Superbonus* investments on VAT receipts and the VTTL. This calculation is based on the simplified assumption that this investment was fully reported for VAT purposes and fully subject to a 10% VAT rate. For the period 2021-2023, this increased housing investment lowered the VAT compliance gap by an average of 0.5pp per year. Importantly, this calculation reflects only the direct impact of *Superbonus*-funded investments on the VAT compliance gap, without accounting for any changes in VAT evasion behaviours in non-*Superbonus*-funded construction activity or other sectors of the economy.

Given that the overall VAT compliance gap in Italy is estimated to have declined from 19.6% in 2020 to 14.5% in 2022, additional causes other than the *Superbonus* must have contributed to its reduction. A number of likely factors exist, starting with the introduction from 2019 onwards of mandatory e-invoicing

for business-to-business and business-to-consumer transactions. E-invoicing requirements have been further extended since then, as initially taxpayers adopting the flat-rate tax regime (the SME exemption scheme) with an annual turnover no greater than EUR 65 000 were excluded from the obligation. Starting from July 2022 the above-mentioned threshold was reduced to EUR 25 000, while in January 2024 the turnover-related exclusion from the obligation was removed altogether. Another contributing factor to the reduction in the VAT compliance gap was the rising share of digital payments. According to ECB payment data, in Italy, unlike in other Member States, this share did not decline in the post-COVID-19 period, but has been steadily rising every year. The value of card payments in Italy increased from 11.6% of GDP in 2019 to 14.3% of GDP in 2023. A related theme is the legal upper limit on cash transactions in Italy, which had been progressively lowered, from EUR 3 000 to EUR 2 000 in July 2020, and then to EUR 1 000 in January 2022, but was raised again to EUR 5 000 from 2023. Experts from the Italian Ministry of Economy and Finance confirmed that the share of cashless payments is an important determinant of tax compliance, noting that this share has been strongly increasing in recent years and that the cash payment limit remains below the maximum threshold established by the EU at EUR 10 000.

These conclusions were corroborated by interviews with construction sector experts, according to whom the prevalence of digital payments and the ability of the tax administration to monitor transactions are the key factors determining the level of tax evasion in the construction sector. In the words of one expert, 'If [construction professionals] do not want to issue the invoice, they simply will not. The only factor that could help reduce the gap is the obligation to make payments using electronic money. As long as cash payments are allowed, it is possible to avoid issuing an invoice'. Another expert noted that, particularly for larger home renovation projects, people undertaking them will take advantage of tax credits if they are available, but the main disincentive to evasion will come from monitoring by the tax administration.

IV.d. Special topic: VAT receipt lotteries

Background

Soft positive enforcement initiatives are policy measures designed to increase taxpayer compliance by encouraging desired behaviour rather than imposing penalties. Instead of relying on coercion, these initiatives make voluntary compliance more appealing and easier to achieve. In the context of VAT compliance, one example are VAT receipt lotteries. In such programmes, receipts or invoices serve as lottery tickets, and everyone who enters their document's details into the lottery can win a prize. This incentivises customers to request receipts for their purchases, which further obliges businesses to issue proper invoices.

A general consensus exists that VAT receipt lotteries, when well-designed and properly implemented, have the potential to enhance tax revenues, particularly in developing countries. Evidence from laboratory experiments suggests that lottery-based incentives can significantly increase tax compliance (Bazart and Pickhardt (2011)). In a theoretical framework, Giebe and Schweinzer (2014) demonstrate that tax receipt lotteries can improve overall economic efficiency. They show that, under reasonable assumptions, the increase in tax collection efficiency resulting from the lottery can, by itself, cover the programme's costs. In addition, Fabbri and Hemels (2013) argue that, by pointing out the businesses that should be audited, VAT receipt lotteries can generate positive long-term side-effects, even when they are introduced only for a limited period of time.

Several successful cases have been documented. Taiwan was the first to implement a tax receipt lottery in 1951 and the programme is still active to this day. In China, a VAT receipt lottery was introduced in

1998, initially in Haikou City, Hainan Province, and subsequently expanded to other cities. A panel study by Wan (2010) shows that the lottery significantly increased VAT revenues in regions where it was implemented. The *Nota Fiscal Paulista* lottery in Brazil not only provides rewards for winning receipts, but also encourages customers to report businesses that fail to issue proper invoices. As Naritomi (2019) demonstrates, this mechanism effectively creates a ‘whistle-blower’ channel, generating third-party information leading to an improvement in firms’ compliance. She found a particularly strong impact on smaller firms, and in sectors characterised by a high volume of low-value transactions and a large number of consumers.

Nevertheless, VAT receipt lotteries have been criticised for their potentially limited effectiveness. Receipts entered into the lottery typically come from large, generally compliant businesses such as supermarkets, rather than from business activities more prone to tax evasion. Thus, they have a limited impact on reducing unrecorded cash transactions or increasing compliance in the service sector. As a result, the programme may fail to effectively target high-risk sectors of the economy. Additionally, the design of some lotteries, where each receipt has an equal chance of winning regardless of its value, can encourage consumers to split payments into multiple transactions to increase their chances of winning. Another concern is the limited administrative capacity of tax authorities to cross-check the invoice information submitted by consumers (for the discussion, see Awasthi and Engelschalk, 2018; Fookien et al., 2015).

On the behavioural side, tax lotteries may have a positive influence on society by increasing awareness of the benefits of income reporting and encouraging the habit of asking for receipts. However, a potential downside also exists, as they may crowd out voluntary compliance. Individuals who are intrinsically motivated to comply might lose that motivation when external incentives, like lotteries, are introduced (see Fabbri (2015)). Fabbri and Wilks (2016) go a step further and argue that tax lotteries might have negative long-term effects, as individuals with the highest levels of education, who typically have greater influence in transmitting social norms, are also more likely to experience crowding-out. As a result, this may lead to a spillover of deteriorating morale affecting future generations.

Generally, quantitative empirical research on the effectiveness of VAT receipt lotteries is still limited. Lotteries are typically implemented alongside broader policy measures and isolating their specific impact on sales tax revenues is difficult. Also, the implementation and design of VAT receipt lotteries vary across countries. For instance, the type of prizes can range from luxury cars to government bonds. Other differences include the frequency and monetary value of prize draws, the rules for participation and the level of effort required from consumers to take part in the programme. In some countries, such as Portugal, participation was almost automatic once a valid receipt was issued. In contrast, in other countries, consumers are required to manually submit their receipts through physical drop-off points or digital platforms (for a more detailed review on specific programmes, see Burger and Schoeman, 2021).

In the EU, countries with past or current VAT lottery programmes include Poland, Slovakia, Czechia, Latvia, Lithuania, Romania, Greece, Malta and Portugal (IGC, 2021). Some countries, such as Poland and Czechia, introduced VAT lotteries as temporary measures and the programmes were active for only a few years, while others, like Malta, have more established VAT receipt lotteries that are widely recognised and integrated into their tax compliance systems.

This case study takes a closer look at two VAT receipt lottery programmes, the Maltese Fiscal Receipts Lottery and the Portuguese *Fatura da Sorte*. It examines their design and operation, and discusses the available evidence on their effectiveness in enhancing VAT compliance.

VAT receipt lotteries in Malta and Portugal

Both Malta and Portugal rely heavily on VAT as a source of government revenue. In 2023, VAT accounted for 22.8% of total general government revenues in Malta and 24.1% in Portugal, compared to the EU average of 17.9% (see Table 8). Additionally, the service sector plays a significant role in both economies. In 2024, the share of gross value added generated by the service sector reached 87.5% in Malta – nearly 14pp above the EU average. Noteworthy, service industries, where transactions are often less traceable, are suspected to be more prone to tax evasion. The same applies to cash transactions (European Commission, 2023; European Commission, 2024): Malta has the highest share of cash transactions at the point of sale in the euro area, with 67% of payments made in cash, compared to the euro-area average of 52%.

Table 8. Selected statistics related to VAT receipt lotteries in Malta and Portugal

	EU	Malta	Portugal
Share (in %) of VAT tax revenues in total tax revenues, 2023	17.9	22.8	24.1
Share (in %) of the gross value added from the service sector, 2024	73.6	87.5	76.6
Share (in %) of the number of cash payments in all payments used at the point of sale	52 (for the euro area)	67	54

Source: own elaboration based on Eurostat gov_10a_taxag and nama_10_a10 (extracted on 21.05.2025), and ECB report 'Study on the payment attitudes of consumers in the euro area 2024' (chart 4, p. 14, and chart 5, p. 16).

Malta has the longest-running tax receipt lottery in Europe. The programme is called Fiscal Receipts Lottery and was introduced in the 1990s. The lottery holds a monthly draw, open to the general public, during which physical receipts are drawn from a drum. Both cash register and manual fiscal receipts are accepted, and the receipts need to be posted or brought by hand to the lottery unit. No limits are set on how many receipts one can enter into the lottery. The total monthly prize pool is around EUR 60 000 and the individual prize is 100 times the value of the submitted receipt, subject to certain thresholds. The list of prizes and winner IDs is published monthly on the Ministry of Finance's website¹⁵.

As discussed at the workshop hosted by DG TAXUD in 2014 (see Fookien et al., 2015), the number of receipts submitted for the Maltese Fiscal Receipts Lottery increased from approximately 32.5 million in 2007 to 35.7 million in 2013. However, these figures were estimated based on the weight of a filled lottery drum and no formal data analysis of the submitted receipts had been conducted prior to the workshop (Fookien et al., 2015). To the best of available knowledge, no formal evaluation or research study on the effectiveness of the Maltese tax lottery has been conducted since then either.

The Portuguese *Fatura da Sorte* has been in operation since 2014, but has been on hold since December 2023 due to delays in renewing protocols. It also rewarded 'lucky receipts', but with a different design and operation compared to the Maltese version. Initially, the lottery's prizes were luxury cars, but in 2016 they were replaced by treasury certificates worth EUR 35 000. The lottery featured weekly

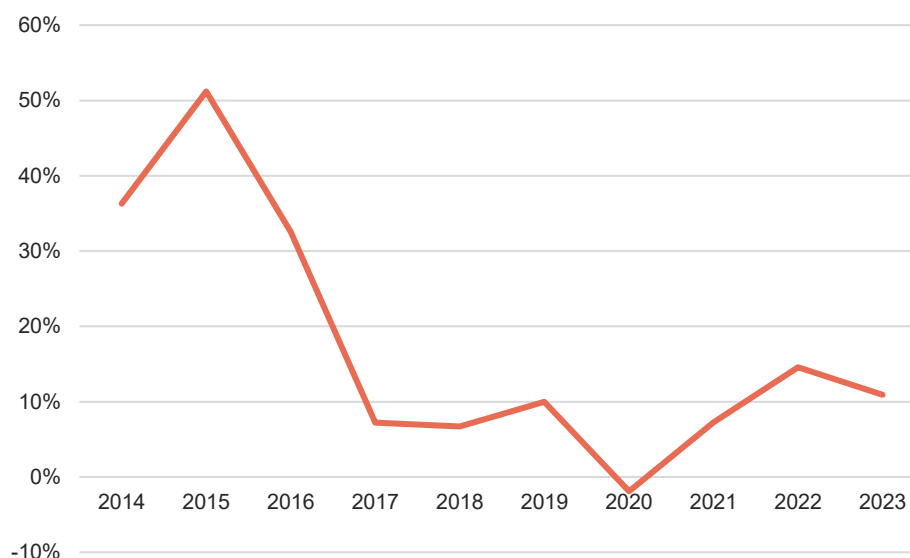
¹⁵ Government of Malta, Ministry for Finance, 'Fiscal Receipts Lottery Results', accessed on 20 May 2025, https://finance.gov.mt/services/fiscal_receipts_lottery_results/. The Maltese lottery was not without controversy, with reports of multiple winners and concerns about the fairness of the draw. It was audited i.a. by the Malta Gambling Authority in 2022, but no major irregularities were found.

draws, along with two extraordinary draws in June and December offering a EUR 50 000 prize and up to 60 draws annually. Participants received one coupon for every EUR 10 spent on invoices.

The main difference between the Portuguese *Fatura da Sorte* and the Maltese Fiscal Receipts Lottery lies in participation. In Portugal, entry is automatic. All natural persons, including minors, are automatically included when they receive an invoice with their taxpayer number (*Número de Identificação Fiscal*, NIF). Individuals may opt out of the lottery if they wish, but according to the report of the Autoridade Tributária e Aduaneira (2023) hardly anyone does. In December 2022, nearly 10.3 million taxpayers were eligible for the lottery, while the total population of Portugal was around 10.5 million.

The efficacy of the Portuguese programme has never been estimated to date. However, during the early years following the introduction of the *Fatura da Sorte*, a significant growth was observed in the number of invoices bearing a NIF (see Figure 31). Even in more recent years, the number of invoices with a NIF has increased significantly. In particular, in 2023 the number of invoices bearing a NIF increased by 10.9% compared to 2022, while in the previous year the growth rate reached 14.6%.

Figure 31. Percentage change in the number of invoices eligible for *Fatura da Sorte* (invoices with NIF, y/y change between 2014 and 2023)



Source: Autoridade Tributária e Aduaneira (2014-2013).

During and just before the lottery programme, Portugal also introduced accompanying incentive measures to encourage the use of invoices issued with NIF. In particular, invoices were required if one wanted to deduct part of their expenses on risky sectors (e.g., hairdressers and restaurants) from the annual personal income tax return. Other important changes included the introduction of the *e-Fatura* and the mandatory use of QR codes on invoices. Thus, the observed increase in the number of invoices with NIF cannot be attributed only to the lottery but also to the accompanying measures and many other factors.

Most studies on the Portuguese VAT lottery focus on the motivations behind requesting an invoice with NIF. Shortly after the *Fatura da Sorte* was introduced, Fabbri and Wilks (2016) ran a survey among the Portuguese population and found that the main drivers were a sense of civic duty and the fiscal benefits contingent on requesting the invoice. The results were confirmed by Wilks et al. (2019). Similarly,

according to the survey conducted by Pinheiro et al. (2021), the willingness to participate in the VAT lottery was found to be of little relevance when it came to requesting an invoice with NIF.

To conclude, VAT receipt lotteries have the potential to be an effective tool for improving VAT compliance. However, the design of these lotteries is crucial to ensure that they provide the right incentives. Accordingly, as part of this study, the team gathered feedback from the Maltese Ministry of Finance through a questionnaire. The answers were provided by the Fiscal Receipts Lottery Unit and the Malta Tax and Customs Administration. The results indicate that the single potential modification the Unit considers within the programme is to introduce more frequent draws, while broader reforms should be introduced once digitisation and real-time reporting make a full overhaul possible. They confirm no evaluation of the lottery's effectiveness has been conducted to date and cite the administrative burden as the programme's biggest challenge. Annual costs in 2018-2024 (excluding the two-month COVID-19 pause in 2020) ranged from EUR 883 000 to EUR 913 000, with prizes accounting for around 82% of total spending. In 2023, they constituted 0.07% of all VAT revenues in Malta. Experts consider the lottery much less effective than the Ministry of Tax and Customs Administration's webinars/workshops on VAT compliance and the Central Fiscal Registry's online VA services.

V. VAT policy gap in the EU, and in EU candidate countries and potential candidates

V.a. Scale and evolution of the VAT policy gap and its components

This section examines the scale and evolution of the VAT policy gap in the EU, and in EU candidate countries and potential candidates, focusing on the period covered by the headline estimates between 2019 and 2023. It also scrutinises the components of the VAT policy gap, i.e. the VAT rate gap and the VAT exemption gap, attributing forgone revenue to specific types of goods and services, sectors of economic activity and categories of taxpayers. The decomposition of the policy gap presented in this report is an advancement compared to previous studies. It distinguishes not only between actionable and non-actionable components, but also between elements under the discretion of national administrations and those mandated by EU policy. In this context, the national policy-driven VAT exemption gap refers to the portion of forgone revenue determined by national decisions¹⁶, while the EU policy-mandated VAT exemption gap refers to the portion arising from exemptions required by the VAT Directive. This section provides an overall perspective, while the individual country assessments in Section VI offer detailed insights into developments in each Member State. The analysis excludes Luxembourg, Bosnia and Herzegovina, Moldova, North Macedonia, and Serbia, either due to data unavailability, or due to estimates falling outside plausible ranges¹⁷.

In 2023, the total VAT policy gap in the EU accounted for approximately 50.5% of notional ideal revenue. Of this, 12.3% can be attributed to the VAT rate gap, i.e. the application of reduced, super-reduced and zero (i.e., exemption with the right to deduct) VAT rates. The VAT exemption gap, representing revenue forgone due to exemptions without the right to deduct input tax and certain components of household final consumption excluded from the VAT base, accounted for roughly 38.3% of notional ideal revenue (Figure 32 and Table 9). Within this component, the main source of revenue loss was the non-actionable part (23.3% of notional ideal revenue). The national policy-driven VAT exemption gap stood at 11.4%,

¹⁶ The national policy-driven actionable VAT exemption gap reflects the decisions by Member States which influence the scope of the exemption.

¹⁷ See Annex E.

which is slightly below the VAT rate gap, while the EU policy-mandated VAT exemption gap was estimated at 3.6%.

With regard to Member State-level estimates, the range in the estimated VAT policy gaps and in their primary components – VAT exemption and rate gaps – is considerable (see Figure 32 and Table 9). The highest VAT policy gap was estimated for Spain at 59.1%, closely followed by Greece at 57.1%. The relatively large overall and actionable VAT policy gap in Spain was due to the application of indirect taxes other than VAT in the Canary Islands, Ceuta and Melilla. In practice, forgone tax revenue in VAT is partially compensated by the local consumption taxes applicable in these regimes.

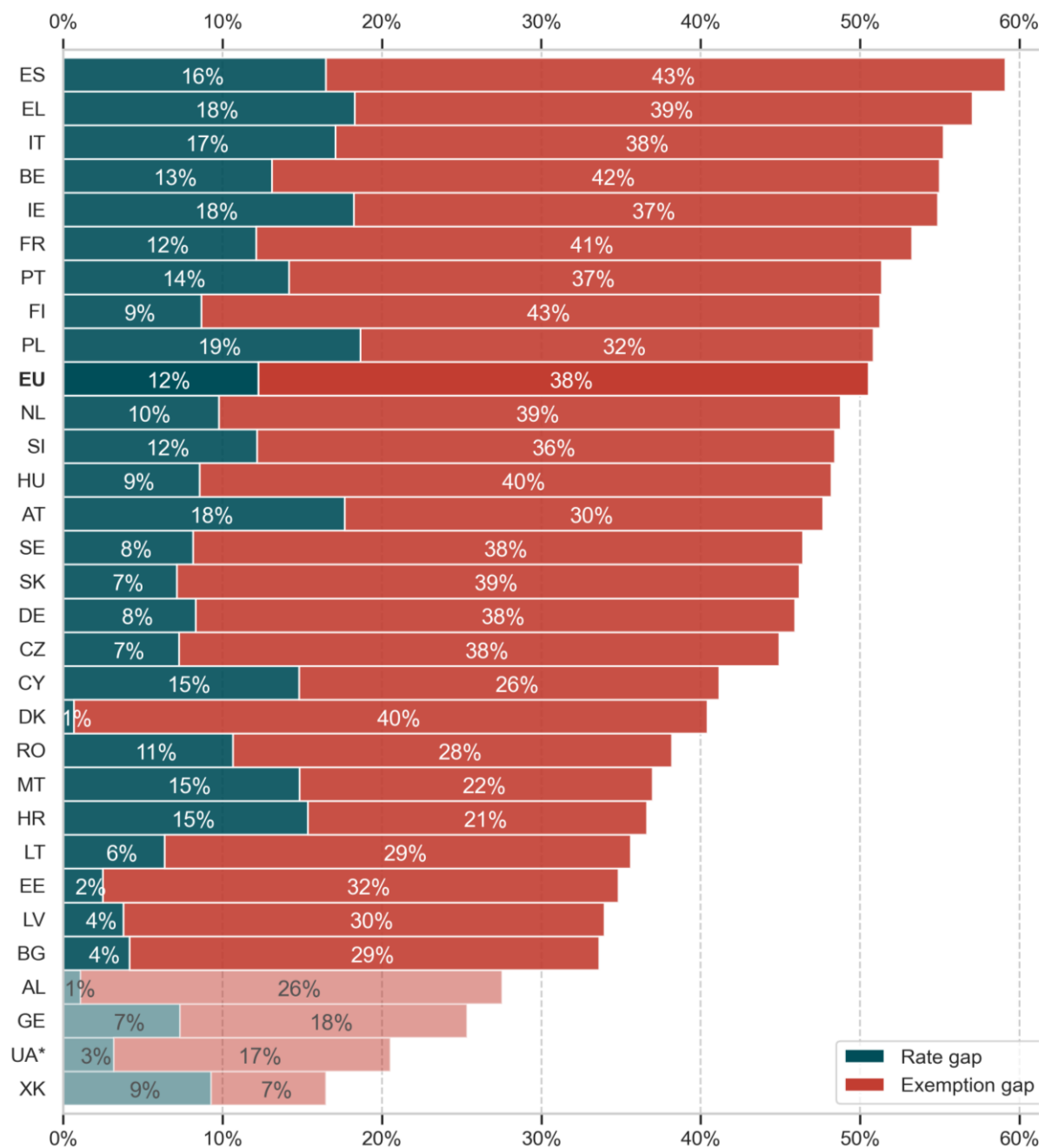
At the other end of the spectrum, the lowest VAT policy gap was estimated for Bulgaria at 33.6%, followed by Latvia, Estonia and Lithuania at 34%, 34.9% and 35.6%, respectively. The very low VAT policy gap in Malta is driven by the VAT exemption gap, particularly the actionable. A negative actionable VAT exemption gap arose due to the significant role of gambling sectors providing electronic services abroad and the lack of input VAT deduction rights for these providers. As a result, substantial hidden tax amounts increase overall VAT revenue compared to a scenario in which output is taxable and intermediate inputs are deductible.

The estimates for EU candidate countries and potential candidates substantially diverge from those for EU Member States, with some, such as Kosovo, recording VAT policy gaps as low as 16.5%. This suggests that in these countries the VAT policy gap stands for a relatively smaller forgone revenue compared to the losses from VAT non-compliance. Contributing factors include a generally more limited use of reduced VAT rates and exemptions, as well as differences in the economic structure – specifically, lower consumption of goods and services provided by non-taxable and exempt sectors. To a large extent, the latter includes non-actionable components of household final consumption as public services and imputed rents.

The actionable standard VAT rate, representing the single statutory rate that would equalise the current VTTL if all actionable exemptions and reduced rates were repealed, was 15.4% in the median EU Member State. This means that completely ‘flat’ systems could adopt a lower standard VAT rate – approximately 5.7pp lower – while remaining VTTL-neutral. The lowest actionable standard VAT rates were estimated for countries with the highest VAT policy gaps.

C-efficiency, i.e. the extent to which a VAT system collects the revenue that could be theoretically raised, which can be treated as a proxy of both the VAT policy and compliance gaps, amounted to 51.2% of net final consumption on average in the EU. The highest C-efficiency across the EU, indicating relatively little revenue forgone, was observed in Estonia (69.5%), featuring the third-lowest VAT policy gap in the EU. The lowest C-efficiency ratios were calculated for Spain (41.6%) and Greece (41.7%), which is primarily caused by the relatively high values of the VAT policy gaps estimated for these countries.

C-efficiency estimates for EU candidate countries and potential candidates were substantially higher than in the EU. In this case as well, the main driver is the low estimated VAT policy gap, largely explained by the economic structure and the relatively low value of imputed elements in household final consumption that do not represent actual market transactions. This finding reinforces the need to examine more granular components of the VAT policy gap to assess the actual actionability of VAT collection inefficiencies.

Figure 32. VAT policy gap (as % of notional ideal revenue, 2023)

Source: own elaboration. Download underlying data [here](#).

Note: EU estimates exclude Luxembourg due to recent data revisions yielding results outside plausible ranges.

* For Ukraine, the most recent available estimates are displayed – i.e., for 2021.

Table 9. VAT policy gap, VAT rate gap, VAT exemption gap and its components, C-efficiency, statutory and actionable standard VAT rates (2023)

Country	(1) VAT policy gap (%): (3) + (4)	(2) Actionabl e VAT policy gap (%) (3)+(5)+(6)	(3) VAT rate gap (%)	(4) VAT exemption gap (%) (5)+(6)+(7)	(5) EU policy-mandated VAT exemption gap (%)	(6) National-driven VAT exemption gap (%)	(7) Non-actionable VAT exemption gap (%)	(8) C-efficiency (%)	(9) Statutory standard VAT rate (%)	(10) Actionabl e standard VAT rate (%)
EU Member States										
BE	55.0	27.6	13.1	41.9	5.0	9.5	27.4	44.8	21	13.8
BG	33.6	11.1	4.2	29.5	1.2	5.8	22.5	65.4	20	18.7
CZ	44.9	18.4	7.3	37.7	2.5	8.6	26.6	59.6	21	16.3
DK	40.4	12.2	0.7	39.8	3.0	8.6	28.2	62.1	25	22.0
DE	45.9	24.0	8.3	37.6	3.9	11.7	22.0	55.8	19	14.1
EE	34.9	15.2	2.5	32.4	2.3	10.4	19.7	69.5	20	17.8
IE	54.9	28.9	18.2	36.7	3.4	7.2	26.0	48.2	23	13.4
EL	57.1	36.1	18.3	38.8	3.4	14.4	20.9	41.7	24	14.2
ES	59.1	38.3	16.5	42.7	3.1	18.7	20.9	41.6	21	11.7
FR	53.3	26.7	12.1	41.1	4.2	10.4	26.5	51.5	20	14.1
HR	36.6	22.8	15.4	21.3	1.8	5.6	13.9	65.9	25	19.6
IT	55.2	32.1	17.1	38.2	3.4	11.7	23.1	43.5	22	13.4
CY	41.2	23.6	14.8	26.4	3.9	4.9	17.5	67.7	19	14.4
LV	34.0	15.3	3.8	30.2	4.2	7.3	18.7	65.5	21	17.4
LT	35.6	17.7	6.4	29.2	3.3	8.0	17.9	58.9	21	17.0
HU	48.2	23.5	8.6	39.7	2.3	12.7	24.7	55.6	27	20.5
MT	37.0	22.7	14.8	22.2	-6.6	14.5	14.3	53.3	18	14.3
NL	48.8	21.1	9.8	39.0	3.9	7.4	27.7	55.2	21	15.4
AT	47.7	25.8	17.7	30.0	2.9	5.3	21.9	60.6	20	14.5
PL	50.8	36.8	18.6	32.2	2.1	16.1	14.0	47.0	23	14.4
PT	51.4	31.5	14.2	37.2	5.6	11.8	19.9	51.3	23	14.6
RO	38.2	24.7	10.6	27.5	2.2	11.8	13.5	51.9	19	15.4
SI	48.4	28.8	12.2	36.3	3.3	13.3	19.7	56.7	22	15.5
SK	46.2	19.7	7.1	39.1	4.7	7.8	26.5	53.4	20	15.9
FI	51.2	20.4	8.7	42.6	3.6	8.1	30.8	55.3	24	18.0
SE	46.4	20.6	8.2	38.3	2.6	9.9	25.8	57.6	25	19.0
EU (average)*	50.5	27.3	12.3	38.3	3.6	11.4	23.3	51.2	.	14.5
EU (median)*	47.1	23.6	11.4	37.4	3.3	9.7	21.9	55.5	21	15.4
EU candidate countries and potential candidates										
AL	27.5	.	1.1	26.4	.	.	.	54.7	20	.
GE	25.4	.	7.3	18.0	.	.	.	79.1	18	.
XK	16.5	.	9.3	7.2	.	.	.	82.1	18	.
UA**	20.5	.	3.2	17.4	.	.	.	64.4	20	.

Source: own elaboration. Download underlying data [here](#).

Note: "EU (average)" refers to the weighted average, calculated using each country's share in the EU notional ideal revenue as its weight. "EU (median)" represents a robust central estimate: half of the Member States score above it, and half below. Breakdown of the policy gap for candidate countries and potential candidates is not available at this stage.

*EU estimates exclude Luxembourg due to recent data revisions yielding results outside plausible ranges.

** For Ukraine, the most recent available estimates are displayed – i.e., for 2021.

The VAT rate gap was one of the components of potential VAT revenue loss that differed most across EU Member States, ranging from 0.7% in Denmark (entirely due to the zero-rating of international transport services, Table 10) to over 18% in Greece and Ireland. The main source of the VAT rate gap in the EU was the reduced taxation of foodstuffs and agricultural goods, which accounted for a revenue loss of 4.7% of notional ideal revenue. A significant share of the VAT rate gap, particularly in major travel destinations, was also attributable to hospitality services (2.4% of notional ideal revenue).

Table 10. Breakdown of the VAT rate gap (% of notional ideal revenue, 2023)

Country	Food	Pharmaceuticals	Accommodation and restaurants	Utilities	Transport	Other
BE	5.1	1.1	1.4	2.0	0.9	2.6
BG	0.0	0.0	2.2	0.2	1.4	0.4
CZ	2.3	0.7	2.0	0.6	0.6	1.2
DK	0.0	0.0	0.0	0.0	0.7	0.0
DE	4.4	0.1	1.3	0.6	1.1	0.9
EE	0.1	0.8	0.6	0.0	0.5	0.5
IE	5.3	1.7	2.5	2.0	2.2	4.5
EL	4.9	1.7	4.3	1.6	1.5	4.3
ES	4.2	1.4	4.8	1.7	0.8	3.5
FR	5.3	0.2	2.0	0.5	1.0	3.1
HR	5.5	2.3	4.2	1.9	0.5	1.0
IT	5.5	0.2	3.6	0.8	0.7	6.3
CY	5.3	1.2	5.1	0.4	1.6	1.2
LV	0.8	0.7	0.4	0.4	1.5	-0.1
LT	0.3	1.0	2.0	0.5	0.8	1.6
HU	2.7	1.2	2.6	0.1	0.5	1.4
MT	7.7	0.1	3.1	0.6	1.2	2.0
NL	3.8	0.4	2.3	1.1	1.0	1.2
AT	3.2	0.6	4.3	0.0	1.3	8.3
PL	10.3	1.7	1.9	0.6	0.6	3.6
PT	4.6	1.2	5.3	0.2	1.2	1.6
RO	5.6	1.3	2.1	0.4	0.6	0.6
SI	5.4	1.3	2.2	1.1	0.5	1.6
SK	1.3	1.0	1.7	0.3	1.0	1.7
FI	2.8	0.9	1.5	0.2	1.1	2.3
SE	3.7	0.6	1.9	0.0	1.1	0.9
EU (average)*	4.7	0.6	2.4	0.8	1.0	2.8
EU (median)*	4.2	1.0	2.2	0.5	1.0	1.6

Source: own elaboration. Download underlying data [here](#).

Note: "EU (average)" refers to the weighted average, calculated using each country's share in the EU notional ideal revenue as its weight. "EU (median)" represents a robust central estimate: half of the Member States score above it, and half below.

Breakdown of the policy gap for candidate countries and potential candidates is not available at this stage.

*EU estimates exclude Luxembourg due to recent data revisions yielding results outside plausible ranges.

Among the actionable VAT policy gap components, the national policy-driven VAT exemption gap was the second-largest source of potential VAT revenue loss. The sectors and types of supplies contributing to this component varied widely across Member States and, in the vast majority of cases, could not be distinguished due to the granularity of the model and its parameters (Table 11). Among the categories that could be identified, financial services other than insurance accounted for 1.7% of notional ideal revenue, SME exemptions for 0.7% and real estate services for 0.6%.

Table 11. Breakdown of the national policy-driven VAT exemption gap (% of notional ideal revenue, 2023)

Country	Real estate	Banking services	SME exemptions	Other
BE	3.1	1.6	0.0	4.7
BG	0.1	1.4	0.3	4.0
CZ	-1.1	-0.3	0.6	9.4
DK	3.8	2.2	0.0	2.6
DE	3.1	0.3	0.0	8.2
EE	0.9	0.4	0.3	8.8
IE	2.8	0.2	0.0	4.2
EL	3.5	2.2	0.0	8.7
ES	1.7	2.4	0.0	14.5
FR	2.8	-0.5	0.0	8.1
HR	-0.1	-0.9	0.5	6.2
IT	1.5	0.5	1.2	8.6
CY	-0.2	-4.0	0.1	9.0
LV	-0.7	1.4	1.7	5.0
LT	0.4	1.8	3.5	2.3
HU	0.2	2.3	0.9	9.4
MT	1.4	0.3	0.5	12.2
NL	2.0	0.7	0.0	4.6
AT	-0.2	0.5	0.0	5.0
PL	1.7	3.1	0.3	11.1
PT	1.8	0.8	0.0	9.1
RO	0.6	-0.4	1.1	10.5
SI	0.3	1.9	0.6	10.5
SK	-0.3	0.6	0.4	7.1
FI	2.7	1.1	0.0	4.3
SE	3.3	0.4	0.0	6.2
EU (average)*	0.6	1.7	0.7	8.4
EU (median)*	1.5	0.7	0.2	8.2

Source: own elaboration. Download underlying data [here](#).

Note: "EU (average)" refers to the weighted average, calculated using each country's share in the EU notional ideal revenue as its weight. "EU (median)" represents a robust central estimate: half of the Member States score above it, and half below.

Breakdown of the policy gap for candidate countries and potential candidates is not available at this stage.

*EU estimates exclude Luxembourg due to recent data revisions yielding results outside plausible ranges.

The EU policy-mandated VAT exemption gap was relatively uniform across Member States. Although differences in the implementation of EU policy-mandated exemptions exist, the main driver of this variation were economic factors (Table 12). The main contributors to this component of the VAT policy gap were private health services (1.3% of notional ideal revenue), insurance (1.1%) and private education (1%). Interestingly, postal services made a small negative contribution to the VAT policy gap, as these services are used primarily by businesses, which deduct input VAT if they are taxable.

Table 12. Breakdown of the EU policy-mandated VAT exemption gap (% of notional ideal revenue, 2023)

Country	Insurance	Private education	Private health	Private social services	Postal services	Recreation services
BE	1.9	0.3	1.6	1.7	-0.4	0.0
BG	-0.1	0.6	0.6	0.1	-0.1	0.0
CZ	1.1	0.2	0.5	0.4	-0.2	0.6
DK	1.5	0.3	0.7	0.8	-0.4	0.0
DE	1.1	0.2	1.0	2.1	-0.1	-0.4
EE	1.1	0.2	0.7	0.3	0.1	0.0
IE	0.0	0.8	1.8	0.3	-0.3	0.8
EL	0.4	1.2	0.5	0.1	0.0	1.2
ES	0.9	0.9	0.9	0.0	-0.1	0.6
FR	2.4	0.2	1.1	0.7	-0.1	-0.2
HR	0.0	0.5	1.2	0.1	-0.1	0.0
IT	1.2	0.6	1.1	0.1	-0.1	0.4
CY	0.5	1.7	1.0	0.0	0.0	0.8
LV	0.6	0.8	1.9	0.2	-0.2	0.9
LT	0.5	0.6	1.3	0.7	-0.1	0.3
HU	0.7	0.8	0.9	0.2	-0.3	0.0
MT	1.0	1.2	1.3	0.2	-0.8	-9.5
NL	2.4	0.4	0.9	0.5	-0.2	0.1
AT	1.4	0.2	0.8	0.3	-0.2	0.3
PL	0.1	0.4	1.1	0.5	0.0	0.1
PT	1.4	0.5	2.3	0.8	0.0	0.5
RO	0.4	0.5	1.4	0.2	-0.3	0.0
SI	1.3	0.5	1.2	0.6	-0.1	-0.2
SK	1.0	0.5	0.5	0.1	0.1	2.6
FI	1.3	0.0	1.0	1.0	-0.3	0.6
SE	1.0	0.1	0.6	1.1	0.0	-0.2
EU (average)*	1.1	1.0	1.3	0.5	-0.3	0.0
EU (median)*	1.0	0.5	1.0	0.3	-0.1	0.1

Source: own elaboration. Download underlying data [here](#).

Note: "EU (average)" refers to the weighted average, calculated using each country's share in the EU notional ideal revenue as its weight. "EU (median)" represents a robust central estimate: half of the Member States score above it, and half below.

Breakdown of the policy gap for candidate countries and potential candidates is not available at this stage.

*EU estimates exclude Luxembourg due to recent data revisions yielding results outside plausible ranges.

The non-actionable VAT policy gap accounted for over 45% of the VAT policy gap in 2023, clearly highlighting the limits of the VAT policy gap and C-efficiency as measures of the impact of policies and the efficiency of administrations (Table 13). The non-actionable VAT policy gap ranged from 13.5% in Romania to 30.9% in Finland, driven mainly by imputed rents, and public health and education services.

Table 13. Breakdown of the non-actionable VAT policy gap (% of notional ideal revenue, 2023)

Country	Imputed rents	Public education	Public health	Public services, other
BE	7.4	6.9	5.2	7.9
BG	8.4	4.9	2.2	7.0
CZ	11.4	4.5	5.2	5.5
DK	7.2	5.4	5.3	10.3
DE	5.6	4.2	5.2	6.9
EE	8.3	4.3	3.8	3.2
IE	9.4	3.7	6.6	6.3
EL	8.9	2.5	2.7	6.8
ES	8.3	4.1	4.5	4.0
FR	9.2	4.4	5.7	7.2
HR	5.3	3.1	4.0	1.4
IT	9.9	4.0	5.4	3.8
CY	8.1	2.2	3.4	3.8
LV	5.1	2.3	2.2	9.2
LT	5.4	4.4	4.8	3.4
HU	10.2	3.1	4.2	7.2
MT	4.7	4.0	3.9	1.7
NL	6.4	4.2	4.9	12.3
AT	7.0	3.3	5.3	6.2
PL	2.8	3.1	3.3	4.8
PT	7.3	3.5	3.9	5.1
RO	6.9	2.0	2.9	1.7
SI	7.0	4.6	4.7	3.3
SK	10.3	3.4	4.6	8.2
FI	9.7	5.0	6.0	10.2
SE	3.8	6.6	6.1	9.3
EU (average)*	8.9	3.4	4.3	6.7
EU (median)*	7.4	4.1	4.7	6.3

Source: own elaboration. Download underlying data [here](#).

Note: "EU (average)" refers to the weighted average, calculated using each country's share in the EU notional ideal revenue as its weight. "EU (median)" represents a robust central estimate: half of the Member States score above it, and half below.

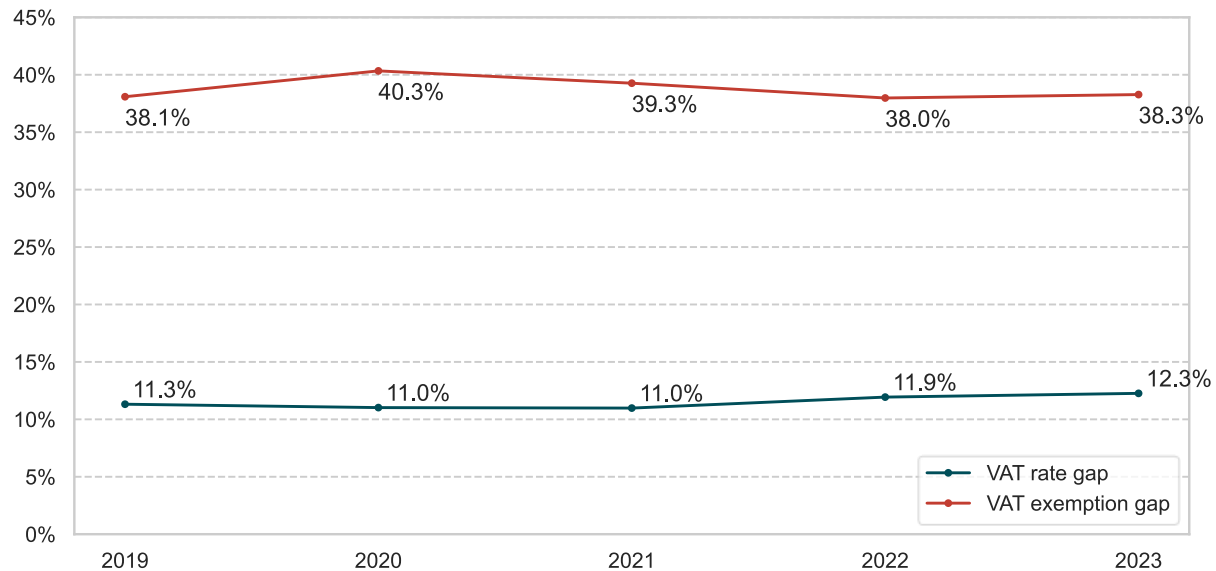
Breakdown of the policy gap for candidate countries and potential candidates is not available at this stage.

*EU estimates exclude Luxembourg due to recent data revisions yielding results outside plausible ranges.

The evolution of the VAT exemption and rate gaps over the 2019-2023 period shows that their patterns are in a way reversed (Figure 33). The exemption gap peaked in 2020, mostly due to a non-actionable component, i.e., the increased public expenditure related to the COVID-19 pandemic. In 2022, the VAT exemption gap decreased, as those measures were largely discontinued. Differently, the VAT rate gap

reached its highest level in 2023 after two consecutive years of increase, as the application of lower rates has commonly been used as a measure to alleviate the burden of consumer price inflation.

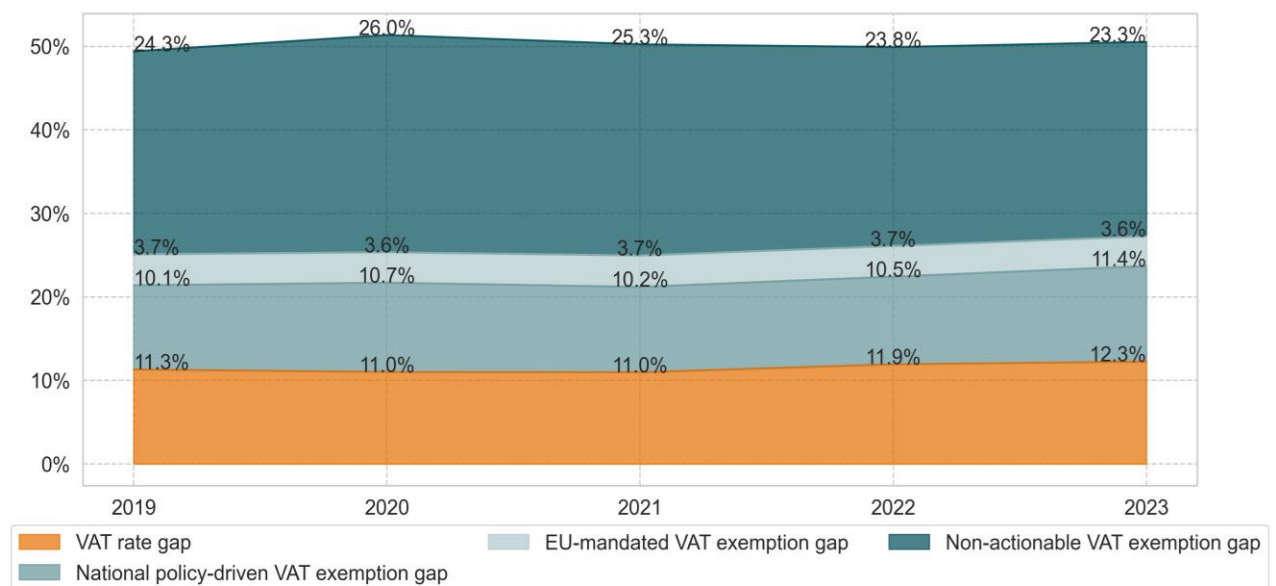
Figure 33. Change in the EU VAT exemption and rate gaps (as % of notional ideal revenue, 2019-2023)



Source: own calculations. Download underlying data [here](#).

Note: EU estimates exclude Luxembourg due to recent data revisions yielding results outside plausible ranges.

Figure 34. Change in the EU VAT exemption (actionable and non-actionable parts) and VAT rate gaps (as % of notional ideal revenue, 2019-2023, stacked)



Source: own calculations. Download underlying data [here](#).

Note: EU estimates exclude Luxembourg due to recent data revisions yielding results outside plausible ranges.

V.b. Special topic: drivers of changes in the VAT policy gap

The evolution of the different components of the VAT policy gap – i.e., the VAT rate gap, the actionable VAT exemption gap (both EU policy-mandated and national policy-driven), and the non-actionable VAT

policy gap – discussed in the previous section sheds light on the sources of the overall VAT policy gap development.

To examine the increase in the VAT policy gap since 2019, its drivers were further decomposed. More specifically, the analysis disentangles the impact of changes in the structure of the core liability component, household final consumption (separately at a high level, between 2-digit CPA categories, and at a low level, within these CPA categories), and statutory changes to VAT rates and VAT matrices. The objective is to verify to what extent changes in the VAT policy gap were driven by decisions of national administrations – mostly temporary measures to alleviate the effects of the COVID-19 pandemic and the inflationary crisis – and to what extent they reflect structural changes in the tax base. The end goal is to explain the developments and pinpoint the most important trends affecting overall collection efficiency in the long term. This is of high relevance, as the evolution of the VAT policy gap tends to be screened less thoroughly than changes in the VAT compliance gap due to its higher stability.

From an operational and methodological standpoint, three additional scenarios were run using the VTTL model, and counterfactual values of the parameters and tax base to obtain:

- the counterfactual VTTL for 2020-2024, assuming the structure of household final consumption had remained unchanged since 2019;
- the counterfactual VTTL for 2020-2024, assuming the effective rates per 2-digit CPA category had remained unchanged since 2019; and
- the counterfactual VTTL for 2020-2024, assuming the statutory rates and rate matrices had remained unchanged since 2019.

Based on differences in the VTTL across the scenarios, and their comparison with the actual VTTL and the notional ideal revenue, the contribution of each of the elements described above was identified for a selected group of Member States. To provide a relatively comprehensive representation across different VAT regimes, economic conditions and structural characteristics – while also taking into account data availability and granularity – the following Member States were selected: Denmark, Greece, Italy, Poland and Romania (see characteristics in Table 14).

Table 14. Characteristics of countries included in the analysis

Country	Specific features	Changes in VAT rules with the largest impact on the VAT policy gap	VAT policy gap change between 2019 and 2024
DK	Almost flat VAT rate system	-	-0.7pp
EL	Significant tourist inflows and high expenditure by foreign nationals	Expansion of the list of goods and services eligible for the reduced rates (13% or 6%) in 2019	+4.9pp
IT	Relatively low economic growth, high VAT policy gap and considerable VAT rate differentiation	Temporary energy relief: natural gas supplies for civil/industrial use cut to 5% VAT repeatedly from Q4-2021 to Q4-2023 (also covering certain ancillary charges and district heating in 2023). Ended after 2023	+0.9pp
PL	Consistently high GDP growth, high degree of VAT rate differentiation and high VAT policy gap	Anti-inflation shields (temporary, 2022): broad VAT cuts (e.g., fuels 23%→8%, electricity 23%→5%, district heating 23%→8%, gas 23%→0%, basic food 5%→0%), largely time-limited in 2022, with some extensions into 2023	+3.0pp

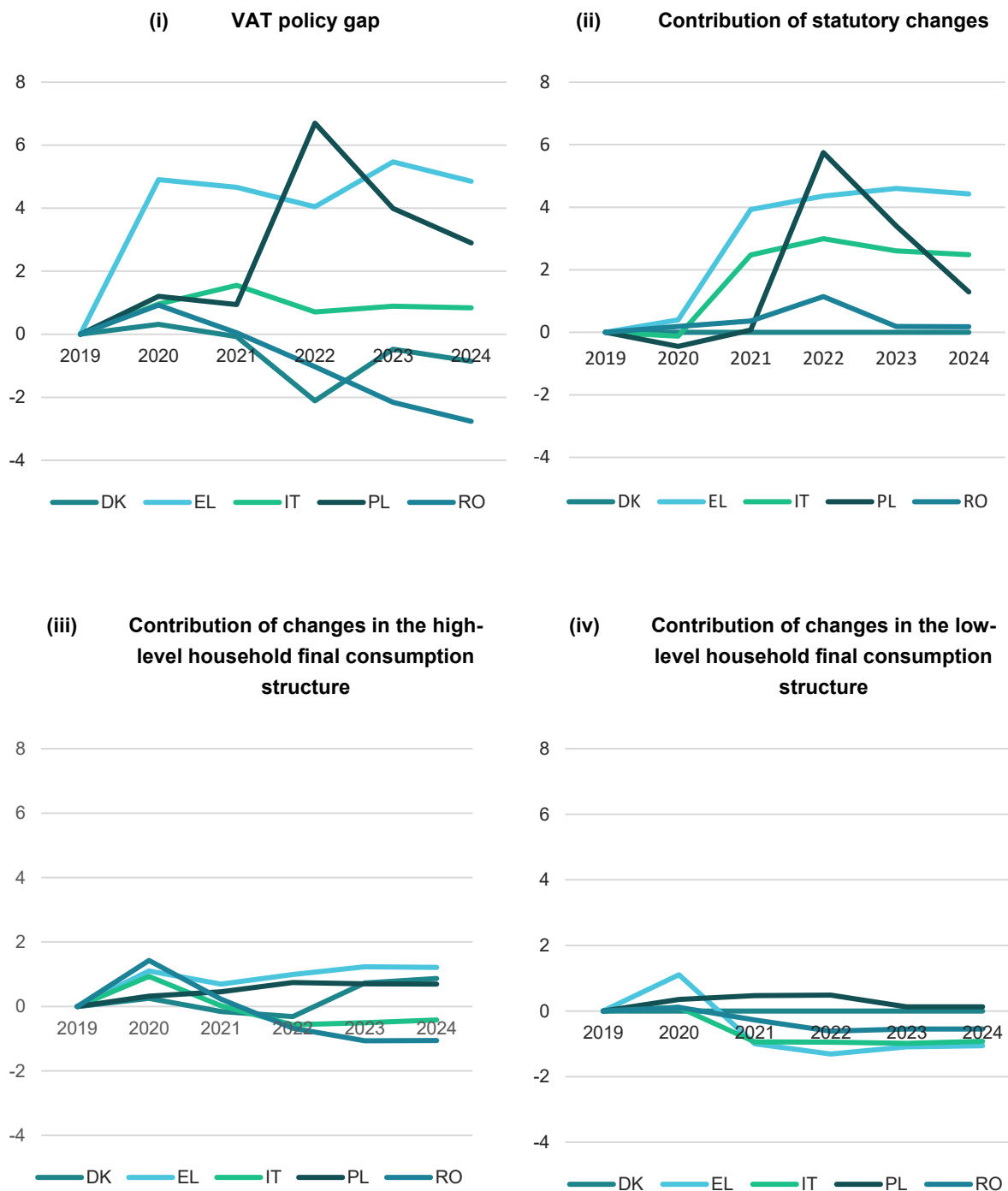
Country	Specific features	Changes in VAT rules with the largest impact on the VAT policy gap	VAT policy gap change between 2019 and 2024
RO	Consistently high GDP growth, relatively low VAT rate differentiation and low VAT policy gap	Hospitality and related services: 5%→9% from 2023	-3.0pp

Source: own elaboration.

Among the Member States analysed, between 2019 and 2024 the VAT policy gap increased in three (Greece, by 4.9pp; Poland, by 3.0pp; and Italy, by 0.9pp) and decreased in two (Romania, by 3.0pp; and Denmark, by 0.7pp) (see Figure 35 (i)). The trajectory of changes differed significantly by Member State, but some important similarities can be observed. In 2020, the VAT policy gap increased in all of the Member States covered, remaining elevated in 2021. From that moment onwards, Romania and Denmark experienced a downward trend, whereas in Greece and Italy the gap remained relatively stable. In Poland, a large hike occurred in 2022, followed by a gradual but modest decline in the two subsequent years.

One of the drivers of the elevated VAT policy gap in 2020 was household final consumption – both its high-level and low-level structure, i.e., the proportion of consumption devoted to largely different and to broadly similar products and services, respectively. A key role was played by necessities (basic foodstuffs), often taxed at reduced rates, which constituted a larger share of expenditure. At the same time, due to COVID-19-related restrictions, expenditure on hospitality services – also often taxed at reduced rates – declined relatively, although this effect was substantially smaller. As shown in Figure 35 (ii) and (iii), after the pandemic, the trajectories of household consumption structure contributions to the VAT policy gap diverged across countries. In 2023 and 2024, the impact of the high-level consumption structure was positive, increasing the VAT policy gap in most of the cases analysed. By contrast, the impact of the low-level consumption structure was negative, partly offsetting the former. This clearly reflects the effect of the inflation crisis, with elevated expenditure on necessities and energy products altering the structure of consumption baskets.

The most important driver of the observed changes, however, were statutory decisions. Except for Denmark, which did not introduce any significant concessions during the analysed timeframe, changes to statutory rates and tax matrices contributed to the increase in the VAT policy gap in the remaining Member States – Greece, Italy, Poland and Romania. The largest impact was recorded in Poland, where large-scale concessions were introduced to alleviate the inflation crisis.

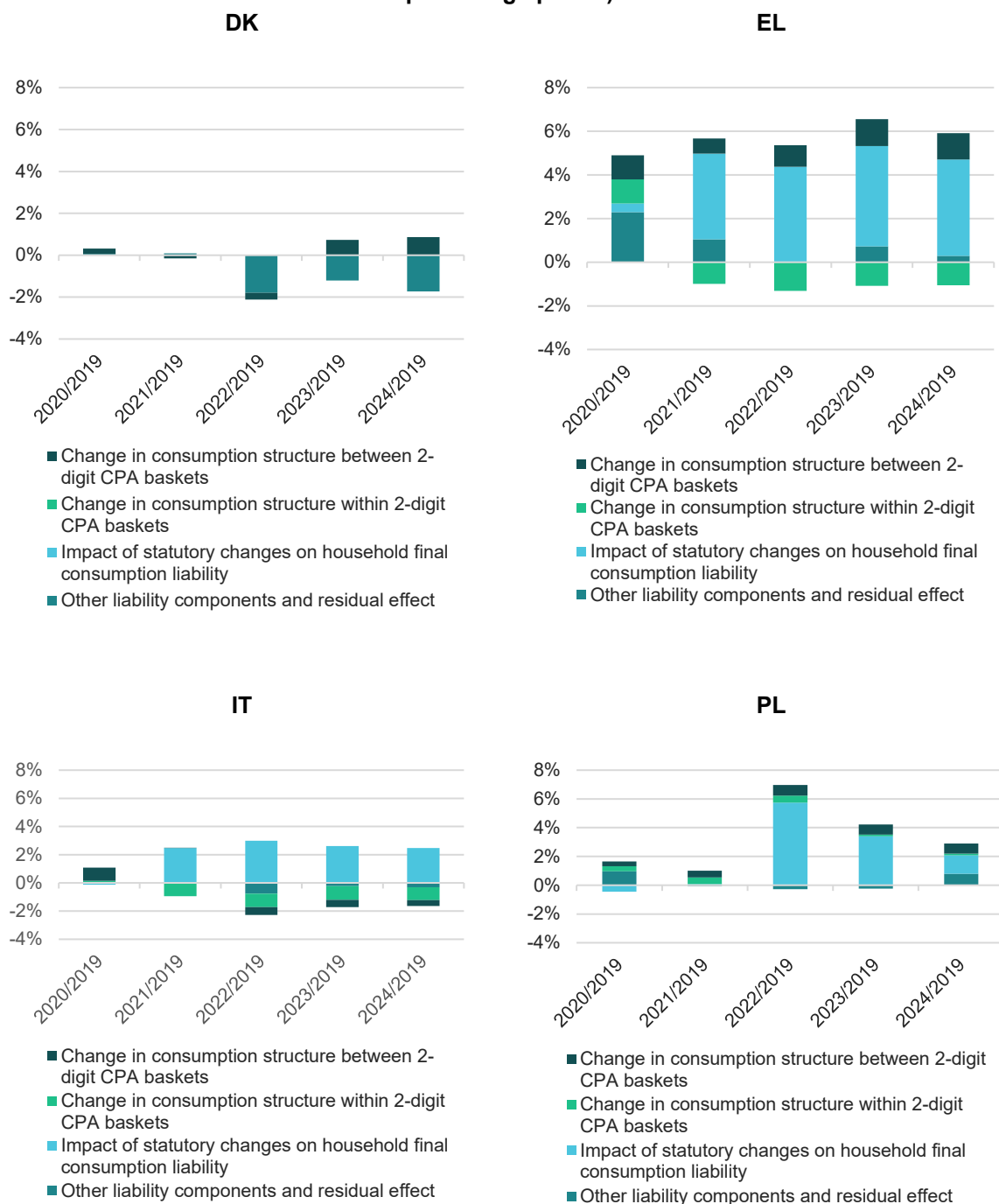
Figure 35. Changes in the VAT policy gap and their drivers

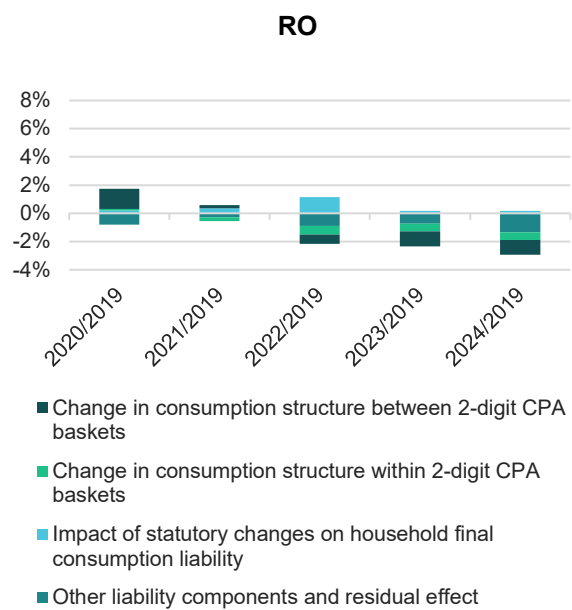
Source: own calculations.

Looking at the country perspective (Figure 36), each case presents a distinct story. Denmark illustrates the most stable VAT policy gap, with only a very modest impact from the structure of household final consumption and the VAT base as a whole, resulting in small shifts in the VAT policy gap. In Greece and Italy, changes were driven primarily by the statutory decisions introduced in 2020, which then remained in place. Poland experienced the largest increase in the statutory-rates-driven VAT policy gap, with the statutory changes compounded by the impact of the household final consumption structure, leading to an overall rise of nearly 6pp (2022 compared to 2019). In Romania, by contrast, a gradual

decline in the VAT policy gap can be observed, linked to both the overall VAT base structure and developments in household final consumption.

Figure 36. Contributions to change in the VAT policy gap (2020-2024 in relation to 2019, percentage points)





Source: own calculations.

VI. VAT compliance and policy gaps – country-specific results

We assess the reliability of estimates using a set of indicators and provide an overall assessment for each country. This assessment is displayed through a traffic light and sign system, which is also employed in each of the chapters on specific countries. A detailed presentation of data availability and reliability is provided in Annex E, building also on the clarifications in Box 2.

The traffic light categories can be summarized as follows:



Estimates based on fairly up-to-date information, with little or no unexplained volatility and no unexpected patterns that could suggest inaccuracies.



Estimates based on somewhat outdated information or showing elevated unexplained volatility of estimates.



Estimates based on very outdated information, with large unexplained volatility, or other unexpected patterns of the liability subcomponents.



Estimates could not be prepared either because core data were unavailable (e.g., SUT) or because the resulting VAT compliance gap estimates fell outside plausible ranges, such as negative values persisting for several consecutive years.

The country-specific analysis for four EU candidate countries, namely Bosnia and Herzegovina, Moldova, North Macedonia, and Serbia, lack accuracy and inconsistencies in the underlying data that could not be resolved in time for the finalisation of this report. We present the country-specific results for these countries in Annex F for transparency, despite their limited reliability.

In the country chapters, we present a set of selected economic indicators to provide broader context for factors likely influencing VAT compliance. These indicators, already introduced in chapter II on the general economic environment, include:

- GDP (real growth rate)
- Final consumption expenditure (nominal growth rate)
- Household final consumption of food and non-alcoholic beverages (nominal growth rate)
- Services susceptible to non-compliance (nominal growth rate)
- Share of services in GDP (nominal growth rate)
- Tourism activity, measured in nights spent (growth rate)
- Bankruptcy declarations (growth rate)
- Digital payments (nominal growth rate)

A detailed discussion of the expected effects of these indicators, based on their most recent developments, can be found on page 18 and 19 in section II.a.

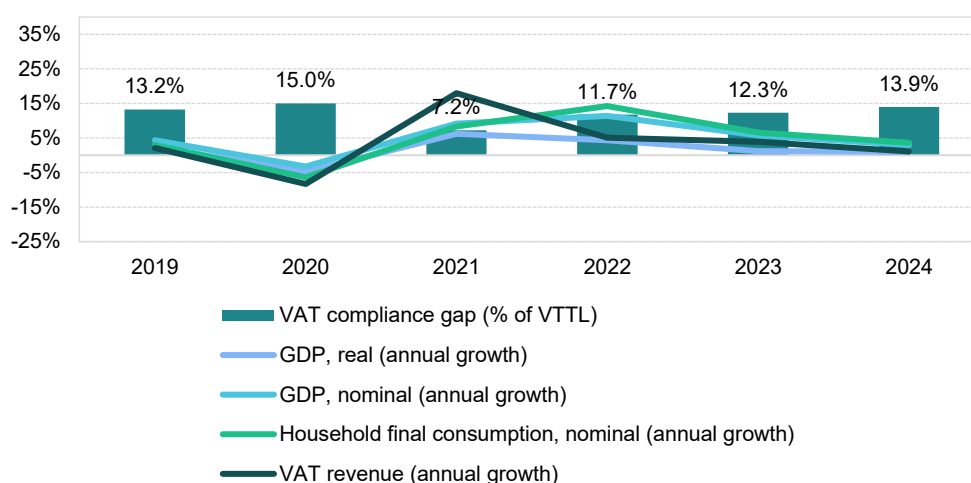
EU Member States			
Country	Page	Country	Page
Belgium	70	Lithuania	126
Bulgaria	74	Luxembourg	130
Czechia	78	Hungary	134
Denmark	82	Malta	138
Germany	86	Netherlands	142
Estonia	90	Austria	146
Ireland	94	Poland	150
Greece	98	Portugal	154
Spain	101	Romania	158
France	106	Slovenia	162
Croatia	110	Slovakia	166
Italy	114	Finland	170
Cyprus	118	Sweden	174
Latvia	122		
EU candidate countries and potential candidates			
Country	Page	Country	Page
Albania	178	Kosovo	186
Georgia	182	Ukraine	190

Belgium

VAT revenues in Belgium grew by 3.8% in 2023, slowing down in comparison with 5.1% in 2022 and well below the peak growth of 18% in 2021. The VAT compliance gap rose to 12.3% in 2023, up from 11.7% in 2022, though it remained below the levels recorded in 2019 (13.2%) and 2020 (15.0%). A preliminary estimate for 2024 suggests a further increase to 13.9%. In 2023, Belgium ended the VAT exemption for COVID-19-related supplies and introduced several administrative and compliance changes. These included adjustments to the reverse charge mechanism in construction, longer statutes of limitation, an extended document retention period, updated late payment and refund interest rates and mandatory e-invoicing for certain government contracts. These policy and administrative measures were among the key factors influencing VAT revenue.

The post-COVID-19 recovery proved short-lived, with the strong rebound in domestic demand confined to 2021 and 2022. Since then, Belgium's economic growth has been constrained by high inflation driven by energy prices, persistent supply chain bottlenecks, energy market volatility linked to Russia's war of aggression against Ukraine and related sanctions and weak export demand. Given Belgium's heavy reliance on international trade – total trade accounted for 169% of GDP in 2023 – external conditions play a critical role. In particular, slow recovery in Germany and other EU economies further affected growth.

Figure 37. BE – VAT compliance gap, VAT revenues, GDP growth and household final consumption



Sources: own elaboration, Eurostat. Note: fast estimates for 2024 are based on a simplified method.

Real GDP growth in Belgium fell to 1.2% in 2023, a decline of 3.1pp compared with 2022. This indicates an economic slowdown likely contributing to an **increase in the VAT compliance gap**. Household final consumption growth rate in real terms, which had been relatively strong in 2021 (5.5%) and 2022 (3.5%), slowed sharply to 0.5% in 2023. By contrast, real government consumption growth moderated more gradually, from 4.2% in 2021 and 3.4% in 2022 to 2.9% in 2023. GFCF accelerated, expanding by 3.5% in 2023 compared with 1.7% in 2022 in real terms.

While measures reported in real values capture the actual change in economic activity by excluding inflation effects, nominal growth rates more directly reflect changes in the VAT base and potential VAT revenues. Accordingly, nominal final consumption expenditure growth slowed from 12.7% in 2022 to 6.8% in 2023. In particular, growth of nominal household final consumption of food and non-alcoholic

beverages fell sharply (-29pp), which may have further contributed to an **increase in the VAT compliance gap**.

Inflation fell sharply to 2.3% in 2023, down from a peak of 10.3% in 2022, although this downward trend did not persist in 2024, when inflationary pressures began to reemerge. The main drivers of inflation were housing, water, electricity, gas and other fuels, as well as transport and food. Price pressures were evident across nearly all components of household consumption except communications and education. In the context of the VAT compliance gap, it is noteworthy that recreational, restaurant and accommodation services were among the fastest-growing categories of nominal household consumption in 2022, but their growth slowed considerably in 2023. Similarly, year-over-year change in demand for tourism, as measured by nights spent in tourist accommodations, slowed to 3.9% in 2023, down from 47.3% in 2022. These last two developments can be regarded as factors that drive conditions conducive to a **decrease in the VAT compliance gap**.

GFCF, reflecting investment in fixed assets such as infrastructure, machinery and buildings, increased by 8.4% in nominal terms in 2023. Adjusted for inflation, this indicates a real increase in investment activity.

On the supply side, a slowdown was also evident in 2023. Services outperformed industry, manufacturing and construction in terms of real value-added growth. After rebounding in 2022, value added in energy-intensive sectors declined again, weighed down by supply chain disruptions, high energy costs and weak external demand. As a result, the share of services in the economy increased by 1.1pp. Overall, this shift in the sectoral structure of the Belgian economy is likely to **increase the VAT compliance gap**, as the risk of non-compliance tends to be higher in the services sector.

Table 15. BE – Factors affecting VAT compliance gap (2022-2023)

Variable	2023	Difference (2023 vs 2022)	Expected impact on 2023 VAT compliance gap
GDP growth, real	1.2%	-3.1pp	Increase
Final consumption expenditure growth, nominal	6.8%	-5.9pp	Increase
Household final consumption of food and non-alcoholic beverages growth, nominal	10.5%	-29.0pp	Increase
Services susceptible to non-compliance growth, nominal	6.7%	-1.5pp	Decrease
Services share in GDP	78.6%	1.1pp	Increase
Tourism (nights spent), growth	3.9%	-43.4pp	Decrease
Bankruptcy declarations, growth	10.8%	-31.2pp	Increase
Digital payments growth, nominal	-0.9%	-5.2pp	Increase

Source: own elaboration based on Eurostat and ECB.

Note: for a discussion of the expected effects of these indicators, please see pages 18 and 19 in section II.a.

The economic slowdown in Belgium led to a 10.8% increase in bankruptcies in 2023, although the pace of growth was much weaker than in 2022, with a cumulative decline of 31.2pp. In 2023, the rise in bankruptcies was recorded across most sectors, although not uniformly, with the accommodation and food services sector experiencing relatively higher rates than others. The overall year-over-year change suggests a potential **widening of the VAT compliance gap**.

Other factors also influenced the VAT compliance gap. In Belgium, the nominal growth of digital payments declined in 2023 after a rise in 2022. This factor likely contributed to the **widening of the VAT compliance gap**.

BE: VAT compliance gap (2019-2024)



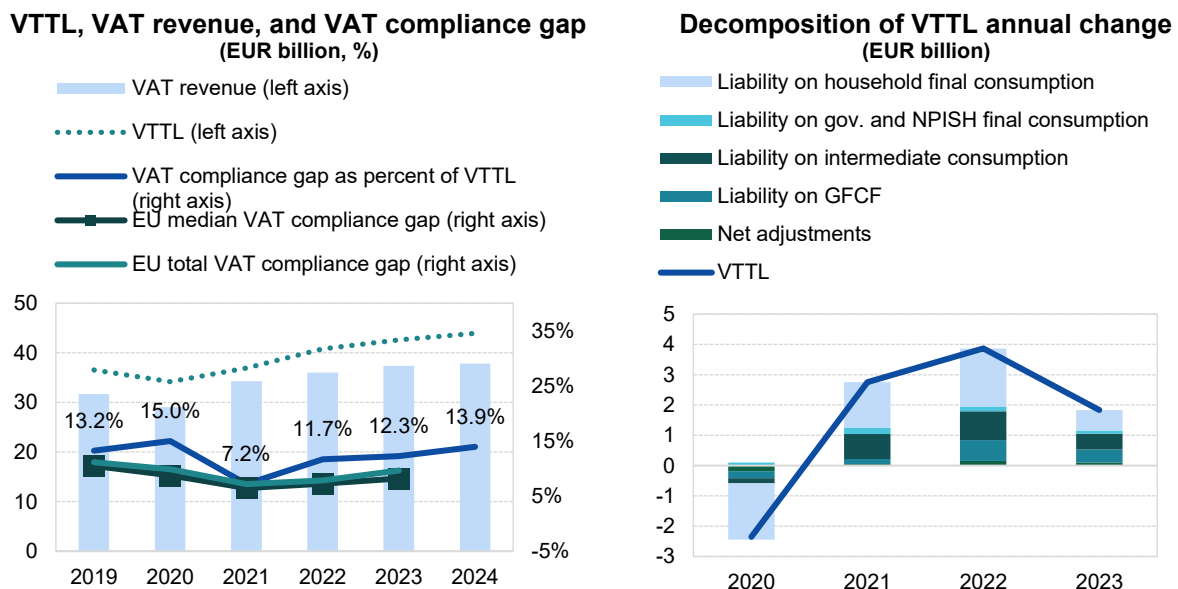
- In Belgium, the VAT compliance gap increased in 2023 to 12.3% from 11.7% in 2022. In 2024, it is expected to increase further¹⁸.
- In 2023, the growth of VTTL and VAT revenues was slower than in previous years (2022 and 2021).
- The main factor behind slower VTTL growth was slower growth in household consumption.

Table 16. BE – VTTL, VAT revenue, and VAT compliance gap

	2019	2020	2021	2022	2023	2024
VTTL (EUR m)	36 541	34 189	36 941	40 808	42 643	43 939
<i>o/w liability on household final consumption</i>	20 273	18 408	19 906	21 820	22 499	X
<i>o/w liability on gov. and NPISH final consumption</i>	1 532	1 629	1 835	1 994	2 094	X
<i>o/w liability on intermediate consumption</i>	8 223	8 051	8 878	9 832	10 357	X
<i>o/w liability on GFCF</i>	5 769	5 541	5 707	6 396	6 828	X
<i>o/w net adjustments</i>	744	561	614	767	865	X
VAT revenue (EUR m)	31 702	29 061	34 283	36 031	37 413	37 814
VAT compliance gap (EUR m)	4 839	5 128	2 657	4 777	5 230	6 126
VAT compliance gap (percent of VTTL)	13.2%	15.0%	7.2%	11.7%	12.3%	13.9%
<i>EU average VAT compliance gap (percent of VTTL)</i>	11.1%	9.9%	7.2%	7.9%	9.5%	X
VAT compliance gap change since 2019					-1.0pp	

Source: own elaboration. Download underlying data [here](#). Note: fast estimates for 2024 are based on a simplified method. Rounded changes may not equal the change between rounded values.

Figure 38. BE – VTTL, VAT revenue, and VAT compliance gap



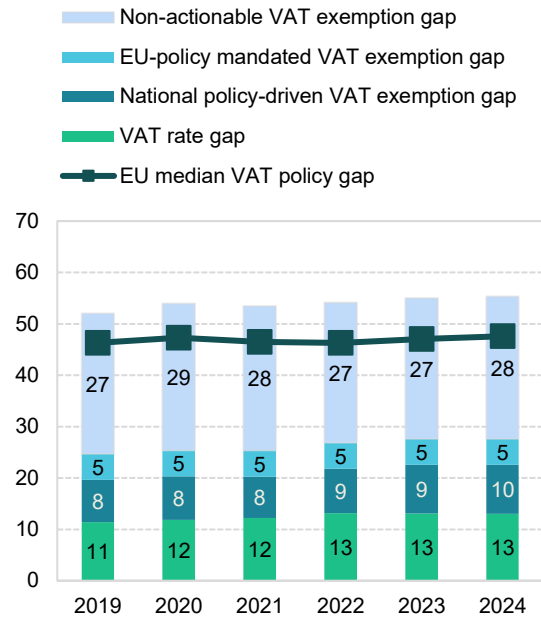
Source: own elaboration. Download underlying data [here](#). Note: fast estimates for 2024 are based on a simplified method.

¹⁸ **Green traffic light:** estimates are based on up-to-date data, show no unexplained volatility, and reveal no unexpected patterns suggesting inaccuracies. This applies to both VAT compliance gap and VAT policy gap estimates. The estimates are based on the latest data available at the cut-off date for data collection (15/07/2025). As datasets are regularly revised, future editions will reassess and update the estimates accordingly.

BE: VAT policy gap (2019-2024)

- The VAT policy gap in Belgium has gradually increased from 2021 (up to 55% of the notional ideal revenue in 2023).
- The main driver of these changes was VAT rate cuts on electricity (effective from March 2022), natural gas and district heating for residential contracts (effective in April). Initially temporary, these reductions were later extended and made permanent for B2C supplies.

Figure 39. BE – VAT policy gap (%)



Source: own elaboration. Download underlying data [here](#).

Table 17. BE – VAT policy gap decomposition

	2019	2020	2021	2022	2023	2024
Notional ideal VAT revenue (EUR m)	75 422	73 561	78 781	88 212	93 743	97 316
VTTL (EUR m)	36 541	34 189	36 941	40 808	42 643	43 939
VAT policy gap (EUR m)	39 225	39 681	42 137	47 759	51 548	53 838
VAT policy gap (%)	52.0	53.9	53.5	54.1	55.0	55.3
For comparison: EU median policy gap (%)	46.1	47.1	46.1	46.0	46.4	46.8
Actionable VAT policy gap	18 617	18 637	19 974	23 694	25 882	26 855
o/w VAT rate gap (EUR m)	8 598	8 703	9 615	11 600	12 272	12 652
o/w agricultural products, foodstuffs, beverages	4 254	4 383	4 498	4 681	4 745	4 883
o/w pharmaceuticals	844	872	915	981	1 028	1 070
o/w accommodation and restaurant services	836	857	1 227	1 378	1 343	1 382
o/w utilities services	97	130	135	1 568	1 893	1 950
o/w transport services	738	611	649	734	821	856
o/w other	1 829	1 851	2 190	2 260	2 442	2 511
o/w National policy-driven VAT exemption gap (EUR m)	6 204	6 234	6 341	7 662	8 876	9 319
o/w EU policy-mandated VAT exemption gap (EUR m)	3 814	3 699	4 019	4 432	4 734	4 884
Non-actionable VAT policy gap (EUR m)	20 608	21 044	22 163	24 065	25 666	26 983
o/w imputed rents	5 584	5 819	6 067	6 483	6 950	7 153
o/w public education	5 192	5 322	5 534	6 039	6 433	6 782
o/w public healthcare	3 719	3 595	4 172	4 613	4 877	5 159
o/w other	6 113	6 307	6 390	6 930	7 407	7 888
C-efficiency (%)	47.5	44.6	49.3	46.0	44.8	43.6

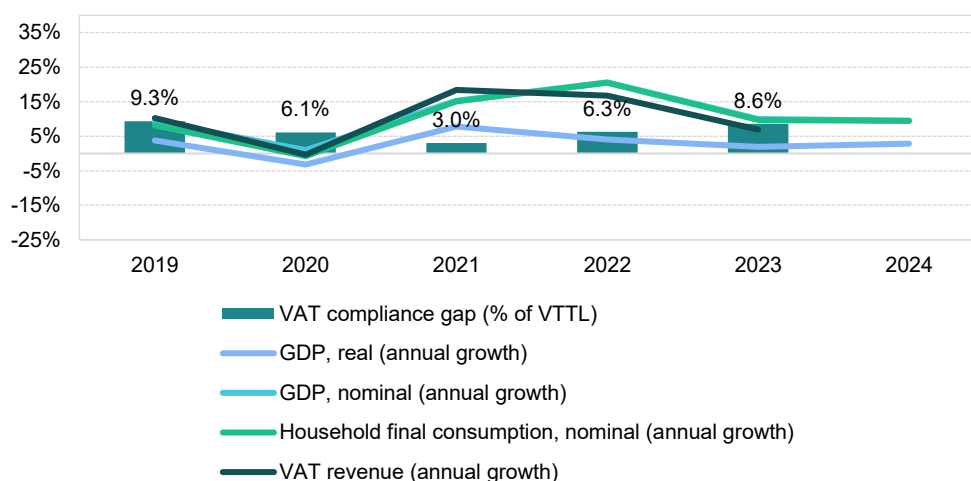
Source: own elaboration. Download underlying data [here](#). Note: fast estimates for 2024 are based on a simplified method.

Bulgaria

VAT revenues in Bulgaria grew in 2023, although at a slower pace (6.9%) than around the post-pandemic peak of 2021 and 2022 (18.4% and 16.7%, respectively). The VAT compliance gap widened to 8.6% in 2023, up from 6.3% in 2022, though it remained below the 2019 level of 9.3%. In 2023, Bulgaria applied a reduced VAT rate of 9% to baby foods, hygiene products and periodicals, and extended the 0% VAT rate on bread and flour. The VAT registration threshold was doubled to BGN 100 000 and new rules for VAT recovery were introduced. These policy changes were among the key drivers of VAT revenue developments.

The post-COVID-19 recovery proved short-lived, as the strong rebound in domestic demand was limited to 2021 and 2022. Economic growth in Bulgaria has since been constrained by high inflation driven by energy prices, persistent supply chain bottlenecks, energy price volatility linked to Russia's war of aggression against Ukraine and related sanctions and weak export demand. Given Bulgaria's high dependence on international trade – total trade accounted for 120% of GDP in 2023 – external factors played a significant role. In particular, slow recovery in Germany and other EU economies further limited Bulgaria's growth prospects.

Figure 40. BG – VAT compliance gap, VAT revenues, GDP growth, and household final consumption



Sources: own elaboration, Eurostat.

Real GDP growth in Bulgaria stood at 1.9% in 2023, a decline of 2.2pp compared with the 2022 growth rate, which indicates an economic slowdown likely contributing to an **increase in the VAT compliance gap**. While household final consumption growth in real terms was relatively strong in 2021 at 8.5%, it has fallen in recent years, bottoming at 1.4% in 2023. Similarly, real government consumption growth peaked in 2022 at 8.0% before falling to 1.1% in 2023. By contrast, GFCF accelerated in real terms, growing by 10.2% in 2023 compared with 6.5% in 2022.

While measures reported in real values capture the actual change in economic activity by excluding inflation effects, nominal growth rates more directly reflect changes in the VAT base and potential VAT revenues. Accordingly, nominal final consumption expenditure growth slowed from 19.6% in 2022 to 9.9% in 2023. In particular, nominal growth of household final consumption of food and non-alcoholic beverages fell sharply (-44.2pp), which may have further contributed to an **increase in the VAT compliance gap**.

Inflation fell to 8.6% in 2023, down from its 2022 peak of 13.0%, and continued to decline throughout 2024 (2.6%). The main drivers of inflation were housing, water, electricity, gas and other fuels, as well as food, transport, furnishings, restaurants and hotels. Indeed, upward price pressures were observed across all components of household consumption except communications. In the context of the VAT compliance gap, it is worth noting that recreational, restaurant and accommodation services were among the fastest-growing categories in nominal household consumption, although their strongest impact was reflected in 2022. Similarly, year-over-year change in demand for tourism – as measured by nights spent in tourist accommodations – grew at a much lower rate in 2023 (11.1%) compared with 2022 (37.2%). These last two developments may be viewed as factors that drive conditions conducive to a **decrease in the VAT compliance gap**.

GFCF, which reflects investment in fixed assets such as infrastructure, machinery and buildings, increased by 20.9% in nominal terms in 2023. Adjusted for inflation, this points to a solid rise in real investment activity.

On the supply side, a slowdown was also evident, particularly in industry, manufacturing and construction, due to supply chain disruptions, high energy costs and weak external demand. By contrast, services recorded stronger real value-added growth in 2023 than in 2022, resulting in a 3.9pp increase in their share of the economy. Overall, the changes in the sectoral structure of the Bulgarian economy may have been associated with pressure for an **increase in the VAT compliance gap**, as non-compliance risks tend to be higher in the services sector.

Table 18. BG – Factors affecting VAT compliance gap (2022-2023)

Variable	2023	Difference (2023 vs 2022)	Expected impact on 2023 VAT compliance gap
GDP growth, real	1.9%	-2.2pp	Increase
Final consumption expenditure growth, nominal	9.9%	-9.7pp	Increase
Household final consumption of food and non-alcoholic beverages growth, nominal	14.6%	-44.2pp	Increase
Services susceptible to non-compliance growth, nominal	12.7%	-9.1pp	Decrease
Services share in GDP	71.3%	3.9pp	Increase
Tourism (nights spent), growth	11.1%	-26.1pp	Decrease
Bankruptcy declarations, growth	-17.2%	-30.9pp	Decrease
Digital payments growth, nominal	9.8%	-16.7pp	Increase

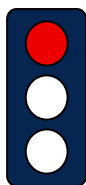
Source: own elaboration based on Eurostat and ECB.

Note: for a discussion of the expected effects of these indicators, please see pages 18 and 19 in section II.a.

The decline of bankruptcies in 2023 (-17.2%) suggests improving economic conditions, although the trend was not uniform across all sectors. The year-over-year change might have exerted pressure to **decrease the VAT compliance gap**.

Other factors also influenced the VAT compliance gap. The prevalence of digital payments (measured as the aggregate of payments with cards, e-money, direct debits and bank transfers) is generally associated with higher compliance, as digital and automated transactions are easier to monitor. In Bulgaria, digital payments increased by 9.8% in nominal terms, but at a slower rate than in 2022 (-16.7pp change compared to 2022). This deceleration in growth likely contributed to an **increase in the VAT compliance gap**.

BG: VAT compliance gap (2019-2024)



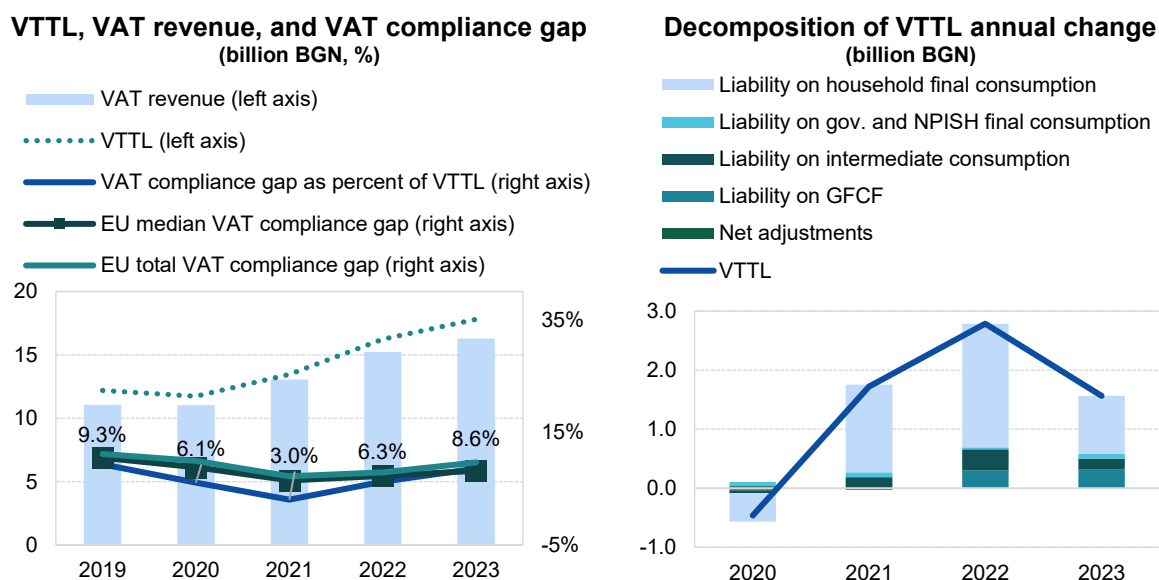
- In Bulgaria, the estimated VAT compliance gap increased from 6.3% in 2022 to 8.6% in 2023¹⁹.
- The main source for the structure of intermediate use in exempt and non-taxable sectors is outdated (from 2014), reducing the reliability of estimates.
- Similarly to other countries marked in red for lower accuracy in 2019-2023 estimates, fast estimates for 2024 are not presented.

Table 19. BG – VTTL, VAT revenue, and VAT compliance gap

	2019	2020	2021	2022	2023
VTTL (BGN m)	12 196	11 733	13 457	16 244	17 808
<i>o/w liability on household final consumption</i>	8 664	8 179	9 662	11 756	12 739
<i>o/w liability on gov. and NPISH final consumption</i>	383	450	530	562	643
<i>o/w liability on intermediate consumption</i>	1 583	1 536	1 720	2 078	2 253
<i>o/w liability on GFCF</i>	1 584	1 549	1 521	1 817	2 139
<i>o/w net adjustments</i>	-18	19	24	31	34
VAT revenue (BGN m)	11 061	11 021	13 048	15 228	16 281
VAT compliance gap (BGN m)	1 135	713	409	1 016	1 527
VAT compliance gap (percent of VTTL)	9.3%	6.1%	3.0%	6.3%	8.6%
<i>EU average VAT compliance gap (percent of VTTL)</i>	11.1%	9.9%	7.2%	7.9%	9.5%
VAT compliance gap change since 2019					-0.7pp

Source: own elaboration. Download underlying data [here](#). Note: Rounded changes may not equal the change between rounded values.

Figure 41. BG – VTTL, VAT revenue, and VAT compliance gap



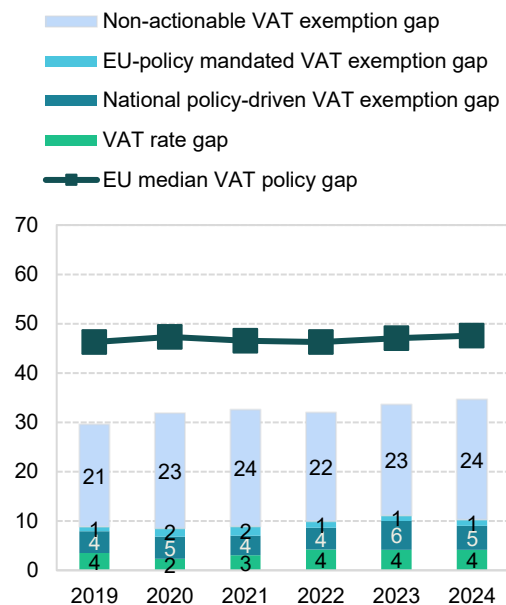
Source: own elaboration. Download underlying data [here](#).

¹⁹ **Red traffic light:** estimates based on very outdated information, with large unexplained volatility, or other unexpected patterns of the liability subcomponents. This applies to both VAT compliance gap and policy gap estimates. The estimates are based on the latest data available at the cut-off date for data collection (15/07/2025). As datasets are regularly revised, future editions will reassess and update the estimates accordingly.

BG: VAT policy gap (2019-2024)

- The VAT policy gap in Bulgaria increased from 32.0% in 2022 to 33.6% in 2023, and further to 34.7% in 2024. Notable structural changes were observed: the national policy-driven VAT exemption gap rose in 2023 (+1.4% compared with 2022), while the non-actionable VAT policy gap grew in 2024 (+1.9% compared with 2023).
- The observed changes may result from a combination of law adjustments and consumption patterns.
- Significant changes to the Bulgarian VAT rate matrix since 2019 include temporary rate reductions introduced in 2020 (still in place) for restaurants and tourist services and reductions in district heating and natural gas rates dating to mid-2022 (from 21% to 9%).

Figure 42: BG – VAT policy gap (%)



Source: own elaboration. Download underlying data [here](#).

Table 20. BG – VAT policy gap decomposition

	2019	2020	2021	2022	2023	2024
Notional ideal VAT revenue (BGN m)	17 353	17 203	19 936	23 862	26 795	29 648
VTTL (BGN m)	12 196	11 733	13 457	16 244	17 808	.
VAT policy gap (BGN m)	5 134	5 484	6 496	7 640	9 012	10 282
VAT policy gap (%)	29.6	31.9	32.6	32.0	33.6	34.7
For comparison: EU median policy gap (%)	46.1	47.1	46.1	46.0	46.4	46.8
Actionable VAT policy gap	1 537	1 466	1 768	2 376	2 983	3 035
o/w VAT rate gap (BGN m)	611	397	609	1 008	1 119	1 224
o/w agricultural products, foodstuffs, beverages	0	1	0	5	5	6
o/w pharmaceuticals	0	0	0	0	0	0
o/w accommodation and restaurant services	196	185	326	524	601	655
o/w utilities services	0	0	0	32	44	48
o/w transport services	282	190	215	369	375	412
o/w other	133	21	68	79	95	103
o/w National-driven VAT exemption gap (BGN m)	758	781	794	1 049	1 552	1 448
o/w EU policy-mandated VAT exemption gap (BGN m)	168	289	365	319	312	362
Non-actionable VAT policy gap (BGN m)	3 597	4 017	4 728	5 264	6 030	7 247
o/w imputed rents	1 791	1 716	1 814	2 012	2 246	2 449
o/w public education	717	855	1 021	1 145	1 304	1 575
o/w public healthcare	321	343	410	532	602	753
o/w other	768	1 103	1 483	1 575	1 879	2 470
C-efficiency (%)	69.3	69.7	70.2	68.4	65.4	69.0

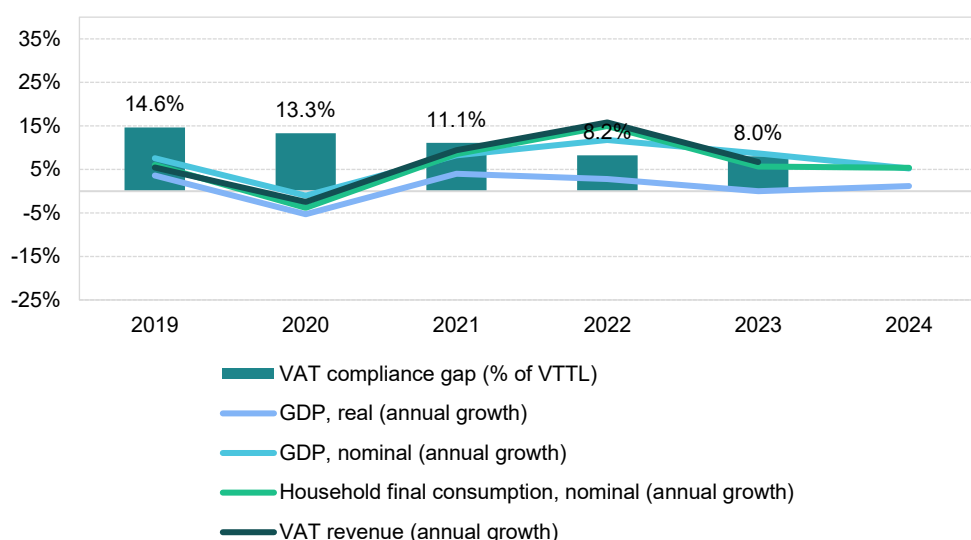
Source: own elaboration. Download underlying data [here](#). Note: fast estimates for 2024 are based on a simplified method.

Czechia

VAT revenues in Czechia grew by 6.7% in 2023, although at a slower pace than during the post-pandemic peak in 2022 (15.8%). The VAT compliance gap remained broadly stable at 8.0% in 2023, compared with 8.2% in 2022, and was significantly lower than in 2019 (14.6%). No major changes in VAT rates or exemptions were implemented in 2023, as these took effect only in 2024 under the Consolidation Package, which unified the various reduced VAT rates into a single rate. Consequently, other factors stood behind the VAT revenue growth.

The post-COVID-19 recovery proved short-lived, with the rebound in domestic demand largely confined to 2021 and 2022. Since then, Czechia's economic growth has been constrained by high inflation driven by energy prices, persistent supply chain bottlenecks, energy market volatility linked to Russia's war of aggression against Ukraine and related sanctions and weak external demand. Given Czechia's high reliance on international trade – total trade accounted for 132% of GDP in 2023 – external conditions played a critical role. In particular, slow recovery in Germany and other EU economies further limited growth prospects.

Figure 43. CZ – VAT compliance gap, VAT revenues, GDP growth and household final consumption



Sources: own elaboration, Eurostat.

Real GDP growth in Czechia stagnated in 2023 (after 2.8% growth in 2022), indicating an economic slowdown that could exert **upward pressure on the VAT compliance gap**. Household final consumption growth, already weak in 2022 (nearly stagnating at only 0.4% growth), declined sharply in real terms to 2.8% in 2023. Real government consumption growth accelerated from 0.4% in 2022 to 3.2% in 2023. Real GFCF and exports grew modestly by 4.2% and 2.3%, respectively (down from 6.3% and 5.1% in 2022), while imports fell by 1.2%.

While measures reported in real values capture the actual change in economic activity by excluding inflation effects, nominal growth rates more directly reflect changes in the VAT base and potential VAT revenues. Accordingly, nominal final consumption expenditure growth slowed from 11.8% in 2022 to 6.6% in 2023. In particular, growth nominal household final consumption of food and non-alcoholic beverages fell sharply (-15.3pp), which may have further supported conditions for an **increase in the VAT compliance gap**.

Inflation eased to 12.0% in 2023, down from 14.8% in 2022, and the downward trend continued into 2024. The main drivers were housing, water, electricity, gas and other fuels, as well as food. Price pressures were evident across most components of household consumption, with the exception of transport. In the context of the VAT compliance gap, it is noteworthy that recreational, restaurant and accommodation services remained among the fastest-growing categories in nominal household consumption, though their growth rate was roughly half that of 2022, contributing to VAT compliance gap decrease. Similarly, year-over-year demand for tourism – as measured by nights spent in tourist accommodations – grew by 10.4% in 2023, significantly below the 58.5% surge recorded in 2022. These last two developments may have helped **narrow the VAT compliance gap**.

GFCF rose by 9.6% in nominal terms in 2023. Non-financial corporations effected approximately half of this growth; government investment contributed 2.6pp, while households and NPISH accounted for 1.2pp. Public investment was thus the fastest-growing component in nominal terms and the only one that expanded at a faster pace than in 2022, driven primarily by the inflow and utilization of Recovery and Resilience Facility funds.

On the supply side, services grew in real value-added terms less than other sectors (0.2% in 2023). After a strong rebound in 2021-2022, industrial value-added growth fell to 0.3%, weighed down by supply chain disruptions, high energy costs, weak external demand and a tight labour market. However, manufacturing grew relatively robustly, while the construction sector recovered from negative growth back into positive territory. This dynamic contributed to a 0.6pp decrease in the share of services in the economy. Overall, sectoral structure shifts may have worked toward a **decrease in the VAT compliance gap**, as non-compliance risks are generally higher in the services sector.

Table 21. CZ – Factors affecting VAT compliance (2022-2023)

Variable	2023	Difference (2023 vs 2022)	Expected impact on 2023 VAT compliance gap
GDP growth, real	0.0%	-2.8pp	Increase
Final consumption expenditure growth, nominal	6.6%	-5.2pp	Increase
Household final consumption of food and non-alcoholic beverages growth, nominal	27.4%	-15.3pp	Increase
Services susceptible to non-compliance growth, nominal	7.0%	-11.8pp	Decrease
Services share in GDP	65.0%	-0.6pp	Decrease
Tourism (nights spent), growth	10.4%	-48.1pp	Decrease
Bankruptcy declarations, growth	-6.9%	-13.6pp	Decrease
Digital payments growth, nominal	20.0%	-58.4pp	Increase

Source: own elaboration based on Eurostat and ECB.

Note: for a discussion of the expected effects of these indicators, please see pages 18 and 19 in section II.a.

Despite difficult economic conditions, bankruptcies in Czechia decreased by 6.9% in 2023, following a 6.7% increase in 2022. However, the decline in 2023 was not uniform, as bankruptcies rose in sectors such as industry, transport and IT. The overall year-over-year change in 2023 may have supported conditions for a **decrease in the VAT compliance gap**.

Other factors also influenced the VAT compliance gap. In Czechia, the nominal value of digital payments increased in 2023, albeit at a slower pace than in 2022. This factor likely contributed to the **widening of the VAT compliance gap**.

CZ: VAT compliance gap (2019-2023)



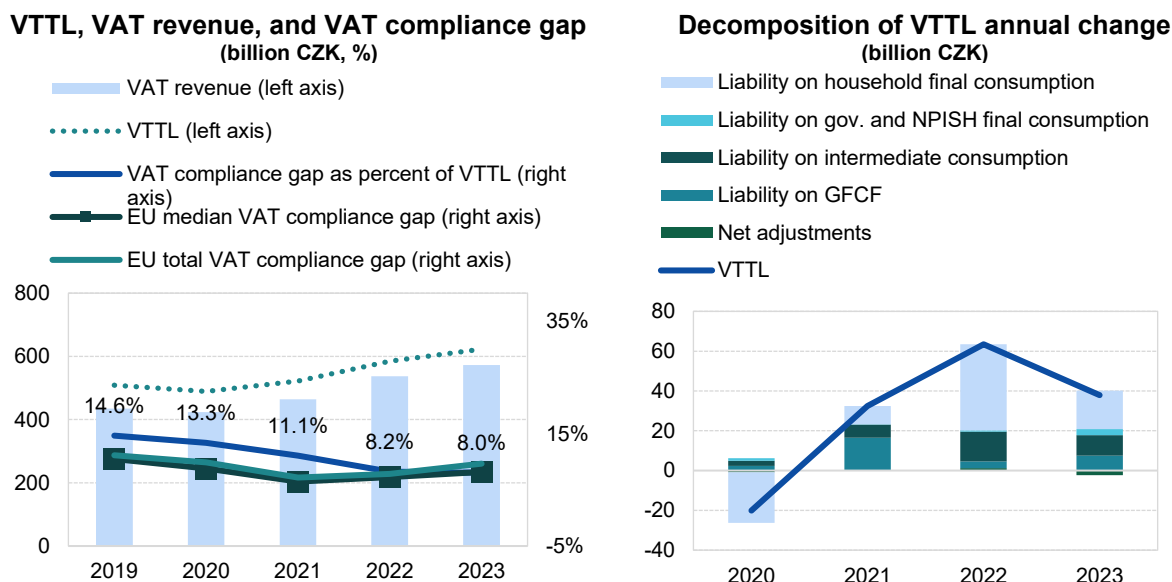
- In Czechia, the VAT compliance gap stood at 8.0% in 2023, remaining broadly unchanged from 2022 (8.2%) and significantly lower than in 2019 (14.6%)²⁰.
- Czech VAT revenue figures are adjusted to account for changes in detained excessive deductions, therefore, the reference revenue used to calculate the VAT compliance gap differs from the figure published by Eurostat.
- Due to large discrepancies between growth rates for VTTL components, fast estimates for 2024 are not published.

Table 22. CZ – VTTL, VAT revenue, and VAT compliance gap

	2019	2020	2021	2022	2023
VTTL (CZK m)	509 184	489 076	521 522	584 973	622 809
<i>o/w liability on household final consumption</i>	<i>307 067</i>	<i>281 524</i>	<i>290 732</i>	<i>334 002</i>	<i>353 358</i>
<i>o/w liability on gov. and NPISH final consumption</i>	<i>25 332</i>	<i>26 630</i>	<i>26 791</i>	<i>27 334</i>	<i>30 398</i>
<i>o/w liability on intermediate consumption</i>	<i>99 419</i>	<i>101 982</i>	<i>108 567</i>	<i>123 563</i>	<i>133 791</i>
<i>o/w liability on GFCF</i>	<i>79 506</i>	<i>81 872</i>	<i>98 273</i>	<i>101 768</i>	<i>109 334</i>
<i>o/w net adjustments</i>	<i>-2 139</i>	<i>-2 932</i>	<i>-2 841</i>	<i>-1 695</i>	<i>-4 072</i>
VAT revenue (CZK m)	434 627	423 868	463 678	536 937	572 701
VAT compliance gap (CZK m)	74 557	65 208	57 844	48 036	50 108
VAT compliance gap (percent of VTTL)	14.6%	13.3%	11.1%	8.2%	8.0%
<i>EU average VAT compliance gap (percent of VTTL)</i>	<i>11.1%</i>	<i>9.9%</i>	<i>7.2%</i>	<i>7.9%</i>	<i>9.5%</i>
VAT compliance gap change since 2019					-6.6pp

Source: own elaboration. Download underlying data [here](#). Note: Rounded changes may not equal the change between rounded values.

Figure 44. CZ – VTTL, VAT revenue, and VAT compliance gap



Source: own elaboration. Download underlying data [here](#).

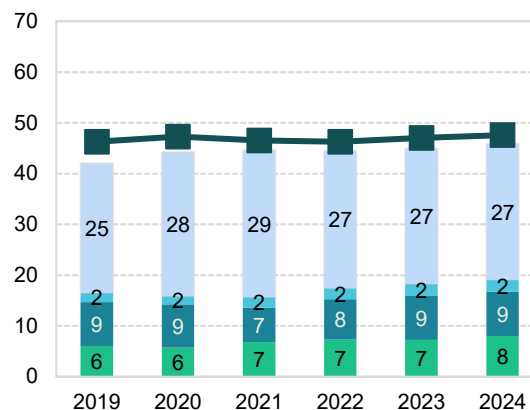
²⁰ **Green traffic light:** estimates are based on up-to-date data, show no unexplained volatility, and reveal no unexpected patterns suggesting inaccuracies. This applies to both VAT compliance gap and VAT policy gap estimates. The estimates are based on the latest data available at the cut-off date for data collection (15/07/2025). As datasets are regularly revised, future editions will reassess and update the estimates accordingly.

CZ: VAT policy gap (2019-2024)

- The VAT policy gap in Czechia increased from 44.5% in 2022 to 44.9% in 2023, and further to 45.9% in 2024. The gap's structure remained relatively stable, with only minor changes: in 2023, the national policy-driven VAT exemption gap rose by 0.7pp, while the non-actionable VAT policy gap declined by 0.5pp.
- In 2020, Czechia introduced temporary VAT relief for the hospitality sector, lowering rates from 15% or 21% to 10% for selected services. At the end of 2021, a zero rate on gas and electricity supply was implemented for November–December.
- As of 2024, the standard rate remains 21%, while previous reduced rates (10% and 15%) were consolidated into a single 12% reduced rate. This change may have affected household consumption structure and the accuracy of 2024 fast estimates.

Figure 45. CZ – VAT policy gap (%)

Non-actionable VAT exemption gap
 EU-policy mandated VAT exemption gap
 National policy-driven VAT exemption gap
 VAT rate gap
 EU median VAT policy gap



Source: own elaboration. Download underlying data [here](#).

Table 23. CZ – VAT policy gap decomposition

	2019	2020	2021	2022	2023	2024
Notional ideal VAT revenue (CZK m)	887 235	886 963	951 615	1 064 979	1 143 553	1 212 147
VTTL (CZK m)	509 184	489 076	521 522	584 973	622 809	.
VAT policy gap (CZK m)	373 290	392 656	424 688	474 085	513 809	556 655
VAT policy gap (%)	42.1	44.3	44.6	44.5	44.9	45.9
For comparison: EU median policy gap (%)	46.1	47.1	46.1	46.0	46.4	46.8
Actionable VAT policy gap (CZK m)	147 221	141 143	149 390	186 236	209 913	232 208
o/w VAT rate gap	53 474	50 972	64 763	77 959	83 186	96 828
o/w agricultural products, foodstuffs, beverages	21 743	22 418	23 171	25 863	26 316	40 608
o/w pharmaceuticals	4 245	4 611	4 749	7 011	7 663	8 200
o/w accommodation and restaurant services	9 959	5 273	13 080	18 779	22 554	20 000
o/w utilities services	3 635	5 611	5 710	6 485	6 571	6 152
o/w transport services	5 427	3 062	3 665	5 763	6 292	5 771
o/w other	8 464	9 995	14 386	14 059	13 791	16 097
o/w National policy-driven VAT exemption gap	76 784	75 539	64 661	84 747	98 537	105 613
o/w EU policy-mandated VAT exemption gap	16 963	14 632	19 967	23 530	28 190	29 766
Non-actionable VAT policy gap (CZK m)	226 069	251 513	275 298	287 849	303 896	324 447
o/w imputed rents	94 634	103 170	115 180	124 441	130 366	136 682
o/w public education	36 500	41 115	45 328	48 228	50 916	55 725
o/w public healthcare	41 431	49 355	55 251	55 340	59 890	62 779
o/w other	53 504	57 872	59 539	59 839	62 725	69 262
C-efficiency (%)	57.2	56.3	57.5	59.8	59.6	57.1

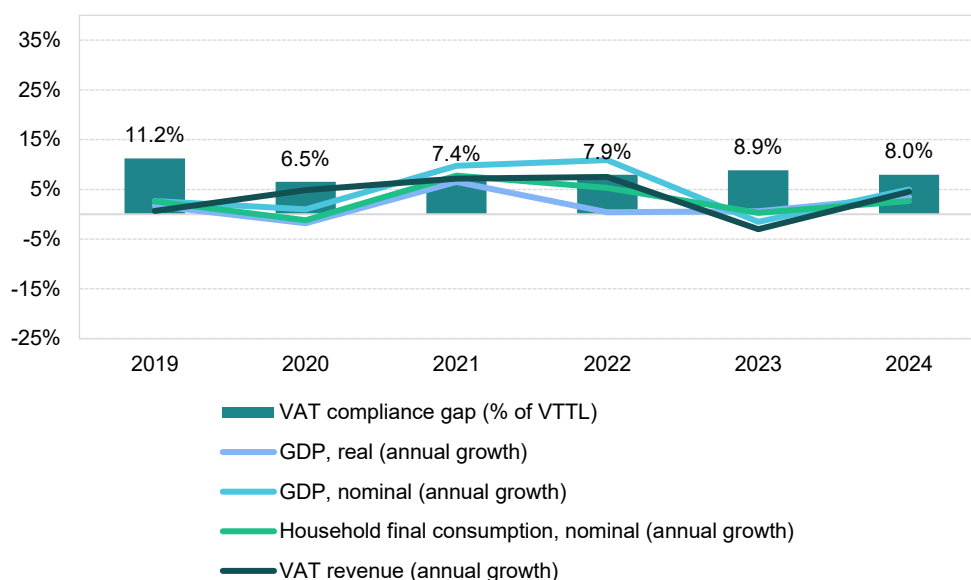
Source: own elaboration. Download underlying data [here](#). Note: fast estimates for 2024 are based on a simplified method.

Denmark

VAT revenues in Denmark fell by 3.0% in 2023, following a post-pandemic peak of 7.5% in 2022. The VAT compliance gap rose to 8.9% in 2023, up from 7.9% in 2022, but remained below the 2019 level of 11.2%. Preliminary estimates for 2024 suggest a decline to 8.0%. Denmark's VAT system is notable for its uniform rate applied to nearly all goods and services, resulting in few legislative changes in 2023, except for the introduction of interest charges on corrections to past VAT returns, calculated using a specific formula. Consequently, other factors accounted for VAT revenue developments.

The post-COVID-19 recovery proved short-lived, with domestic demand mostly slowing down again after rebounding in 2021 and 2022. Economic growth in Denmark has since been constrained by high inflation driven by energy prices, persistent supply chain bottlenecks, energy market volatility linked to Russia's war of aggression against Ukraine and related sanctions and weak export demand. Given Denmark's reliance on international trade – total trade accounted for 130% of GDP in 2023 – external conditions, including slow recovery in Germany and other EU economies, further limited growth.

Figure 46. DK – VAT compliance gap, VAT revenues, GDP growth and household final consumption



Sources: own elaboration, Eurostat. Note: fast estimates for 2024 are based on a simplified method.

Real GDP growth in Denmark stood at 0.6% in 2023, a slight increase of 0.2pp compared with 2022, which may have exerted **downward pressure on the VAT compliance gap**. Real household final consumption growth, which had been relatively strong in 2021 (5.8%), contracted sharply in 2022 (-2.4%) and further in 2023 (-2.7%). By contrast, real government consumption growth reversed modestly, from -2.4% in 2022 to 0.2% in 2023. GFCF declined in real terms by 3.8% in 2023.

While measures reported in real values capture the actual change in economic activity by excluding inflation effects, nominal growth rates more directly reflect changes in the VAT base and potential VAT revenues. Accordingly, nominal final consumption expenditure growth slowed from 4.1% in 2022 to 0.9% in 2023. In particular, growth of nominal household final consumption of food and non-alcoholic beverages fell sharply (-36.5pp), which may have further contributed to an **increase in the VAT compliance gap**.

Inflation remained at 3.4% in 2023, after peaking at 8.5% in 2022. It remained below earlier levels into 2024. The main drivers of inflation were housing, water, electricity, gas and other fuels, as well as food and transport. Price pressures were present across all components of household consumption. In the context of the VAT compliance gap, recreational services, restaurants and accommodation services were not among the fastest-growing categories in nominal household consumption, although their growth slowed in 2023 by -6.9pp. Similarly, the year-over-year change in demand for tourism, as measured by nights spent in tourist accommodations, grew more slowly in 2023 than in 2022. These last two trends could be interpreted as forces influencing the **decrease in the VAT compliance gap**.

GFCF, reflecting investment in fixed assets such as infrastructure, machinery, and buildings, rose by 0.3% in nominal terms in 2023. Adjusted for inflation, this indicates a contraction in real investment activity.

On the supply side, a slowdown was observed primarily in the industry, manufacturing and construction sectors. The services sector grew in real value added in 2023. However, despite this, the former three sectors recorded higher growth than services, leading to a 3.2pp decline in the share of services in the total economy. Overall, sectoral structural shifts may have exerted some **downward pressure on the VAT compliance gap**, as non-compliance risks are generally higher in the services sector.

Table 24. DK – Factors affecting VAT compliance gap (2022-2023)

Variable	2023	Difference (2023 vs 2022)	Expected impact on 2023 VAT compliance gap
GDP growth, real	0.6%	0.2pp	Decrease
Final consumption expenditure growth, nominal	0.9%	-3.2pp	Increase
Household final consumption of food and non-alcoholic beverages growth, nominal	1.4%	-36.5pp	Increase
Services susceptible to non-compliance growth, nominal	2.2%	-6.9pp	Decrease
Services share in GDP	72.2%	-3.2pp	Decrease
Tourism (nights spent), growth	1.3%	-33.3pp	Decrease
Bankruptcy declarations, growth	-11.4%	-5.4pp	Decrease
Digital payments growth, nominal	n/a	n/a	n/a

Source: own elaboration based on Eurostat.

Note: for a discussion of the expected effects of these indicators, please see pages 18 and 19 in section II.a.

Bankruptcies in Denmark declined further in 2023, falling by 11.4%, marking a more significant decrease than in 2022. This development exerted pressure to **decrease the VAT compliance gap**.

DK: VAT compliance gap (2019-2024)



- In Denmark, the VAT compliance gap increased to 8.9% in 2023, up from 7.9% in 2022²¹.
- In 2023, the VTTL ratio decreased by approximately 2%, while VAT revenues fell by around 3%.
- Revisions of VAT revenue and national accounts data led to upward adjustments in VTTL estimates. Consequently, the VAT compliance gap for 2019-2022 increased on average by 1.8pp compared to the 2024 study.

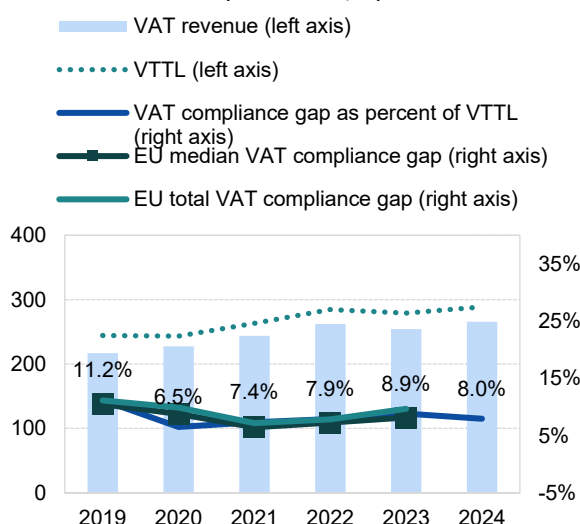
Table 25. DK – VTTL, VAT revenue, and VAT compliance gap

	2019	2020	2021	2022	2023	2024
VTTL (DKK m)	244 333	243 427	263 200	284 602	278 916	288 715
<i>o/w liability on household final consumption</i>	143 971	140 897	152 251	163 670	159 431	X
<i>o/w liability on gov. and NPISH final consumption</i>	5 453	5 585	5 993	6 051	6 114	X
<i>o/w liability on intermediate consumption</i>	58 396	59 808	63 636	70 904	70 799	X
<i>o/w liability on GFCF</i>	30 483	31 452	35 066	36 706	35 578	X
<i>o/w net adjustments</i>	6 030	5 684	6 255	7 271	6 993	X
VAT revenue (DKK m)	216 998	227 563	243 831	262 103	254 221	265 745
VAT compliance gap (DKK m)	27 335	15 864	19 369	22 499	24 695	22 971
VAT compliance gap (percent of VTTL)	11.2%	6.5%	7.4%	7.9%	8.9%	8.0%
<i>EU average VAT compliance gap (percent of VTTL)</i>	11.1%	9.9%	7.2%	7.9%	9.5%	X
VAT compliance gap change since 2019					-2.3pp	

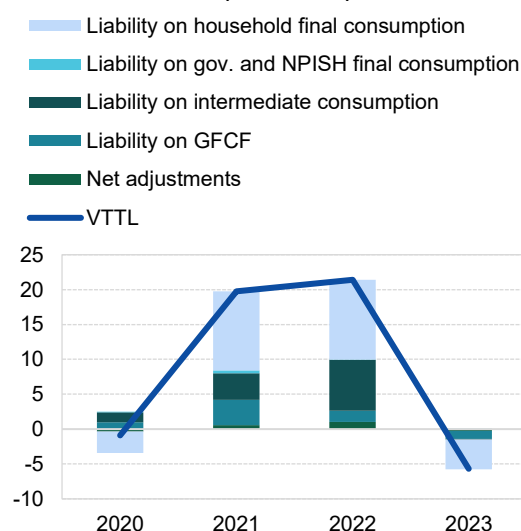
Source: own elaboration. Download underlying data [here](#). Note: fast estimates for 2024 are based on a simplified method. Rounded changes may not equal the change between rounded values.

Figure 47. DK – VTTL, VAT revenue, and VAT compliance gap

VTTL, VAT revenue, and VAT compliance gap
(billion DKK, %)



Decomposition of VTTL annual change
(billion DKK)



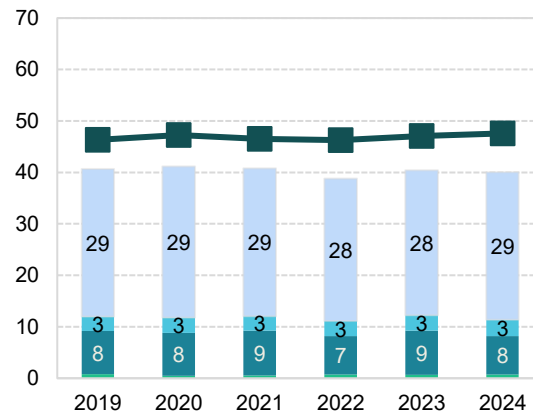
Source: own elaboration. Download underlying data [here](#). Note: fast estimates for 2024 are based on a simplified method.

²¹ **Green traffic light:** estimates are based on up-to-date data, show no unexplained volatility, and reveal no unexpected patterns suggesting inaccuracies. This applies to both VAT compliance gap and VAT policy gap estimates. The estimates are based on the latest data available at the cut-off date for data collection (15/07/2025). As datasets are regularly revised, future editions will reassess and update the estimates accordingly.

DK: VAT policy gap (2019-2024)

Figure 48. DK – VAT policy gap (%)

Non-actionable VAT exemption gap
 EU-policy mandated VAT exemption gap
 National policy-driven VAT exemption gap
 VAT rate gap
 EU median VAT policy gap



Source: own elaboration. Download underlying data [here](#).

Table 26. DK – VAT policy gap decomposition

	2019	2020	2021	2022	2023	2024
Notional ideal VAT revenue (DKK m)	408 476	409 114	439 476	459 565	462 624	475 842
VTTL (DKK m)	244 333	243 427	263 200	284 602	278 916	288 715
VAT policy gap (DKK m)	166 226	168 416	179 299	178 350	187 061	190 525
VAT policy gap (%)	40.7	41.2	40.8	38.8	40.4	40.0
For comparison: EU median policy gap (%)	46.1	47.1	46.1	46.0	46.4	46.8
Actionable VAT policy gap	48 965	48 238	53 079	51 001	56 482	54 195
o/w VAT rate gap (DKK m)	3 178	2 076	2 245	3 225	3 096	3 327
o/w agricultural products, foodstuffs, beverages	0	0	0	0	0	0
o/w pharmaceuticals	0	0	0	0	0	0
o/w accommodation and restaurant services	0	0	0	0	0	0
o/w utilities services	0	0	0	0	0	0
o/w transport services	3 178	2 076	2 245	3 225	3 096	3 327
o/w other	0	0	0	0	0	0
o/w National policy-driven VAT exemption gap (DKK m)	34 266	33 955	38 503	34 394	39 649	35 723
o/w EU policy-mandated VAT exemption gap (DKK m)	11 521	12 207	12 332	13 382	13 737	15 145
Non-actionable VAT policy gap (DKK m)	117 261	120 177	126 219	127 349	130 579	136 330
o/w imputed rents	29 872	30 739	31 135	32 358	33 510	34 539
o/w public education	22 472	22 524	24 231	24 303	24 772	26 136
o/w public healthcare	21 247	21 751	23 212	23 669	24 586	25 862
o/w other	43 670	45 163	47 642	47 019	47 711	49 792
C-efficiency (%)	59.6	62.8	63.0	64.8	62.1	62.7

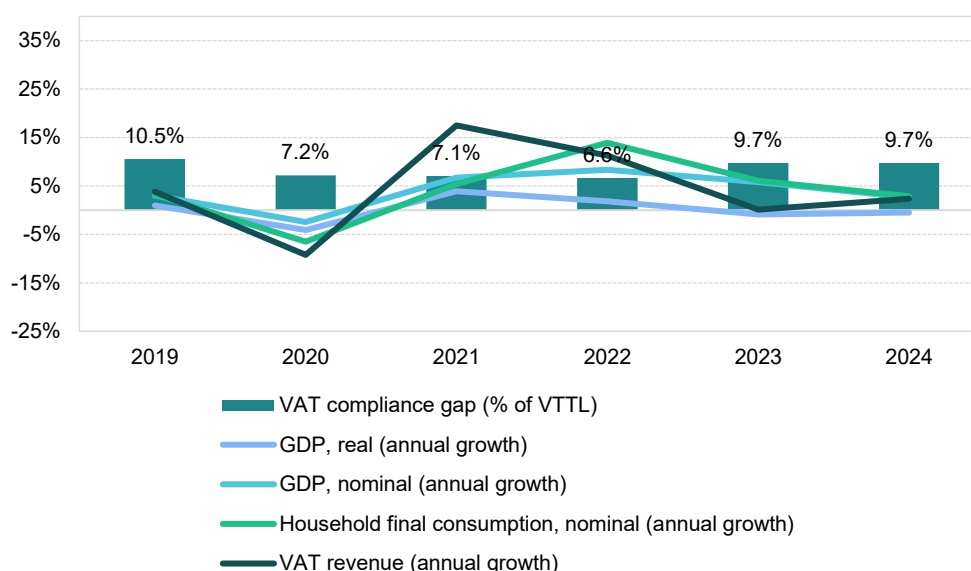
Source: own elaboration. Download underlying data [here](#). Note: fast estimates for 2024 are based on a simplified method.

Germany

VAT revenues in Germany grew by 0.1% in 2023, a significantly slower pace than the post-pandemic rebound in 2022 (11.3%). The VAT compliance gap rose to 9.7% in 2023, up from 6.6% in 2022, but remained below the 2019 level of 10.5%. Preliminary estimates for 2024 indicate the gap will remain at 9.7%. In 2023, Germany applied zero VAT to solar modules and certain components, extended the 7% reduced VAT rate for restaurant and catering services (excluding drinks), and lowered the agricultural flat rate from 9.5% to 9.0%. Other changes included abolishing the input VAT flat rate for non-profit corporations with adjusted thresholds, and expanding the reverse charge mechanism to cover the transfer of emission allowances. These policy measures contributed to VAT revenue developments.

The German economy has yet to fully recover from the COVID-19 crisis, with additional challenges arising from Russia's war of aggression against Ukraine. Energy price shocks, ongoing supply chain disruptions, and weak export demand have constrained growth. Industrial output stagnated, business sentiment remained subdued, investment activity was limited, and private consumption was dampened by high inflation and reduced real incomes.

Figure 49: DE – VAT compliance gap, VAT revenues, GDP growth and household final consumption



Sources: own elaboration, Eurostat. Note: fast estimates for 2024 are based on a simplified method.

Real GDP contracted by 0.9% in 2023, a decline of 2.7pp compared with the 2022 growth rate, signifying an economic slowdown that contributed to an **increase in the VAT compliance gap**. Household final consumption growth, which had been relatively strong in 2022 (6.6%), fell to -0.7% in real terms in 2023. Real government consumption growth, following higher rates during the pandemic (4.9% in 2020, 3.1% in 2021 and 0.6% in 2022), declined to -0.2% in 2023. Similarly, GFCF contracted in real terms from -0.1% in 2022 to -2.0% in 2023.

While measures reported in real values capture the actual change in economic activity by excluding inflation effects, nominal growth rates more directly reflect changes in the VAT base and potential VAT revenues. Accordingly, nominal final consumption expenditure growth slowed from 11.5% in 2022 to 5.5% in 2023. In particular, growth of nominal household final consumption of food and non-alcoholic

beverages fell sharply (-55.6pp), which may have further contributed to an **increase in the VAT compliance gap**.

Inflation fell to 6.0% in 2023 from a peak of 8.7% in 2022. This downward trend continued into 2024 (2.5%). The main drivers of inflation were housing, water, electricity, gas and other fuels, as well as food and transport. Price pressures were observed across nearly all components of household consumption, except communications. In the context of the VAT compliance gap, recreational services, restaurants and accommodation services grew by 7.1% in nominal household consumption in 2023; however, this represented a decline of 9.2pp compared with 2022. Similarly, year-to-year change in demand for tourism, as measured by nights spent in tourist accommodations, grew by 7.8% in 2023, substantially below the 50.5% increase recorded in 2022. These last two developments can be viewed as factors that drive conditions conducive to a **decrease in the VAT compliance gap**.

GFCF, reflecting investment in fixed assets such as infrastructure, machinery, and buildings, rose by 3.8% in nominal terms in 2023. Adjusted for inflation, this indicates a contraction in real investment activity.

On the supply side, a slowdown was also evident in 2023. Notably, services experienced a larger drop in real value-added growth than other sectors. After several weak years, the combined value added in industry, manufacturing and construction increased, resulting in a 0.9 percentage point decline in the share of services. The discussed structural shifts probably exerted some **downward pressure on the VAT compliance gap**, as non-compliance risks are generally higher in the services sector.

Table 27. DE – Factors affecting VAT compliance gap (2022-2023)

Variable	2023	Difference (2023 vs 2022)	Expected impact on 2023 VAT compliance gap
GDP growth, real	-0.9%	-2.7pp	Increase
Final consumption expenditure growth, nominal	5.5%	-6.0pp	Increase
Household final consumption of food and non-alcoholic beverages growth, nominal	8.5%	-55.6pp	Increase
Services susceptible to non-compliance growth, nominal	7.1%	-9.2pp	Decrease
Services share in GDP	69.6%	-0.9pp	Decrease
Tourism (nights spent), growth	7.8%	-42.7pp	Decrease
Bankruptcy declarations, growth	21.9%	17.4pp	Increase
Digital payments growth, nominal	-1.3%	-7.8pp	Increase

Source: own elaboration based on Eurostat and ECB.

Note: for a discussion of the expected effects of these indicators, please see pages 18 and 19 in section II.a.

Reduced economic activity in Germany led to a 21.9% increase in bankruptcies in 2023 compared with 2022. The rise was not uniform across sectors, with IT, accommodation and food service activities experiencing relatively higher rates than others. Overall, the year-over-year growth in bankruptcies in 2023 likely contributed to an **increase in the VAT compliance gap**.

The prevalence of digital payments (measured as the aggregate of payments with cards, e-money, direct debits and bank transfers) is generally associated with higher compliance, as transactions are predominantly digital and automated, making them easier to monitor. In Germany, the nominal value of digital payments declined by 1.3% in 2023 after 6.5% growth in 2022. This deceleration in growth appears to have contributed to an **increase in the VAT compliance gap**.

DE: VAT compliance gap (2019-2024)



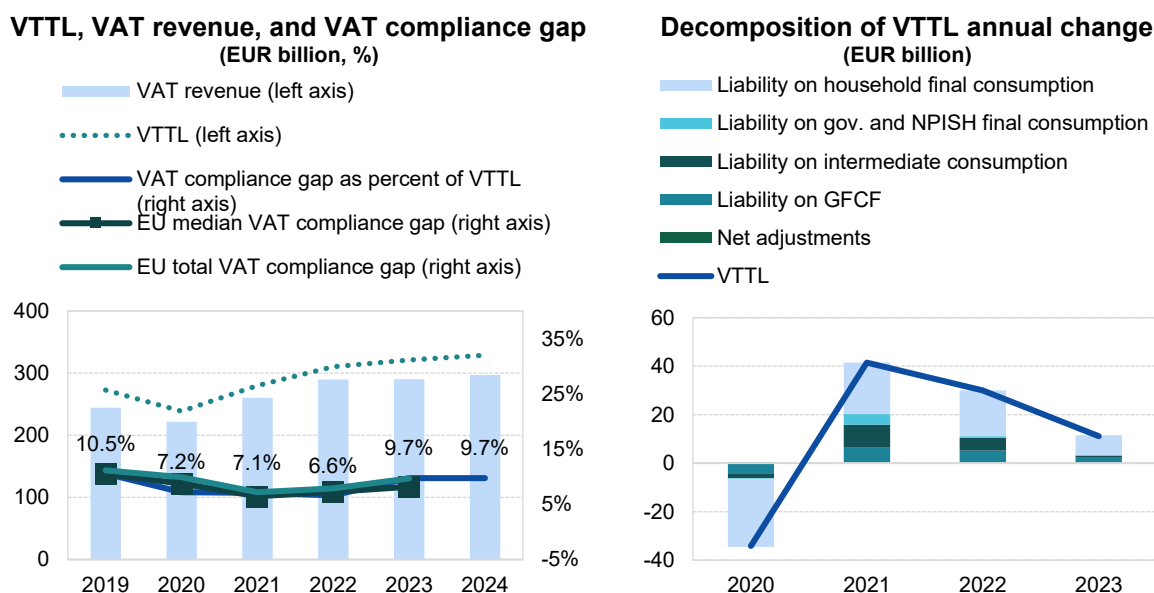
- In Germany, the VAT compliance gap increased to 9.7% in 2023, up from 6.6% in 2022²².
- Germany's VTTL estimates were revised upwards for the entire period covered following benchmark revisions of national accounts, including a >5% revision of household final consumption for the study period.
- The average annual VAT compliance gap in Germany rose by 2pp compared to the 2024 study, contributing notably to the revision of the EU total VAT compliance gap.

Table 28. DE – VTTL, VAT revenue, and VAT compliance gap

	2019	2020	2021	2022	2023	2024
VTTL (EUR m)	272 895	238 713	280 170	310 182	321 260	328 860
<i>o/w liability on household final consumption</i>	163 087	134 904	156 096	174 968	183 222	X
<i>o/w liability on gov. and NPISH final consumption</i>	7 648	7 443	11 867	12 503	12 668	X
<i>o/w liability on intermediate consumption</i>	54 424	52 409	61 669	67 056	67 585	X
<i>o/w liability on GFCF</i>	46 644	42 427	48 687	53 476	56 042	X
<i>o/w net adjustments</i>	1 091	1 530	1 851	2 178	1 743	X
VAT revenue (EUR m)	244 112	221 565	260 333	289 641	289 965	296 831
VAT compliance gap (EUR m)	28 783	17 148	19 837	20 541	31 295	32 029
VAT compliance gap (percent of VTTL)	10.5%	7.2%	7.1%	6.6%	9.7%	9.7%
<i>EU average VAT compliance gap (percent of VTTL)</i>	11.1%	9.9%	7.2%	7.9%	9.5%	X
VAT compliance gap change since 2019					-0.8pp	

Source: own elaboration. Download underlying data [here](#). Note: fast estimates for 2024 are based on a simplified method. Rounded changes may not equal the change between rounded values.

Figure 50. DE – VTTL, VAT revenue, and VAT compliance gap



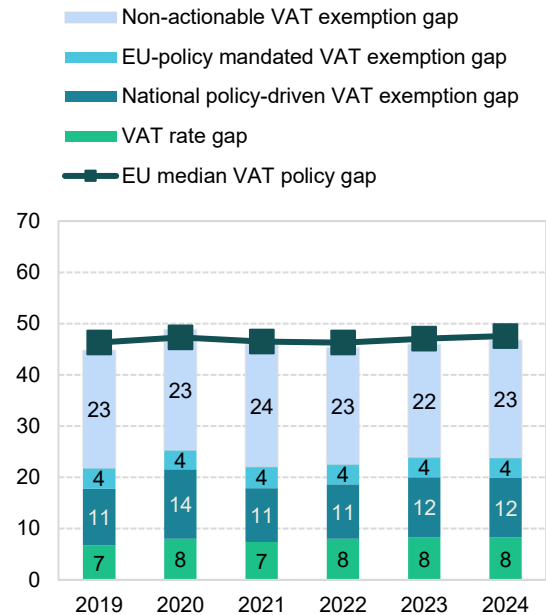
Source: own elaboration. Download underlying data [here](#). Note: fast estimates for 2024 are based on a simplified method.

²² **Yellow traffic light:** estimates based on somewhat outdated information or showing elevated unexplained volatility. This applies to both VAT compliance gap and policy gap estimates. The estimates are based on the latest data available at the cut-off date for data collection (15/07/2025). As datasets are regularly revised, future editions will reassess and update the estimates accordingly.

DE: VAT policy gap (2019-2024)

- The VAT policy gap in Germany remained broadly stable between 2022 and 2023, respectively registering at 45.3% and 45.9%, before increasing to 46.7% in 2024. Its overall structure remained largely unchanged, with the only notable change being a 1.1pp rise in the national policy-driven VAT exemption gap in 2023.
- Temporary VAT measures included a rate reduction from 19% to 7% for natural gas supply via network as well as for district heating, in place from October 2022 to March 2023. In 2023, Germany also applied zero VAT to solar modules and certain components and extended the 7% reduced VAT rate for restaurant and catering services (excluding drinks).

Figure 51. DE – VAT policy gap (%)



Source: own elaboration. Download underlying data [here](#).

Table 29. DE – VAT policy gap decomposition

	2019	2020	2021	2022	2023	2024
Notional ideal VAT revenue (EUR m)	494 126	466 236	518 150	567 113	594 199	617 435
VTTL (EUR m)	272 895	238 713	280 170	310 182	321 260	328 860
VAT policy gap (EUR m)	221 165	227 461	237 907	256 853	272 855	288 489
VAT policy gap (%)	44.8	48.8	45.9	45.3	45.9	46.7
For comparison: EU median policy gap (%)	46.1	47.1	46.1	46.0	46.4	46.8
Actionable VAT policy gap	107 816	118 196	114 598	127 950	142 314	147 421
o/w VAT rate gap (EUR m)	33 239	37 459	38 212	45 357	49 502	51 013
o/w agricultural products, foodstuffs, beverages	20 714	25 454	23 500	24 780	26 022	26 763
o/w pharmaceuticals	636	647	743	789	799	843
o/w accommodation and restaurant services	2 737	3 803	4 180	6 857	7 437	7 648
o/w utilities services	861	845	832	1 695	3 288	3 382
o/w transport services	4 048	2 693	4 784	6 138	6 591	6 856
o/w other	4 242	4 017	4 173	5 096	5 365	5 521
o/w National policy-driven VAT exemption gap (EUR m)	54 657	63 184	54 478	60 233	69 406	71 976
o/w EU policy-mandated VAT exemption gap (EUR m)	19 919	17 553	21 908	22 361	23 405	24 433
Non-actionable VAT policy gap (EUR m)	113 349	109 265	123 309	128 903	130 542	141 069
o/w imputed rents	30 274	28 456	31 653	32 518	33 523	34 473
o/w public education	21 843	21 054	23 854	24 968	25 188	27 271
o/w public healthcare	26 224	25 432	28 931	30 325	30 826	33 552
o/w other	35 007	34 323	38 872	41 092	41 006	45 772
C-efficiency (%)	56.1	54.4	57.6	58.4	55.8	54.7

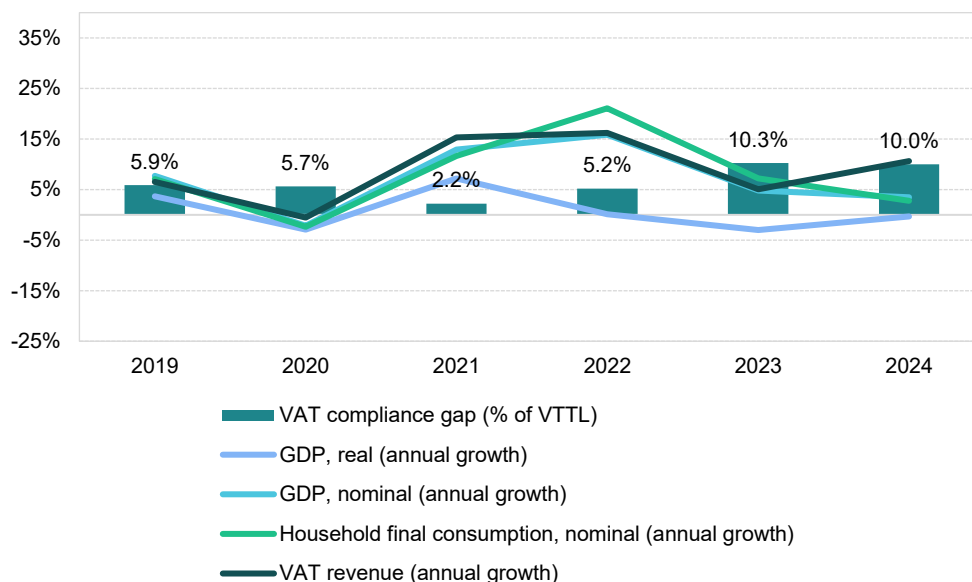
Source: own elaboration. Download underlying data [here](#). Note: fast estimates for 2024 are based on a simplified method.

Estonia

VAT revenues in Estonia grew in 2023 (5.1%), but at a slower pace than in the 2022 post-pandemic peak (16.2%). The VAT compliance gap increased to 10.3% from 5.2% in 2022, amply surpassing the pre-COVID-19 pandemic levels of 2019 (5.9%). Fast estimate for 2024 equals 10.0%. No significant changes in VAT system took place in 2023: consequently, other factors drove VAT revenue.

The recovery after the COVID-19 pandemic has been relatively short-lived, with a significant rebound of domestic demand limited to 2021 and 2022. Economic challenges that curbed growth in Estonia included high inflation driven by energy prices, continued bottlenecks in value chains, energy price volatility caused by Russia's war of aggression against Ukraine and the ensuing sanctions and weak export demand. As Estonia relies on international trade of final and intermediate goods, with the ratio of total trade to GDP at 155% in 2023, another limiting factor was slow recovery in Germany and the rest of the EU.

Figure 52. EE – VAT compliance gap, VAT revenues, GDP growth and household final consumption



Sources: own elaboration, Eurostat. Note: fast estimates for 2024 are based on a simplified method.

Real GDP contracted by 2.7% in 2023, a decline of 1.5pp compared with 2022, which signifies an economic slowdown that likely contributed to an **increase in the VAT compliance gap**. Real household final consumption growth, which had been relatively strong in 2021 (7.2%), slowed down to 3.2% in 2022 and declined by 1.6% in 2023. By contrast, real government consumption growth reversed from -1.6% in 2022 to 0.6% in 2023. Real GFCF grew at 2.3% in 2023, up from -14.4% in 2022.

While measures reported in real values capture the actual change in economic activity by excluding inflation effects, nominal growth rates more directly reflect changes in the VAT base and potential VAT revenues. Accordingly, nominal final consumption expenditure growth slowed from 18.2% in 2022 to 8.6% in 2023. In particular, growth of nominal household final consumption of food and non-alcoholic beverages fell sharply (-42.9pp), which may have further contributed to an **increase in the VAT compliance gap**.

Inflation fell to 9.1% in 2023, down from a peak of 19.4% in 2022; this downward trend continued into 2024. The main drivers of inflation were housing, water, electricity, gas and other fuels, as well as food, transport, and services such as restaurants and hotels. Price pressures were present across all components of household consumption. In the context of the VAT compliance gap, recreational services, restaurants, and accommodation services grew by 9.9% in nominal household consumption in 2023, though this was significantly slower than in 2022. Similarly, year-over-year demand for tourism, as measured by nights spent in tourist accommodations, increased by only 7.1% in 2023, compared with 48.8% in 2022. These last two developments can be viewed as factors that drive conditions conducive to a **decrease in the VAT compliance gap**.

GFCF, reflecting investment in fixed assets such as infrastructure, machinery, and buildings, rose by 6.7% in nominal terms in 2023. Adjusted for inflation, this indicates a moderate increase in real investment activity.

On the supply side, a slowdown was observed in 2023. Services experienced smaller declines in real value added than other sectors. After a strong rebound in 2021, value added in industry, manufacturing and construction declined due to supply chain disruptions, high energy costs, weak external demand and a tight labour market. As a result, the share of services in overall value added increased by 2.8pp. Overall, these structural changes appear to have supported an **increase in the VAT compliance gap**, as non-compliance risks are generally higher in the services sector.

Table 30. EE – Factors affecting VAT compliance gap (2022-2023)

Variable	2023	Difference (2023 vs 2022)	Expected impact on 2023 VAT compliance gap
GDP growth, real	-2.7%	-1.5pp	Increase
Final consumption expenditure growth, nominal	8.6%	-9.6pp	Increase
Household final consumption of food and non-alcoholic beverages growth, nominal	13.4%	-42.9pp	Increase
Services susceptible to non-compliance growth, nominal	9.9%	-9.3pp	Decrease
Services share in GDP	73.9%	2.8pp	Increase
Tourism (nights spent), growth	7.1%	-41.7pp	Decrease
Bankruptcy declarations, growth	51.7%	59.8pp	Increase
Digital payments growth, nominal	2.7%	-13.4pp	Increase

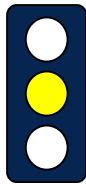
Source: own elaboration based on Eurostat and ECB.

Note: for a discussion of the expected effects of these indicators, please see pages 18 and 19 in section II.a.

The economic slowdown in Estonia led to a significant increase in the number of bankruptcies recorded, which rose by 51.7% in 2023 (59.8pp more than in 2022). This year-over-year growth in bankruptcies is likely to have contributed to an **increase in the VAT compliance gap**. It is worth noting that in 2024, the pace of change slowed down, yet the incidence of bankruptcies continued to rise.

Other factors also influenced the compliance gap. The prevalence of digital payments (measured as the aggregate of payments with cards, e-money, direct debits and bank transfers) is generally associated with higher compliance, as digital and automated transactions are easier to monitor. In Estonia, the nominal value of digital payments increased in 2023, although at a slower pace than in 2022. This deceleration appears to have exerted **upward pressure on the VAT compliance gap**.

EE: VAT compliance gap (2019-2024)



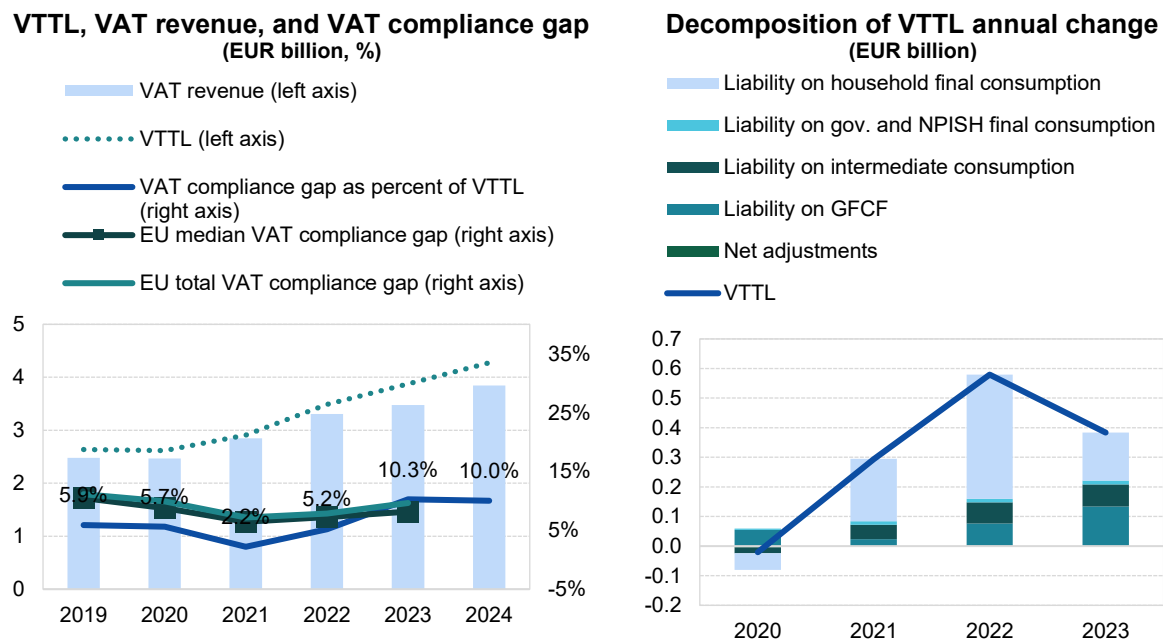
- In Estonia, the VAT compliance gap increased to 10.3% in 2023, up from 5.2% in 2022²³.
- In 2023, both VTTL and VAT revenue growth slowed down compared with 2022.
- The main factor behind slower VTTL growth was weaker household consumption, partially offset by stronger growth in GFCF.

Table 31. EE – VTTL, VAT revenue, and VAT compliance gap

	2019	2020	2021	2022	2023	2024
VTTL (EUR m)	2 638	2 617	2 911	3 491	3 874	4 275
<i>o/w liability on household final consumption</i>	1 714	1 658	1 868	2 287	2 449	X
<i>o/w liability on gov. and NPISH final consumption</i>	86	90	101	113	127	X
<i>o/w liability on intermediate consumption</i>	380	361	410	482	556	X
<i>o/w liability on GFCF</i>	455	510	534	609	743	X
<i>o/w net adjustments</i>	3	-1	-2	0	0	X
VAT revenue (EUR m)	2 483	2 469	2 847	3 309	3 476	3 846
VAT compliance gap (EUR m)	155	148	64	182	398	429
VAT compliance gap (percent of VTTL)	5.9%	5.7%	2.2%	5.2%	10.3%	10.0%
<i>EU average VAT compliance gap (percent of VTTL)</i>	11.1%	9.9%	7.2%	7.9%	9.5%	X
VAT compliance gap change since 2019					4.4pp	

Source: own elaboration. Download underlying data [here](#). Note: fast estimates for 2024 are based on a simplified method. Rounded changes may not equal the change between rounded values.

Figure 53. EE – VTTL, VAT revenue, and VAT compliance gap



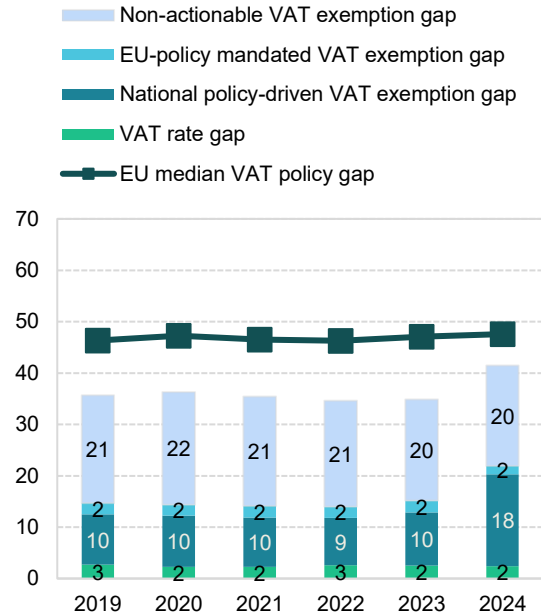
Source: own elaboration. Download underlying data [here](#). Note: fast estimates for 2024 are based on a simplified method.

²³ **Yellow traffic light:** estimates based on somewhat outdated information or showing elevated unexplained volatility. This applies to both VAT compliance gap and policy gap estimates. The estimates are based on the latest data available at the cut-off date for data collection (15/07/2025). As datasets are regularly revised, future editions will reassess and update the estimates accordingly.

EE: VAT policy gap (2019-2024)

- The VAT policy gap in Estonia remained broadly stable in 2023 (34.9%) compared with 2022 (34.6%), before rising sharply to 41.5% in 2024. Most of this increase was driven by growth in the national policy-driven VAT exemption gap.
- In 2023, Estonia did not implement major changes to VAT rates or exemptions, so small shifts in the VAT policy gap decomposition likely reflected structural changes in consumption. In 2024, the standard VAT rate was raised from 20% to 22%, while reduced rates of 5% and 9% remained unchanged. This increase widened the difference between the standard and reduced rates, resulting in a 8-percentage-point rise in the national policy-driven VAT exemption gap (compared to 2023), primarily reflecting the higher standard rate rather than new exemptions.

Figure 54. EE – VAT policy gap (%)



Source: own elaboration. Download underlying data [here](#).

Table 32. EE – VAT policy gap decomposition

	2019	2020	2021	2022	2023	2024
Notional ideal VAT revenue (EUR m)	4 120	4 129	4 531	5 366	5 975	7 341
VTTL (EUR m)	2 638	2 617	2 911	3 491	3 874	4 275
VAT policy gap (EUR m)	1 470	1 499	1 605	1 858	2 083	3 046
VAT policy gap (%)	35.7	36.3	35.4	34.6	34.9	41.5
For comparison: EU median policy gap (%)	46.1	47.1	46.1	46.0	46.4	46.8
Actionable VAT policy gap	604	594	640	750	906	1 607
o/w VAT rate gap (EUR m)	110	95	104	137	149	178
o/w agricultural products, foodstuffs, beverages	3	3	3	4	4	5
o/w pharmaceuticals	36	39	42	46	50	62
o/w accommodation and restaurant services	28	19	22	34	39	47
o/w utilities services	0	0	0	0	0	0
o/w transport services	29	16	18	25	28	32
o/w other	15	17	19	29	28	33
o/w National policy-driven VAT exemption gap (EUR m)	403	411	434	498	619	1 312
o/w EU policy-mandated VAT exemption gap (EUR m)	91	88	102	115	138	117
Non-actionable VAT policy gap (EUR m)	865	905	965	1 108	1 177	1 438
o/w imputed rents	365	362	387	468	499	565
o/w public education	195	208	222	236	258	317
o/w public healthcare	142	164	188	208	227	282
o/w other	163	171	168	196	193	273
C-efficiency (%)	70.3	70.9	74.1	72.3	69.5	67.5

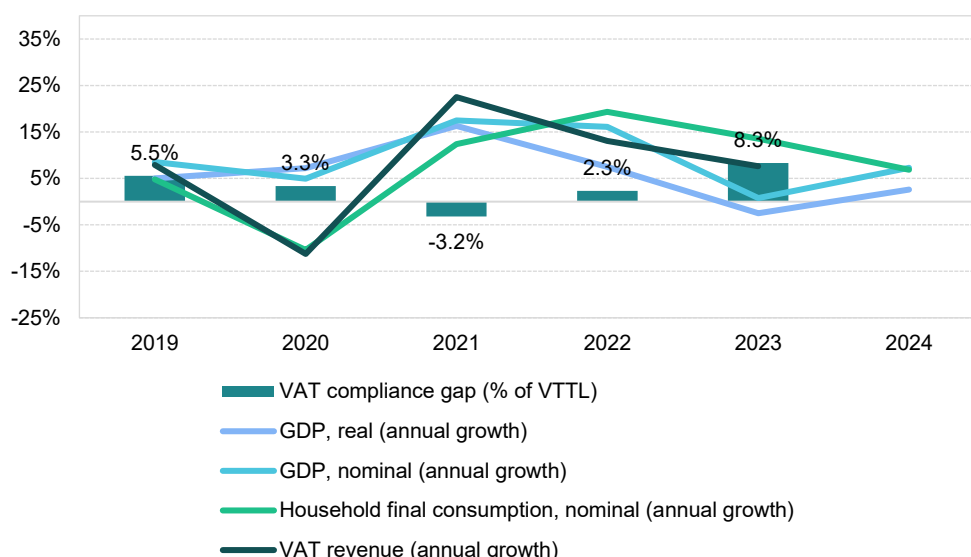
Source: own elaboration. Download underlying data [here](#). Note: fast estimates for 2024 are based on a simplified method.

Ireland

VAT revenues in Ireland grew by 7.9% in 2023, a slower pace than around the post-pandemic rebound of 2022 (12.2%). The VAT compliance gap rose to 8.3% in 2023, up from 2.3% in 2022 and surpassing the pre-pandemic levels of 2019 (5.5%). In 2023, Ireland applied zero VAT to newspapers, certain health products and solar panels for schools, extended the 9% VAT rate for gas and electricity until October 2024, reverted tourism, hospitality and hairdressing rates to 13.5% and reduced farmers' flat-rate addition to 5%. These measures contributed to VAT revenue developments.

The post-COVID-19 recovery was relatively short-lived, with the rebound in domestic demand largely confined to 2021 and 2022. Ireland's economic growth in 2023 was constrained by high inflation driven by energy prices, persistent supply chain bottlenecks, energy price volatility linked to Russia's war of aggression against Ukraine and associated sanctions, and weak export demand. Given Ireland's heavy reliance on international trade – total trade accounted for 240% of GDP in 2023 – external factors, including slow recovery in Germany and other EU economies, further limited growth.

Figure 55. IE – VAT compliance gap, VAT revenues, GDP growth and household final consumption



Sources: own elaboration, Eurostat.

The Irish real GDP contracted by 2.5% in 2023, a decline of 10.0pp compared with the 2022 growth rate, which signifies an economic slowdown that likely contributed to an **increase in the VAT compliance gap**. Real household final consumption growth, which had proven strong in 2022 (10.9%), slowed down to 4.3% in 2023. By contrast, real government consumption growth increased from 3.7% in 2022 to 6.4% in 2023. GFCF grew significantly in real terms, reaching 13.4% in 2023.

While measures reported in real values capture the actual change in economic activity by excluding inflation effects, nominal growth rates more directly reflect changes in the VAT base and potential VAT revenues. Accordingly, nominal final consumption expenditure growth slowed from 15.7% in 2022 to 12.7% in 2023. In particular, growth of nominal household final consumption of food and non-alcoholic beverages fell sharply (-27.3pp), which may have further contributed to an **increase in the VAT compliance gap**.

Inflation eased to 5.3% in 2023 after peaking at 8.1% in 2022; this downward trend continued into 2024. The main drivers of inflation were housing, water, electricity, gas and other fuels, as well as food and transport. Price pressures were present across nearly all components of household consumption, except health and education. In the context of the VAT compliance gap, recreational services, restaurants and accommodation services were among the fastest-growing categories in nominal household final consumption, although their growth mostly reflected 2022 levels. Tourism demand, measured by nights spent in tourist accommodations, grew year-over-year by 16.3% in 2023, sharply below the 133.9% increase in 2022. These last two developments may have created conditions conducive to a **decrease in the VAT compliance gap**.

GFCF, reflecting investment in fixed assets such as infrastructure, machinery and buildings, rose by 18.6% in nominal terms in 2023. Adjusted for inflation, this represents a significant increase in real investment activity.

A slowdown was observed on the supply side in 2023. Services, however, grew in real value-added terms, in contrast to industry and manufacturing. After a strong rebound in 2021 and 2022, value added in industry fell due to supply chain disruptions, high energy costs, weak external demand and a tight labour market. These changes resulted in a 7.3 percentage point increase in the share of services in the total economy. Overall, these structural shifts are likely to have contributed to an **increase in the VAT compliance gap**, as non-compliance risks are generally higher in the services sector.

Table 33. IE – Factors affecting VAT compliance gap (2022-2023)

Variable	2023	Difference (2023 vs 2022)	Expected impact on 2023 VAT compliance gap
GDP growth, real	-2.5%	-10.0pp	Increase
Final consumption expenditure growth, nominal	12.7%	-3.0pp	Increase
Household final consumption of food and non-alcoholic beverages growth, nominal	14.1%	-27.3pp	Increase
Services susceptible to non-compliance growth, nominal	11.2%	-5.9pp	Decrease
Services share in GDP	63.4%	7.3pp	Increase
Tourism (nights spent), growth	16.3%	-117.6pp	Decrease
Bankruptcy declarations, growth	40.0%	-128.9pp	Increase
Digital payments growth, nominal	1.8%	-11.0pp	Increase

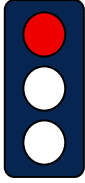
Source: own elaboration based on Eurostat and ECB.

Note: for a discussion of the expected effects of these indicators, please see pages 18 and 19 in section II.a.

Challenging economic conditions in Ireland led to a substantial increase in the number of bankruptcies, rising by approximately 40% in 2023. This development likely added to pressures driving an **increase in the VAT compliance gap**. However, it should be noted that the pace of year-over-year growth slowed down by 128.9pp.

Other factors also influenced the VAT compliance gap. The prevalence of digital payments (measured as the aggregate of payments with cards, e-money, direct debits and bank transfers) is generally associated with higher compliance, as digital and automated transactions are easier to monitor. In Ireland, the nominal value of digital payments increased in 2023 (1.8%), but at a slower pace than in 2022 (-11pp). This deceleration appears to have exerted **upward pressure on the VAT compliance gap**.

IE: VAT compliance gap (2019-2024)



- In Ireland, the VAT compliance gap increased to 8.3% in 2023, up from 2.3% in 2022²⁴.
- Estimates for Ireland are uncertain due to partially outdated model parameters and negative 2021 estimates. Data are drawn from Eurostat and the Central Statistics Office (CSO).
- Use tables for the 2018-2020 period were updated by column rescaling to align with the latest national accounts; 2021-2022 tables were similarly forecasted based on the 2020 structure.
- Fast estimates for 2024 are not published due to uncertainty in the effective rate calculation.

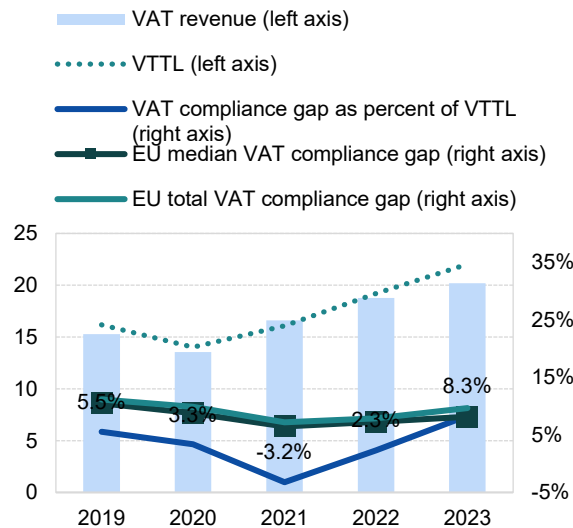
Table 34. IE – VTTL, VAT revenue, and VAT compliance gap

	2019	2020	2021	2022	2023
VTTL (EUR m)	16 167	14 022	16 083	19 217	22 027
<i>o/w liability on household final consumption</i>	8 617	7 178	8 197	10 016	11 474
<i>o/w liability on gov. and NPISH final consumption</i>	711	794	908	1 001	1 101
<i>o/w liability on intermediate consumption</i>	4 516	3 767	4 430	4 997	5 406
<i>o/w liability on GFCF</i>	2 113	2 158	2 431	3 058	3 896
<i>o/w net adjustments</i>	210	125	118	145	150
VAT revenue (EUR m)	15 271	13 552	16 602	18 769	20 195
VAT compliance gap (EUR m)	896	469	-519	448	1 832
VAT compliance gap (percent of VTTL)	5.5%	3.3%	-3.2%	2.3%	8.3%
<i>EU average VAT compliance gap (percent of VTTL)</i>	11.1%	9.9%	7.2%	7.9%	9.5%
VAT compliance gap change since 2019					2.8pp

Source: own elaboration. Download underlying data [here](#).

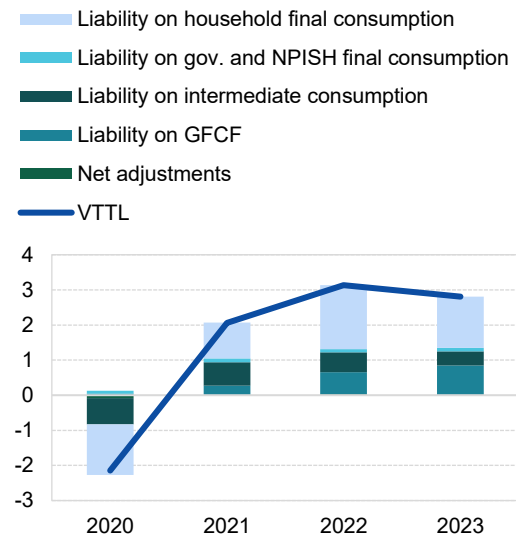
Figure 56. IE – VTTL, VAT revenue, and VAT compliance gap

VTTL, VAT revenue, and VAT compliance gap (EUR billion, %)



Source: own elaboration. Download underlying data [here](#).

Decomposition of VTTL annual change (EUR billion)

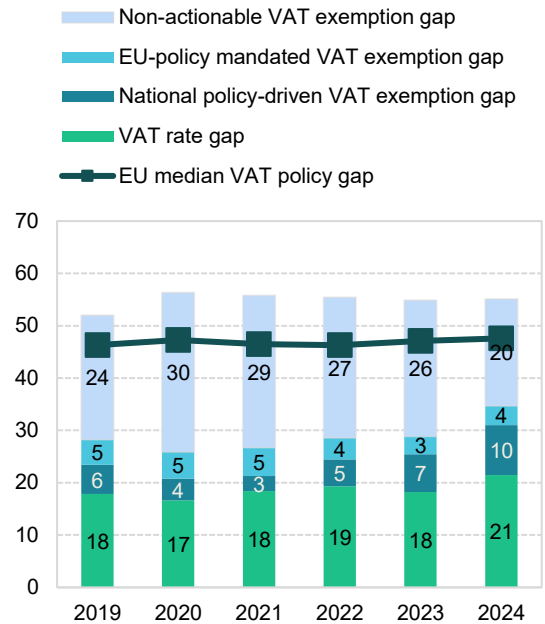


²⁴ **Red traffic light:** Estimates based on very outdated information, with large unexplained volatility, or other unexpected patterns of the liability subcomponents. This applies to both VAT compliance gap and policy gap estimates. The estimates are based on the latest data available at the cut-off date for data collection (15/07/2025). As datasets are regularly revised, future editions will reassess and update the estimates accordingly.

IE: VAT policy gap (2019-2024)

- The VAT policy gap in Ireland remained broadly stable between 2022 and 2024, hovering around 55%. However, significant changes occurred within the components of the decomposed structure in 2023 and 2024, primarily driven by legislative adjustments.
- In May 2022, Ireland reduced VAT on electricity and gas for domestic and industrial heating and lighting from 13.5% to 9%.
- In September 2023, the temporary 9% rate for restaurant, accommodation, and entertainment services ended, with VAT returning to 13.5%.

Figure 57. IE – VAT policy gap (%)



Source: own elaboration. Download underlying data [here](#).

Table 35. IE – VAT policy gap decomposition

	2019	2020	2021	2022	2023	2024
Notional ideal VAT revenue (EUR m)	33 440	31 879	36 098	42 780	48 459	48 947
VTTL (EUR m)	16 167	14 022	16 083	19 217	22 027	.
VAT policy gap (EUR m)	17 383	17 962	20 128	23 712	26 599	26 986
VAT policy gap (%)	52.0	56.3	55.8	55.4	54.9	55.1
For comparison: EU median policy gap (%)	46.1	47.1	46.1	46.0	46.4	46.8
Actionable VAT policy gap	9 457	8 254	9 653	12 229	13 984	16 973
o/w VAT rate gap (EUR m)	5 964	5 303	6 639	8 272	8 836	10 498
o/w agricultural products, foodstuffs, beverages	1 883	1 935	2 103	2 332	2 568	2 700
o/w pharmaceuticals	553	597	700	774	841	889
o/w accommodation and restaurant services	953	644	1 314	1 850	1 213	1 282
o/w utilities services	368	355	414	811	946	812
o/w transport services	1 004	646	659	915	1 064	1 133
o/w other	1 203	1 127	1 448	1 591	2 204	3 682
o/w National policy-driven VAT exemption gap (EUR m)	1 860	1 317	1 047	2 179	3 506	4 690
o/w EU policy-mandated VAT exemption gap (EUR m)	1 634	1 635	1 967	1 778	1 642	1 785
Non-actionable VAT policy gap (EUR m)	7 926	9 708	10 475	11 483	12 615	10 013
o/w imputed rents	3 539	3 502	3 709	4 135	4 556	4 863
o/w public education	1 216	1 366	1 466	1 644	1 808	2 028
o/w public healthcare	1 825	2 169	2 615	2 883	3 216	3 551
o/w other	1 346	2 671	2 685	2 821	3 036	-429
C-efficiency (%)	50.4	46.9	51.4	49.7	48.2	49.0

Source: own elaboration. Download underlying data [here](#). Note: fast estimates for 2024 are based on a simplified method.

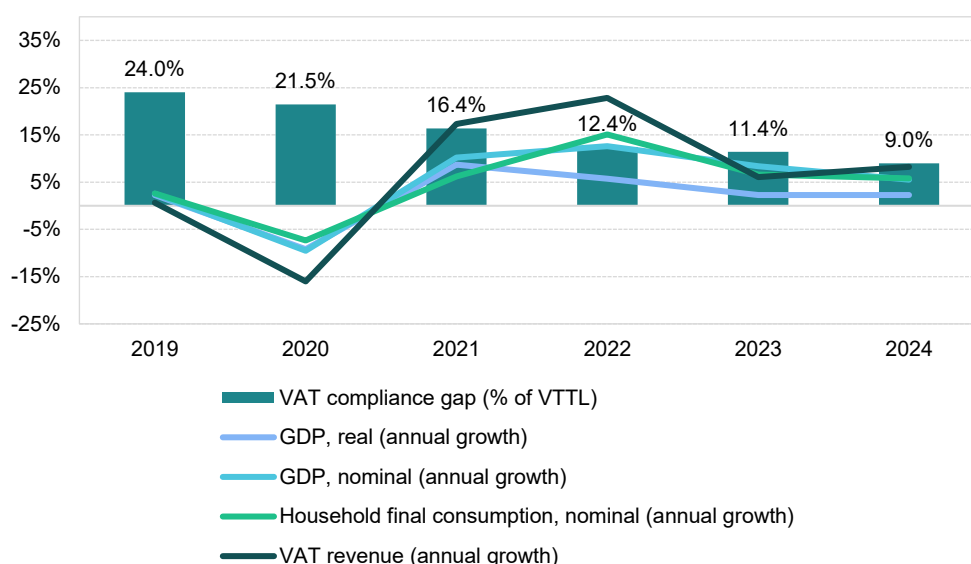
Greece

VAT revenues in Greece grew by 6.1% in 2023, a slower pace than the post-pandemic rebound in 2022 (22.8%). The VAT compliance gap, however, declined to 11.4% in 2023, down from 12.4% in 2022, a significant decrease compared with the pre-pandemic levels of 2019 (24.0%). Preliminary estimates for 2024 suggest a further decline to 9.0%.

In 2023, Greece extended reduced VAT rates for various goods and services, maintained the suspension of VAT on new properties and introduced mandatory e-invoicing for government contract holders. These measures contributed to VAT revenue developments.

The post-COVID-19 recovery was relatively short-lived, with domestic demand rebounding mainly in 2021 and 2022. Economic growth in Greece in 2023 was constrained by high inflation driven by energy prices, persistent supply chain bottlenecks, energy price volatility linked to Russia's war of aggression against Ukraine and associated sanctions and weak export demand. Given that part of Greece's economy depends on international trade – total trade accounted for 92% of GDP in 2023 – external factors, including slow recovery in Germany and other EU economies, further limited growth.

Figure 58. EL – VAT compliance gap, VAT revenues, GDP growth and household final consumption



Sources: own elaboration, Eurostat. Note: fast estimates for 2024 are based on a simplified method.

Real GDP growth in Greece reached 2.3% in 2023, a slowdown of 3.4pp compared with 2022. While this indicates a moderation in economic activity that could have placed some **upward pressure on the VAT compliance gap**, some specific macroeconomic and structural developments appear to have fostered conditions supportive of its reduction. Real household final consumption growth, which had been relatively strong in 2022 (8.8%), slowed sharply to 1.8% in 2023. Similarly, real GFCF expanded at a slower pace, growing by 6.6% in 2023 compared with 16.4% in 2022. In contrast, real government consumption growth increased from 0.1% in 2022 to 2.6% in 2023.

While measures reported in real values capture the actual change in economic activity by excluding inflation effects, nominal growth rates more directly reflect changes in the VAT base and potential VAT revenues. Accordingly, nominal final consumption expenditure growth slowed from 12.2% in 2022 to 6.4% in 2023. In particular, growth of nominal household final consumption of food and non-alcoholic

beverages fell sharply (-8.8pp), which may have limited VAT revenue growth but did not prevent an overall improvement in compliance conditions.

Inflation fell to 4.2% in 2023 from a peak of 9.3% in 2022, and this downward trend continued into 2024. The main drivers of inflation were housing, water, electricity, gas and other fuels, as well as food, transport and services such as restaurants and hotels. Price pressures were present across most components of household consumption. In the context of the VAT compliance gap, recreational services, restaurants and accommodation services were among the fastest-growing categories in nominal household final consumption, although their growth largely reflected 2022 levels. The year-over-year change in demand for tourism, measured by nights spent in tourist accommodations, grew by only 10.9% in 2023, a sharp slowdown compared to the 79.7% increase registered in 2022. Both developments appear to have supported a further **narrowing of the VAT compliance gap**.

GFCF, reflecting investment in fixed assets such as infrastructure, machinery and buildings, rose by 10.0% in nominal terms in 2023. Adjusted for inflation, this indicates a real increase in investment activity.

On the supply side, both services and the combined sectors of industry, manufacturing and construction contributed positively to real value added in 2023. However, agriculture, forestry and fishing experienced a decline in real value added. These changes resulted in a 1.8 percentage point increase in the share of services. Overall, the structural shifts may have contributed to **upward pressure on the VAT compliance gap**, as non-compliance risks are generally higher in the services sector.

Table 36. EL – Factors affecting VAT compliance gap (2022-2023)

Variable	2023	Difference (2023 vs 2022)	Expected impact on 2023 VAT compliance gap
GDP growth, real	2.3%	-3.4pp	Increase
Final consumption expenditure growth, nominal	6.4%	-5.8pp	Increase
Household final consumption of food and non-alcoholic beverages growth, nominal	1.7%	-8.8pp	Increase
Services susceptible to non-compliance growth, nominal	13.1%	-29.8pp	Decrease
Services share in GDP	78.7%	1.8pp	Increase
Tourism (nights spent), growth	10.9%	-68.8pp	Decrease
Bankruptcy declarations, growth	110%	15.7pp	Increase
Digital payments growth, nominal	3.0%	-42.9pp	Increase

Source: own elaboration based on Eurostat and ECB.

Note: for a discussion of the expected effects of these indicators, please see pages 18 and 19 in section II.a.

Despite economic growth in many sectors, sectoral shifts led to a sharp increase in the number of bankruptcies, which rose by 110% in 2023 after a 94.3% increase in 2022. This development might have exerted some **upward pressure on the VAT compliance gap**.

Other factors also influenced the compliance gap. The prevalence of digital payments (measured as the aggregate of payments with cards, e-money, direct debits and bank transfers) is generally associated with higher compliance, as digital and automated transactions are easier to monitor. In Greece, the nominal value of digital payments increased in 2023, however, at a much smaller pace than in 2022. This slower growth may have **limited the downward changes in the VAT compliance gap**.

EL: VAT compliance gap (2019-2024)



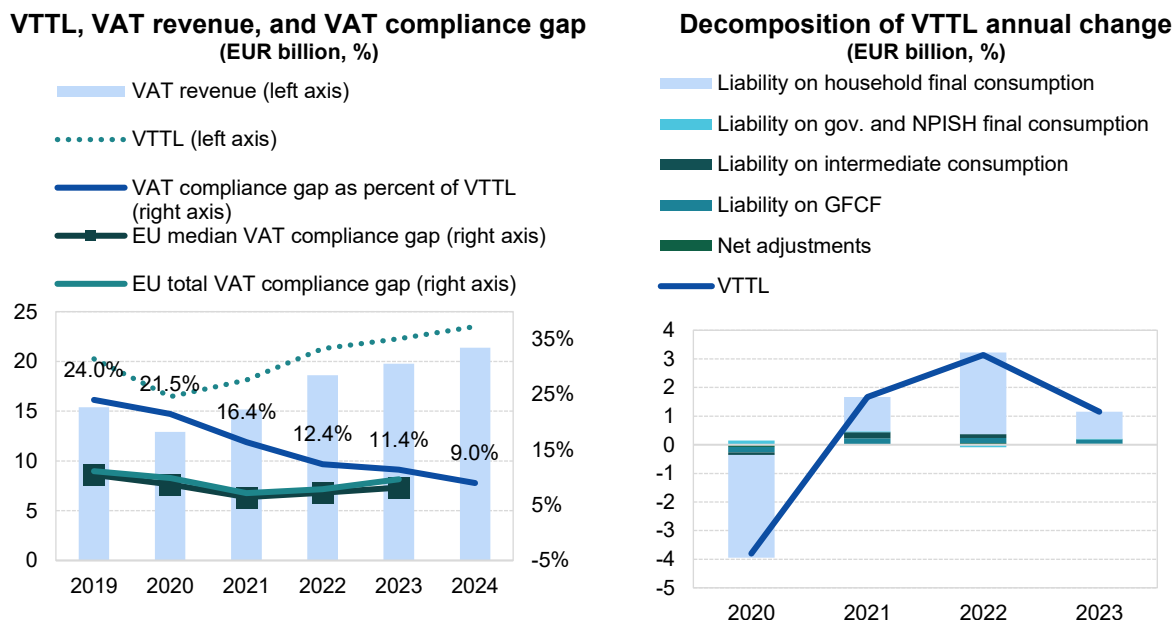
- In Greece, the VAT compliance gap declined to 11.4% in 2023, down from 12.4% in 2022²⁵.
- Between 2019 and 2023, the VAT compliance gap followed a stable downward trend.
- Improved data from Greek authorities allowed refined calibration of VTTL model parameters for 2021-2022, lowering VAT compliance gap estimates.

Table 37. EL – VTTL, VAT revenue, and VAT compliance gap

	2019	2020	2021	2022	2023	2024
VTTL (EUR m)	20 262	16 458	18 129	21 265	22 288	23 500
<i>o/w liability on household final consumption</i>	16 184	12 594	13 794	16 645	17 481	X
<i>o/w liability on gov. and NPISH final consumption</i>	719	865	892	806	836	X
<i>o/w liability on intermediate consumption</i>	1 934	1 848	2 063	2 199	2 180	X
<i>o/w liability on GFCF</i>	1 070	874	1 080	1 256	1 396	X
<i>o/w net adjustments</i>	355	278	300	359	395	X
VAT revenue (EUR m)	15 390	12 925	15 160	18 621	19 756	21 384
VAT compliance gap (EUR m)	4 872	3 533	2 969	2 644	2 532	2 116
VAT compliance gap (percent of VTTL)	24.0%	21.5%	16.4%	12.4%	11.4%	9.0%
<i>EU average VAT compliance gap (percent of VTTL)</i>	11.1%	9.9%	7.2%	7.9%	9.5%	X
VAT compliance gap change since 2019					-12.7pp	

Source: own elaboration. Download underlying data [here](#). Note: fast estimates for 2024 are based on a simplified method. Rounded changes may not equal the change between rounded values.

Figure 59. EL – VTTL, VAT revenue, and VAT compliance gap



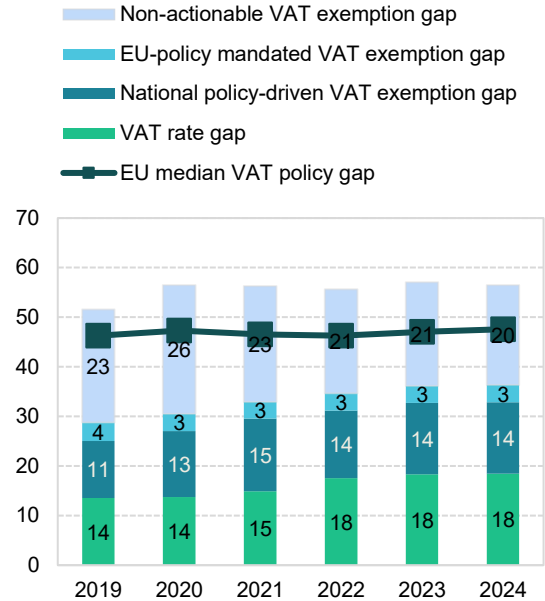
Source: own elaboration. Download underlying data [here](#). Note: fast estimates for 2024 are based on a simplified method.

²⁵ **Green traffic light:** estimates are based on up-to-date data, show no unexplained volatility, and reveal no unexpected patterns suggesting inaccuracies. This applies to both VAT compliance gap and VAT policy gap estimates. The estimates are based on the latest data available at the cut-off date for data collection (15/07/2025). As datasets are regularly revised, future editions will reassess and update the estimates accordingly.

EL: VAT policy gap (2019-2024)

- The VAT policy gap in Greece increased from 55.6% in 2022 to 57.1% in 2023, before declining to 56.5% in 2024. Overall, the structure of the VAT policy gap remained relatively stable.
- In 2020, Greece temporarily amended its VAT rate structure by reducing rates for passenger transport, selected entertainment and tourism services (decreasing the rate from 24% to 13%). The changes introduced at the end of 2020 were maintained until the end of 2023. In 2023, Greece also reduced VAT for personal hygiene and protection products and extended the suspension of VAT on new properties.

Figure 60. EL – VAT policy gap (%)



Source: own elaboration. Download underlying data [here](#).

Table 38. EL – VAT policy gap decomposition

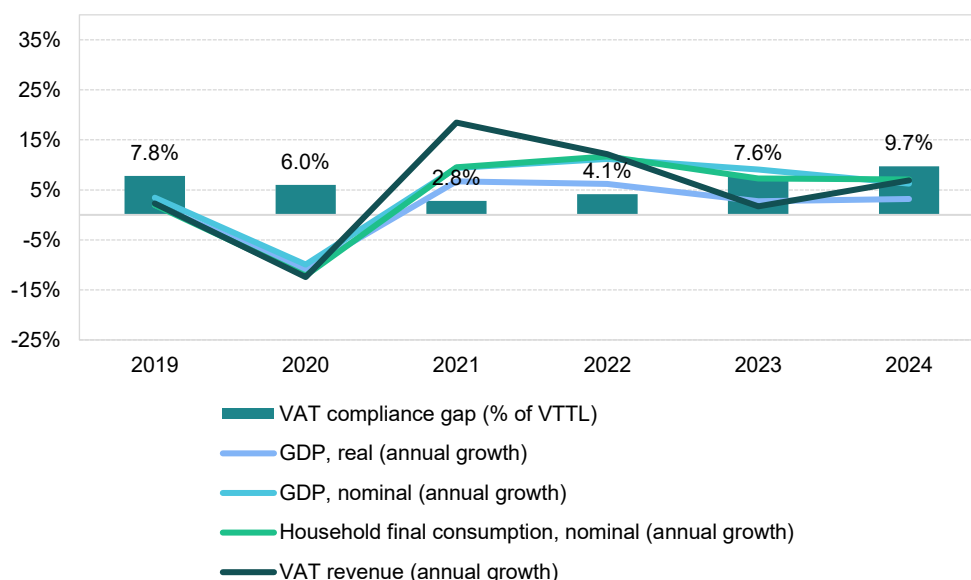
	2019	2020	2021	2022	2023	2024
Notional ideal VAT revenue (EUR m)	41 441	37 415	40 991	47 418	51 329	53 367
VTTL (EUR m)	20 262	16 458	18 129	21 265	22 288	23 500
VAT policy gap (EUR m)	21 372	21 142	23 065	26 385	29 290	30 131
VAT policy gap (%)	51.6	56.5	56.3	55.6	57.1	56.5
For comparison: EU median policy gap (%)	46.1	47.1	46.1	46.0	46.4	46.8
Actionable VAT policy gap	11 936	11 422	13 503	16 425	18 549	19 374
o/w VAT rate gap (EUR m)	5 621	5 138	6 109	8 317	9 400	9 862
o/w agricultural products, foodstuffs, beverages	1 902	2 119	2 161	2 487	2 495	2 635
o/w pharmaceuticals	720	487	495	787	879	899
o/w accommodation and restaurant services	1 024	829	1 405	1 702	2 188	2 275
o/w utilities services	556	711	764	871	837	882
o/w transport services	380	193	384	649	785	820
o/w other	1 039	799	900	1 820	2 215	2 351
o/w National policy-driven VAT exemption gap (EUR m)	4 763	4 988	6 004	6 474	7 406	7 675
o/w EU policy-mandated VAT exemption gap (EUR m)	1 552	1 297	1 390	1 633	1 744	1 838
Non-actionable VAT policy gap (EUR m)	9 436	9 720	9 562	9 961	10 741	10 756
o/w imputed rents	3 923	4 220	4 061	4 362	4 569	4 825
o/w public education	1 223	1 216	1 187	1 230	1 300	1 262
o/w public healthcare	997	978	1 150	1 184	1 380	1 348
o/w other	3 293	3 306	3 164	3 185	3 492	3 321
C-efficiency (%)	38.9	36.6	39.6	42.3	41.7	43.5

Source: own elaboration. Download underlying data [here](#). Note: fast estimates for 2024 are based on a simplified method.

VAT revenues in Spain grew by 1.7% in 2023, a slower pace than the post-pandemic rebound in 2022 (12.2%). The VAT compliance gap, however, increased to 7.6% in 2023, up from 4.1% in 2022, remaining just below the estimated 2019 level (7.8%). Preliminary estimates for 2024 suggest a further increase to 9.7%. In 2023, Spain extended the 5% VAT rate for electricity and gas, reduced VAT on basic foodstuffs from 4% to 0% and cut VAT on olive and seed oils, as well as pasta, from 10% to 5%. Additional measures included adjustments to the reverse charge mechanism, eased VAT recovery on bad debts and more flexible VAT deferment rules with higher thresholds. These measures contributed to VAT revenue developments.

The post-COVID-19 recovery was relatively short-lived, with domestic demand rebounding mainly in 2021 and 2022. Economic growth in Spain in 2023 was constrained by high inflation driven by energy prices, persistent supply chain bottlenecks, energy price volatility caused by Russia's war of aggression against Ukraine and related sanctions and weak export demand. Since part of Spain's economy depends on international trade, which accounted for 72% of GDP in 2023, slow recovery in other EU economies further limited growth.

Figure 61. ES – VAT compliance gap, VAT revenues, GDP growth and household final consumption



Sources: own elaboration, Eurostat. Note: fast estimates for 2024 are based on a simplified method.

Real GDP growth in Spain stood at 2.7% in 2023, a decline of 3.5pp compared with 2022, indicating an economic slowdown that likely contributed to an **increase in the VAT compliance gap**. Real household final consumption growth, which had been relatively strong in 2021 (7.2%), markedly slowed down to 4.9% in 2022 and further to 1.7% in 2023. By contrast, real government consumption growth accelerated from 0.6% in 2022 to 5.2% in 2023. Real GFCF grew at a slower pace, rising by 2.1% in 2023 compared with 3.3% in 2022.

While measures reported in real values capture the actual change in economic activity by excluding inflation effects, nominal growth rates more directly reflect changes in the VAT base and potential VAT revenues. Accordingly, nominal final consumption expenditure growth slowed from 10.2% in 2022 to 7.1% in 2023. In particular, growth of nominal household final consumption of food and non-alcoholic

beverages fell sharply (-27.5pp), which may have further reinforced an **increase in the VAT compliance gap**.

Inflation slowed down to 3.4% in 2023 after peaking at 8.3% in 2022, with the downward trend continuing into 2024. The main drivers of inflation were housing, water, electricity, gas and other fuels, as well as food and transport. Price pressures were present across all components of household consumption. In the context of the VAT compliance gap, recreational services, restaurants and accommodation services were among the fastest-growing categories in nominal household final consumption, though their growth largely reflected 2022 levels. Tourism demand, measured by nights spent in tourist accommodations, increased by only 7.4% in 2023, substantially below the 74% growth in 2022. These last two developments can be regarded as factors that drive conditions conducive to a **decrease in the VAT compliance gap**.

GFCF, reflecting investment in fixed assets such as infrastructure, machinery and buildings, rose by 5.3% in nominal terms in 2023. Adjusted for inflation, this points to a moderate increase in real investment activity.

On the supply side, sectoral performance varied. Services growth declined less in real value-added terms than other sectors. After significant rebounds in 2021 and 2022, value added in industry fell due to supply chain disruptions, high energy costs, low external demand and a tight labour market. These developments resulted in a 0.7 percentage point increase in the share of services. This shift toward a greater weight of services may have contributed to **upward pressure on the VAT compliance gap**, as non-compliance risks tend to be higher in the services sector.

Table 39. ES – Factors affecting VAT compliance gap (2022-2023)

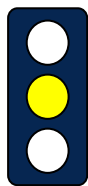
Variable	2023	Difference (2023 vs 2022)	Expected impact on 2023 VAT compliance gap
GDP growth, real	2.7%	-3.5pp	Increase
Final consumption expenditure growth, nominal	7.1%	-3.1pp	Increase
Household final consumption of food and non-alcoholic beverages growth, nominal	15.1%	-27.5pp	Increase
Services susceptible to non-compliance growth, nominal	7.5%	-9.5pp	Decrease
Services share in GDP	75.2%	0.7pp	Increase
Tourism (nights spent), growth	7.4%	-66.6pp	Decrease
Bankruptcy declarations, growth	-12.1%	-44.8pp	Decrease
Digital payments growth, nominal	3.7%	5.7pp	Decrease

Source: own elaboration based on Eurostat and ECB.

Note: for a discussion of the expected effects of these indicators, please see pages 18 and 19 in section II.a.

Spain's relatively favourable economic conditions compared with the rest of the EU contributed to a decline in the number of bankruptcies, which fell by 12.1% in 2023 compared to 2022. Declines were observed across most sectors, although the financial and IT sectors experienced relatively smaller declines. The overall shift may have exerted some **downward pressure on the VAT compliance gap**.

Finally, the prevalence of digital payments (measured as the aggregate of payments with cards, e-money, direct debits and bank transfers) continued to expand. In Spain, the nominal value of digital payments increased in 2023 at a faster pace than in 2022 (5.7pp). This expansion in electronic transactions likely worked to **restrain growth in the VAT compliance gap**.



ES: VAT compliance gap (2019-2024)

- The estimated VAT compliance gap in Spain increased to 7.6% in 2023, up from 4.1% in 2022, reaching its pre-pandemic levels²⁶.
- Differences in data sources for tax returns and national accounts create some uncertainty for 2023 VTTL estimates.

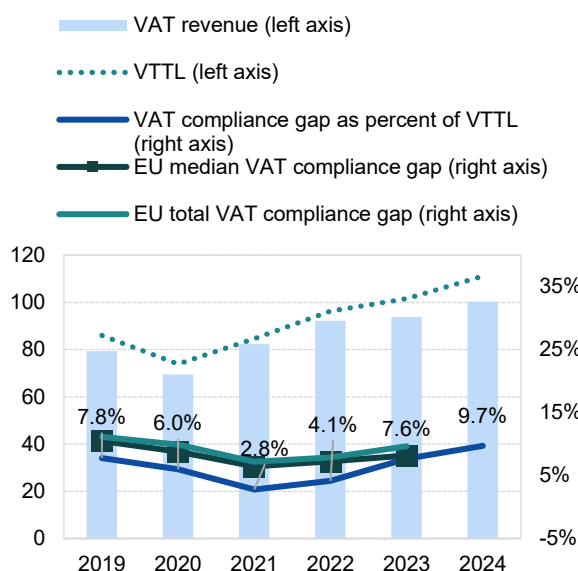
Table 40. ES – VTTL, VAT revenue, and VAT compliance gap

	2019	2020	2021	2022	2023	2024
VTTL (EUR m)	86 008	73 874	84 599	96 236	101 596	111 096
<i>o/w liability on household final consumption</i>	61 274	48 868	56 858	64 405	67 591	X
<i>o/w liability on gov. and NPISH final consumption</i>	3 094	3 087	3 228	3 624	3 833	X
<i>o/w liability on intermediate consumption</i>	11 310	11 375	13 404	15 578	16 600	X
<i>o/w liability on GFCF</i>	9 407	9 788	10 084	11 636	12 583	X
<i>o/w net adjustments</i>	923	755	1 026	992	989	X
VAT revenue (EUR m)	79 301	69 435	82 249	92 250	93 825	100 300
VAT compliance gap (EUR m)	6 707	4 439	2 350	3 986	7 771	10 796
VAT compliance gap (percent of VTTL)	7.8%	6.0%	2.8%	4.1%	7.6%	9.7%
<i>EU average VAT compliance gap (percent of VTTL)</i>	11.1%	9.9%	7.2%	7.9%	9.5%	X
VAT compliance gap change since 2019					-0.1pp	

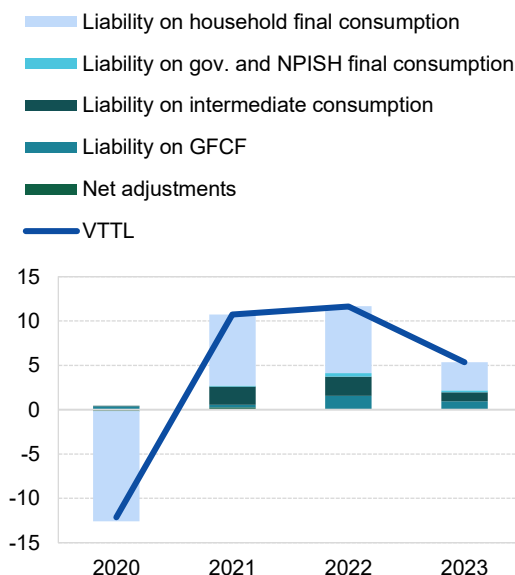
Source: own elaboration. Download underlying data [here](#). Note: fast estimates for 2024 are based on a simplified method. Rounded changes may not equal the change between rounded values.

Figure 62. ES – VTTL, VAT revenue, and VAT compliance gap

VTTL, VAT revenue, and VAT compliance gap (EUR billion, %)



Decomposition of VTTL annual change (EUR billion)



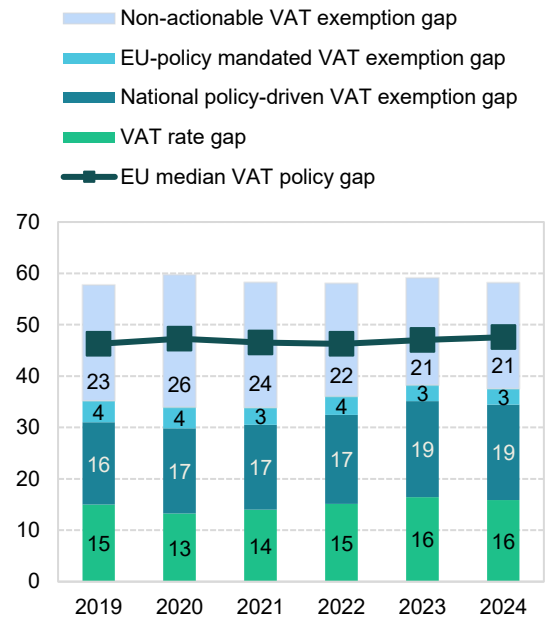
Source: own elaboration, Download underlying data [here](#). Note: fast estimates for 2024 are based on a simplified method.

²⁶ **Yellow traffic light:** estimates based on somewhat outdated information or showing elevated unexplained volatility. This applies to both VAT compliance gap and policy gap estimates. The estimates are based on the latest data available at the cut-off date for data collection (15/07/2025). As datasets are regularly revised, future editions will reassess and update the estimates accordingly.

ES: VAT policy gap (2019-2024)

- The VAT policy gap in Spain increased from 58.1% in 2022 to 59.1% in 2023, before decreasing to 58.2% in 2024. At a more granular level, some notable shifts occurred: in 2023, the national policy-driven VAT exemption gap and the VAT rate gap grew by 1.4pp and 1.3pp, respectively, while the non-actionable VAT policy gap declined by 1.1pp.
- The observed changes may have resulted from legislative changes. In 2023, Spain maintained the 5% VAT rate on electricity and gas for the entire year. Reduced VAT rates were applied throughout the year, with the 4% rate lowered to 0% for essential food items, including bread, flour, milk, cheese, eggs, fruits, vegetables, legumes, grains, and cereals. Additionally, VAT rates on olive and seed oils, alimentary dough, and pasta were reduced from 10% to 5%.

Figure 63. ES – VAT policy gap (%)



Source: own elaboration. Download underlying data [here](#).

Table 41. ES – VAT policy gap decomposition

	2019	2020	2021	2022	2023	2024
Notional ideal VAT revenue (EUR m)	203 637	183 585	202 772	229 677	248 643	265 654
VTTL (EUR m)	86 008	73 874	84 599	96 236	101 596	111 096
VAT policy gap (EUR m)	117 629	109 712	118 172	133 436	147 043	154 564
VAT policy gap (%)	57.8	59.8	58.3	58.1	59.1	58.2
For comparison: EU median policy gap (%)	46.1	47.1	46.1	46.0	46.4	46.8
Actionable VAT policy gap	71 628	62 382	68 744	82 834	95 114	99 754
o/w VAT rate gap (EUR m)	30 553	24 343	28 464	34 814	40 965	42 164
o/w agricultural products, foodstuffs, beverages	8 385	9 040	8 999	9 753	10 400	11 818
o/w pharmaceuticals	2 185	2 210	3 215	3 295	3 586	3 810
o/w accommodation and restaurant services	9 511	5 053	7 197	10 422	11 973	12 878
o/w utilities services	396	388	398	1 103	4 296	2 288
o/w transport services	2 062	1 151	1 463	1 866	2 083	2 233
o/w other	8 014	6 502	7 190	8 376	8 627	9 137
o/w National policy-driven VAT exemption gap (EUR m)	32 571	30 491	33 490	39 671	46 453	49 344
o/w EU policy-mandated VAT exemption gap (EUR m)	8 503	7 547	6 791	8 348	7 696	8 246
Non-actionable VAT policy gap (EUR m)	46 002	47 330	49 428	50 602	51 929	54 810
o/w imputed rents	18 768	19 044	19 450	19 698	20 534	22 092
o/w public education	8 742	8 947	9 703	9 979	10 281	10 794
o/w public healthcare	9 373	10 165	10 781	10 973	11 185	11 729
o/w other	9 119	9 175	9 494	9 952	9 929	10 194
C-efficiency (%)	42.0	41.1	44.5	44.3	41.6	41.5

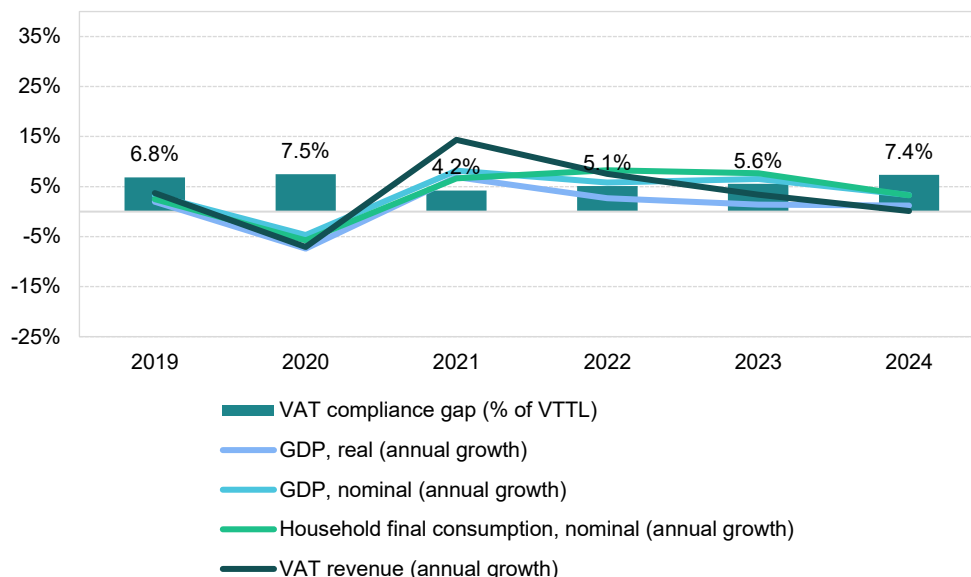
Source: own elaboration. Download underlying data [here](#). Note: fast estimates for 2024 are based on a simplified method.

France

VAT revenues in France grew by 3.4% in 2023, a slower pace than the post-pandemic peak of 7.5% in 2022. The VAT compliance gap increased to 5.6% in 2023, up from 5.1% in 2022, but remained below the 2019 level of 6.8%. Fast estimates for 2024 suggest a compliance gap of 7.4%. In 2023, France extended the 5.5% VAT rate for certain food items and COVID-19 protection materials and exempted VAT-exempt businesses from filing recapitulative statements for goods. These measures contributed to growing VAT revenues.

The recovery after the COVID-19 pandemic was relatively short-lived, with a significant rebound of domestic demand limited to 2021 and 2022. Economic challenges that curbed growth included high inflation driven by energy prices, continued bottlenecks in value chains, energy price volatility caused by Russia's war of aggression against Ukraine and the ensuing sanctions and weak export demand. France's reliance on international trade, with total trade accounting for 71% of GDP in 2023, made slow recovery in Germany and the rest of the EU another limiting factor.

Figure 64: FR – VAT compliance gap, VAT revenues, GDP growth and household final consumption



Sources: own elaboration, Eurostat. Note: fast estimates for 2024 are based on a simplified method.

Real GDP growth in France in 2023 stood at 1.4%, a decline of 1.3pp compared to 2022, reflecting an economic slowdown that likely contributed to an **increase in the VAT compliance gap**. Household final consumption growth in real terms, which was relatively strong in 2021 at 5.2%, slowed to 3.2% in 2022 and further to 0.6% in 2023. Real government consumption growth followed a similar trend, decreasing from 6.6% in 2021 to 2.7% in 2022 and to 1.4% in 2023. In contrast, real GFCF growth reversed slightly from -0.4% in 2022 to 0.4% in 2023.

While measures reported in real values capture the actual change in economic activity by excluding inflation effects, nominal growth rates more directly reflect changes in the VAT base and potential VAT revenues. Accordingly, nominal final consumption expenditure growth slowed from 7.1% in 2022 to 6.6% in 2023. In particular, growth of nominal household final consumption of food and non-alcoholic

beverages fell sharply (-36.6pp), which may have further contributed to an **increase in the VAT compliance gap**.

Inflation decreased to 5.7% in 2023 from 5.9% in 2022, with the trend continuing throughout 2024. The main drivers of inflation were the costs of housing, water, electricity, gas and other fuels, as well as food and transport. Inflationary tendencies were present in all components of household consumption. Regarding the VAT compliance gap, recreational services, restaurants and accommodation were among the fastest-growing categories in nominal household final consumption, although their growth mostly reflected 2022 measures. Similarly, year-over-year change in demand for tourism, measured by nights spent in tourist accommodations, grew at a significantly lower rate in 2023 (2.3%) compared to 2022 (38.6%). These last two developments can be regarded as factors that drove conditions conducive to a **decrease in the VAT compliance gap**.

GFCF, which reflects investment in fixed assets such as infrastructure, machinery, and buildings, increased in nominal terms by 3.5% in 2023. Given the inflation rate, this indicates a contraction in real investment activity.

On the supply side, growth varied across sectors. Services growth dropped less in real value-added terms than the combined industry, manufacturing and construction sectors, resulting in a 2.2 percentage point decline in the share of services. Therefore, the overall impact of changes in the sectoral structure of the French economy appears to have contributed to a **downward pressure on the VAT compliance gap**, as the risk of non-compliance tends to be higher in the services sector.

Table 42. FR – Factors affecting VAT compliance gap (2022-2023)

Variable	2023	Difference (2023 vs 2022)	Expected impact on 2023 VAT compliance gap
GDP growth, real	1.4%	-1.3pp	Increase
Final consumption expenditure growth, nominal	6.6%	-0.5pp	Increase
Household final consumption of food and non-alcoholic beverages, nominal growth rate	8.5%	-36.6pp	Increase
Services susceptible to non-compliance, nominal growth rate	8.4%	-0.4pp	Decrease
Services share in GDP	78.2%	-2.2pp	Decrease
Tourism (nights spent), growth	2.3%	-36.3pp	Decrease
Bankruptcy declarations, growth	37.3%	-14.0pp	Increase
Digital payments growth, nominal	-21.1%	-25.1pp	Increase

Source: own elaboration based on Eurostat and ECB.

Note: for a discussion of the expected effects of these indicators, please see pages 18 and 19 in section II.a.

In 2023, France experienced an increase in the number of bankruptcies (37.3%). This trend was driven by a combination of factors, including the withdrawal of COVID-19 support measures, persistent cost pressures from high energy prices and wages and weaker consumer demand. The scale of the changes varied across sectors, with IT, accommodation and food service activities experiencing relatively higher rates than others. Overall, the discussed factor trend likely reinforced **upward pressure on the VAT compliance gap**.

Other factors also influenced the compliance gap. In France, the nominal value of digital payments declined in 2023 after the growth in 2022. This shift may have contributed to an **increase in the VAT compliance gap**.

FR: VAT compliance gap (2019-2024)



- In France, the VAT compliance gap increased to 5.6% in 2023, up from 5.1% in 2022. Further increase is expected in 2024²⁷.
- The VTTL estimates for 2019-2022 were updated using revised VAT revenue, national accounts, and the 2022 supply and use tables (SUTs). The average yearly downward revision of the VAT compliance gap in this period amounted to 1.1 percentage point.

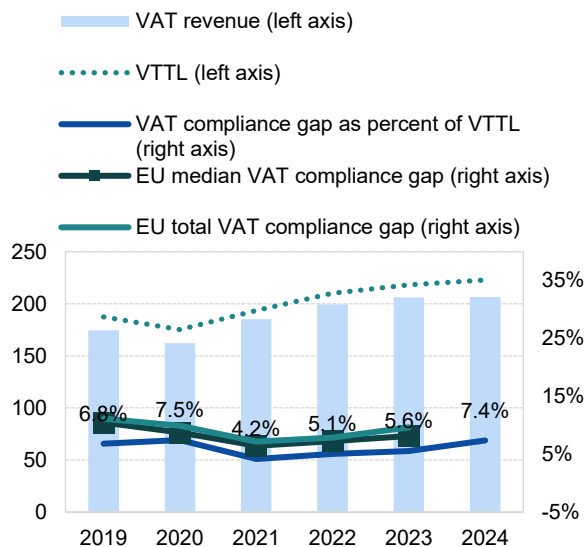
Table 43. FR – VTTL, VAT revenue, and VAT compliance gap

	2019	2020	2021	2022	2023	2024
VTTL (EUR m)	187 247	175 146	193 443	209 942	218 170	222 783
<i>o/w liability on household final consumption</i>	104 849	95 534	104 835	115 677	122 213	X
<i>o/w liability on gov. and NPISH final consumption</i>	2 832	3 993	4 077	4 208	4 382	X
<i>o/w liability on intermediate consumption</i>	34 318	33 011	37 319	40 655	40 431	X
<i>o/w liability on GFCF</i>	40 328	38 621	43 209	44 622	46 023	X
<i>o/w net adjustments</i>	4 920	3 987	4 002	4 780	5 121	X
VAT revenue (EUR m)	174 424	162 090	185 350	199 272	206 049	206 332
VAT compliance gap (EUR m)	12 823	13 056	8 093	10 670	12 121	16 451
VAT compliance gap (percent of VTTL)	6.8%	7.5%	4.2%	5.1%	5.6%	7.4%
<i>EU average VAT compliance gap (percent of VTTL)</i>	11.1%	9.9%	7.2%	7.9%	9.5%	X
VAT compliance gap change since 2019					-1.3pp	

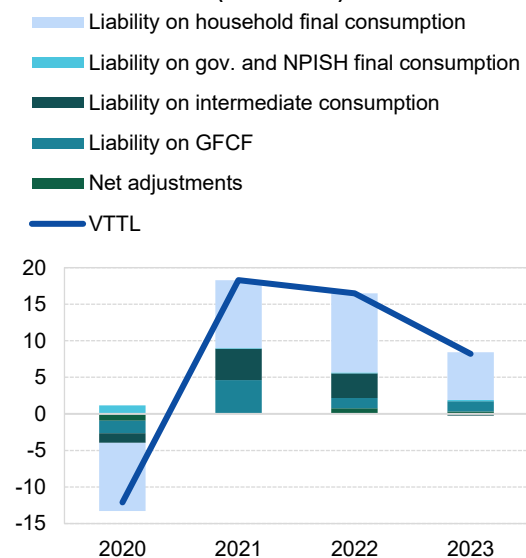
Source: own elaboration. Download underlying data [here](#). Note: fast estimates for 2024 are based on a simplified method. Rounded changes may not equal the change between rounded values.

Figure 65. FR – VTTL, VAT revenue, and VAT compliance gap

VTTL, VAT revenue, and VAT compliance gap (EUR billion, %)



Decomposition of VTTL annual change (EUR billion)



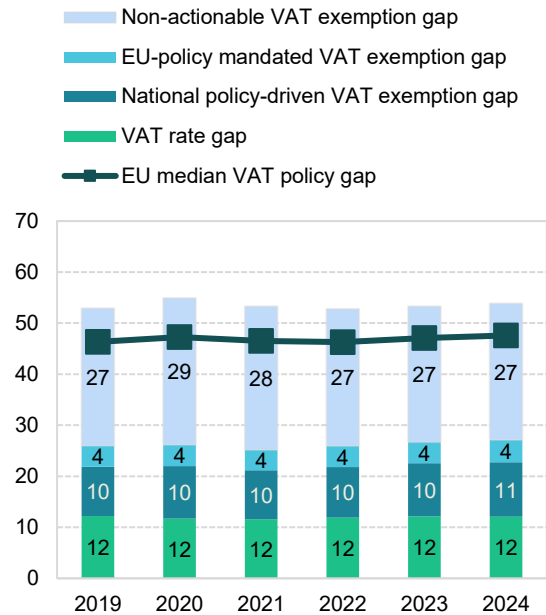
Source: own elaboration. Download underlying data [here](#). Note: fast estimates for 2024 are based on a simplified method.

²⁷ **Green traffic light:** estimates are based on up-to-date data, show no unexplained volatility, and reveal no unexpected patterns suggesting inaccuracies. This applies to both VAT compliance gap and VAT policy gap estimates. The estimates are based on the latest data available at the cut-off date for data collection (15/07/2025). As datasets are regularly revised, future editions will reassess and update the estimates accordingly.

FR: VAT policy gap (2019-2024)

- The VAT policy gap in France between 2022 and 2024 remained relatively stable compared to other EU Member States, ranging from 52.8% in 2022 to 53.8% in 2024. The overall structure of the gap also remained stable.
- The VAT rate matrix remained broadly unchanged, with no significant rebates or temporary adjustments introduced during the pandemic or the inflation crisis.

Figure 66. FR – VAT policy gap (%)



Source: own elaboration. Download underlying data [here](#).

Table 44. FR – VAT policy gap decomposition

	2019	2020	2021	2022	2023	2024
Notional ideal VAT revenue (EUR m)	390 880	380 980	407 026	437 177	458 705	474 066
VTTL (EUR m)	187 247	175 146	193 443	209 942	218 170	222 783
VAT policy gap (EUR m)	206 880	209 124	216 871	230 769	244 316	255 150
VAT policy gap (%)	52.9	54.9	53.3	52.8	53.3	53.8
For comparison: EU median policy gap (%)	46.1	47.1	46.1	46.0	46.4	46.8
Actionable VAT policy gap	101 555	99 833	102 583	113 399	122 569	128 499
o/w VAT rate gap (EUR m)	47 674	44 497	47 130	52 025	55 598	57 285
o/w agricultural products, foodstuffs, beverages	21 076	22 195	22 098	22 352	24 445	24 680
o/w pharmaceuticals	1 198	1 200	1 167	1 125	1 121	1 174
o/w accommodation and restaurant services	6 572	4 659	5 441	8 457	9 003	9 508
o/w utilities services	1 861	1 898	1 985	2 170	2 451	2 698
o/w transport services	4 577	2 077	2 496	4 208	4 396	4 746
o/w other	12 391	12 467	13 943	13 713	14 183	14 480
o/w National policy-driven VAT exemption gap (EUR m)	37 738	39 310	38 970	43 210	47 892	50 425
o/w EU policy-mandated VAT exemption gap (EUR m)	16 143	16 026	16 484	18 164	19 079	20 789
Non-actionable VAT policy gap (EUR m)	105 324	109 291	114 288	117 370	121 747	126 651
o/w imputed rents	38 353	39 102	39 774	40 601	42 185	43 515
o/w public education	17 661	18 566	19 131	19 484	20 284	21 114
o/w public healthcare	21 366	22 131	25 331	25 191	26 130	27 180
o/w other	27 944	29 492	30 052	32 094	33 148	34 842
C-efficiency (%)	51.2	48.7	52.6	52.5	51.5	49.6

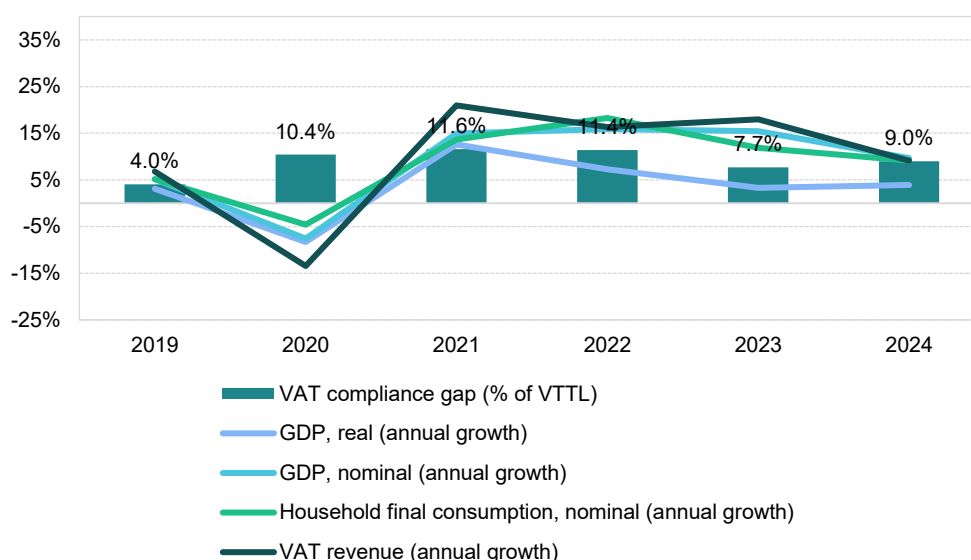
Source: own elaboration. Download underlying data [here](#). Note: fast estimates for 2024 are based on a simplified method.

Croatia

VAT revenues in Croatia grew by 17.9% in 2023, outpacing the post-pandemic 2022 growth of 16.3%. The VAT compliance gap decreased to 7.7% in 2023, down from 11.4% in 2022, but remained above the estimated 2019 level (4.0%). Fast estimates for 2024 indicate a gap of 9.0%. In 2023, Croatia reduced VAT on basic food products to 5%, sanitary products to 13%, and event tickets to 13%. The temporary 5% VAT on natural gas, heating services, and certain wood fuels was extended until March 2024, after which the rate was increased to 13%. These measures were key drivers of VAT revenue.

The post-COVID-19 recovery was relatively short-lived, with a strong rebound in domestic demand limited to 2021 and 2022. Economic challenges that curbed growth in Croatia included high inflation driven by energy prices, ongoing bottlenecks in value chains, energy price volatility caused by Russia's war of aggression against Ukraine and related sanctions and weak export demand. Given Croatia's significant involvement in international trade of final and intermediate goods – with a total trade-to-GDP ratio of 108% in 2023 – slow recovery in Germany and the rest of the EU also acted as a limiting factor.

Figure 67. HR – VAT compliance gap, VAT revenues, GDP growth and household final consumption



Sources: own elaboration, Eurostat data. Note: fast estimates for 2024 are based on a simplified method.

Real GDP growth in Croatia in 2023 stood at 3.3%, a decline of 4.0pp compared to the 2022 growth. This indicates an economic slowdown that may have exerted **upward pressure on the VAT compliance gap**. Household final consumption growth in real terms, which was strong in 2021 at 10.9%, slowed to 6.9% in 2022 and further to 3.2% in 2023. In contrast, government consumption real growth accelerated from 2.2% in 2022 to 7.1% in 2023. Real GFCF maintained a high growth rate of around 10% in both 2022 and 2023.

While measures reported in real values capture the actual change in economic activity by excluding inflation effects, nominal growth rates more directly reflect changes in the VAT base and potential VAT revenues. Accordingly, nominal final consumption expenditure growth slowed from 14.7% in 2022 to 13.1% in 2023. In particular, growth of nominal household final consumption of food and non-alcoholic beverages fell sharply (-8.8pp), which may have further exerted some **upward pressure on the VAT compliance gap**.

Inflation slowed down to 8.4% in 2023 from a peak of 10.7% in 2022, with the trend continuing into 2024. The main drivers of inflation were housing, water, electricity, gas and other fuels, as well as food, transport, furnishings, household equipment and services such as restaurants and hotels. Inflationary tendencies were observed across nearly all components of household consumption. In the context of the VAT compliance gap, recreational services, restaurants and accommodation services were among the fastest-growing categories in nominal household consumption, although most of this growth reflected 2022 trends. Similarly, year-over-year demand for tourism, measured by nights spent in tourist accommodations, rose at a much slower rate in 2023 (2.6%) compared to 2022 (28.3%). These last two trends may be interpreted as forces contributing to the **decrease in the VAT compliance gap**.

GFCF, reflecting investment in fixed assets such as infrastructure, machinery and buildings, grew by 20.0% in nominal terms in 2023, indicating a significant increase in real investment activity after adjusting for inflation.

On the supply side, sectoral performance varied, with services growth declining more sharply in real value-added terms than other sectors in 2023. This led to a one percentage point decrease in the share of services. Consequently, the overall shift in sectoral composition may have reinforced **downward pressure on the VAT compliance gap**, as the risk of non-compliance is generally higher in the services sector.

Table 45. HR – Factors affecting VAT compliance gap (2022-2023)

Variable	2023	Difference (2023 vs 2022)	Expected impact on 2023 VAT compliance gap
GDP growth, real	3.3%	-4.0pp	Increase
Final consumption expenditure growth, nominal	13.1%	-1.6pp	Increase
Household final consumption of food and non-alcoholic beverages growth, nominal	7.9%	-8.8pp	Increase
Services susceptible to non-compliance growth, nominal	15.4%	-26.5pp	Decrease
Services share in GDP	70.8%	-1.0pp	Decrease
Tourism (nights spent), growth	2.6%	-25.7pp	Decrease
Bankruptcy declarations, growth	-22.3%	-32.8pp	Decrease
Digital payments growth, nominal	23.3%	-9.3pp	Increase

Source: own elaboration based on Eurostat and ECB.

Note: for a discussion of the expected effects of these indicators, please see pages 18 and 19 in section II.a.

Croatia's relatively favourable economic conditions compared to the rest of the EU contributed to a decline in the number of bankruptcies in 2023 (-22.3%). The decrease was observed across all sectors, although the magnitude of change varied, with financial, education, human health and social work sectors experiencing relatively larger drops. This trend may have further supported a **decrease in the VAT compliance gap**. In 2024, the situation worsened, with an overall 10.9% increase in bankruptcies, affecting nearly all major sectors except transportation and storage.

Other potential factors, such as the prevalence of digital payments (measured as the aggregate of payments with cards, e-money, direct debits and bank transfers), are generally associated with higher compliance, as digital and automated transactions are easier to monitor. In Croatia, the nominal value of digital payments increased in 2023, but at a slower pace than in 2022. This slower growth may have **limited the downward changes in the VAT compliance gap**.

HR: VAT compliance gap (2019-2024)



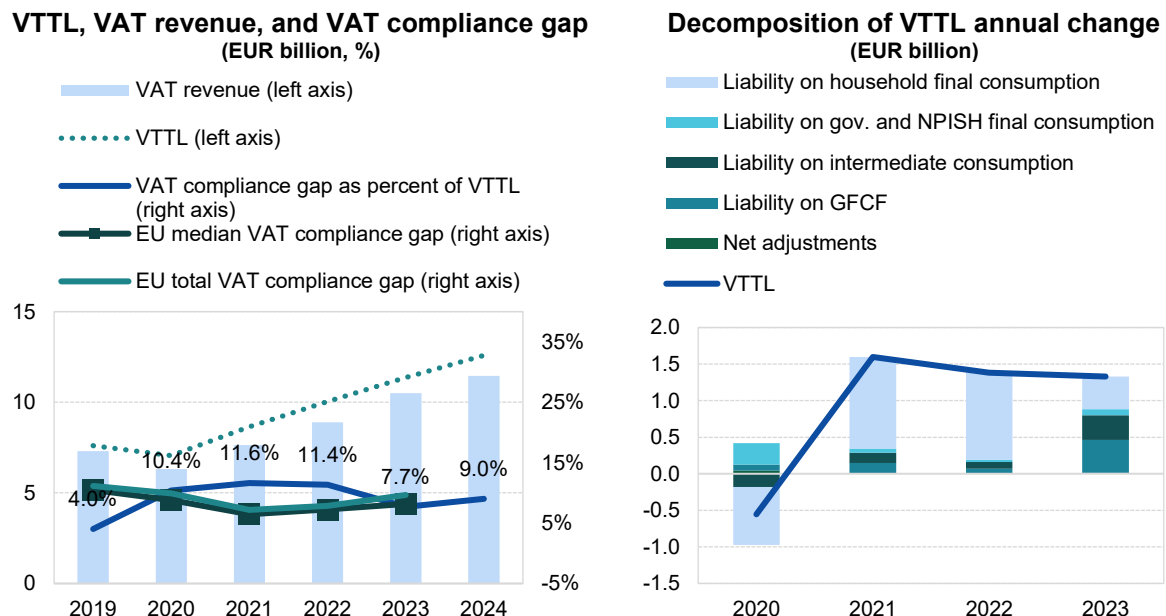
- The VAT compliance gap in Croatia decreased to 7.7% in 2023, down from 11.4% in 2022²⁸.
- Slight VTTL revisions for Croatia reflect updated 2022 SUTs and upward revisions of underlying GFCF figures.

Table 46. HR – VTTL, VAT revenue, and VAT compliance gap

	2019	2020	2021	2022	2023	2024
VTTL (EUR m)	7 611	7 056	8 653	10 036	11 366	12 584
<i>o/w liability on household final consumption</i>	5 411	4 621	5 875	7 066	7 511	X
<i>o/w liability on gov. and NPISH final consumption</i>	192	485	541	572	656	X
<i>o/w liability on intermediate consumption</i>	1 019	838	977	1 068	1 406	X
<i>o/w liability on GFCF</i>	1 004	1 087	1 230	1 291	1 741	X
<i>o/w net adjustments</i>	-16	26	30	39	52	X
VAT revenue (EUR m)	7 305	6 322	7 647	8 895	10 492	11 450
VAT compliance gap (EUR m)	306	734	1 006	1 141	875	1 134
VAT compliance gap (percent of VTTL)	4.0%	10.4%	11.6%	11.4%	7.7%	9.0%
<i>EU average VAT compliance gap (percent of VTTL)</i>	11.1%	9.9%	7.2%	7.9%	9.5%	X
VAT compliance gap change since 2019					3.7pp	

Source: own elaboration. Download underlying data [here](#). Note: fast estimates for 2024 are based on a simplified method. Rounded changes may not equal the change between rounded values.

Figure 68. HR – VTTL, VAT revenue, and VAT compliance gap



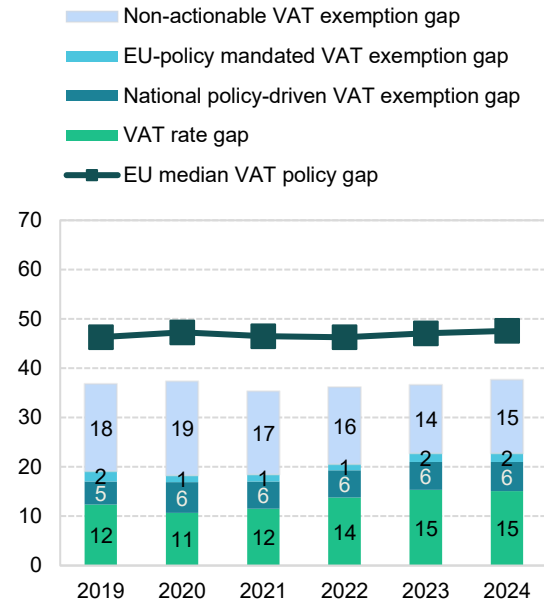
Source: own elaboration. Download underlying data [here](#). Note: fast estimates for 2024 are based on a simplified method.

²⁸ **Green traffic light:** estimates are based on up-to-date data, show no unexplained volatility, and reveal no unexpected patterns suggesting inaccuracies. This applies to both VAT compliance gap and VAT policy gap estimates. The estimates are based on the latest data available at the cut-off date for data collection (15/07/2025). As datasets are regularly revised, future editions will reassess and update the estimates accordingly.

HR: VAT policy gap (2019-2024)

- The VAT policy gap in Croatia remained relatively stable between 2022 and 2023, increasing from 36.2% to 36.6%, eventually expanding to 37.7% in 2024.
- From April 2022, several anti-inflationary measures were introduced: the VAT rate on certain types of food (e.g., baby food, edible oils and fats, meat, fish, vegetables, and eggs) was reduced from 13% to 5%; the rate on the supply of natural gas and district heating was reduced from the full rate to 13%. In October 2022, further cuts were introduced: the VAT rate on the installation of solar panels on private residences and public buildings was set at 0%, and the supply of district heating and fuel wood was taxed at 5%. The latter provision was extended until March 2024. These measures contributed to an increase in the VAT rate gap in 2023 (+1.6pp).

Figure 69. HR – VAT policy gap (%)



Source: own elaboration. Download underlying data [here](#).

Table 47. HR – VAT policy gap decomposition

	2019	2020	2021	2022	2023	2024
Notional ideal VAT revenue (EUR m)	12 109	11 262	13 377	15 717	17 915	20 168
VTTL (EUR m)	7 611	7 056	8 653	10 036	11 366	12 584
VAT policy gap (EUR m)	4 461	4 209	4 729	5 690	6 566	7 602
VAT policy gap (%)	36.8	37.4	35.3	36.2	36.6	37.7
For comparison: EU median policy gap (%)	46.1	47.1	46.1	46.0	46.4	46.8
Actionable VAT policy gap	2 317	2 061	2 471	3 229	4 081	4 585
o/w VAT rate gap (EUR m)	1 497	1 200	1 538	2 167	2 750	3 039
o/w agricultural products, foodstuffs, beverages	394	375	447	683	982	1 074
o/w pharmaceuticals	277	262	290	356	408	466
o/w accommodation and restaurant services	557	191	372	589	749	818
o/w utilities services	116	161	175	249	347	383
o/w transport services	42	52	64	75	88	102
o/w other	110	159	190	214	176	196
o/w National policy-driven VAT exemption gap (EUR m)	570	705	743	871	1 010	1 191
o/w EU policy-mandated VAT exemption gap (EUR m)	251	156	190	192	321	355
Non-actionable VAT policy gap (EUR m)	2 144	2 149	2 258	2 461	2 485	3 016
o/w imputed rents	793	813	843	905	948	1 035
o/w public education	332	456	490	520	563	696
o/w public healthcare	380	645	693	739	720	897
o/w other	639	235	231	297	253	388
C-efficiency (%)	66.6	63.2	63.8	62.4	65.9	64.1

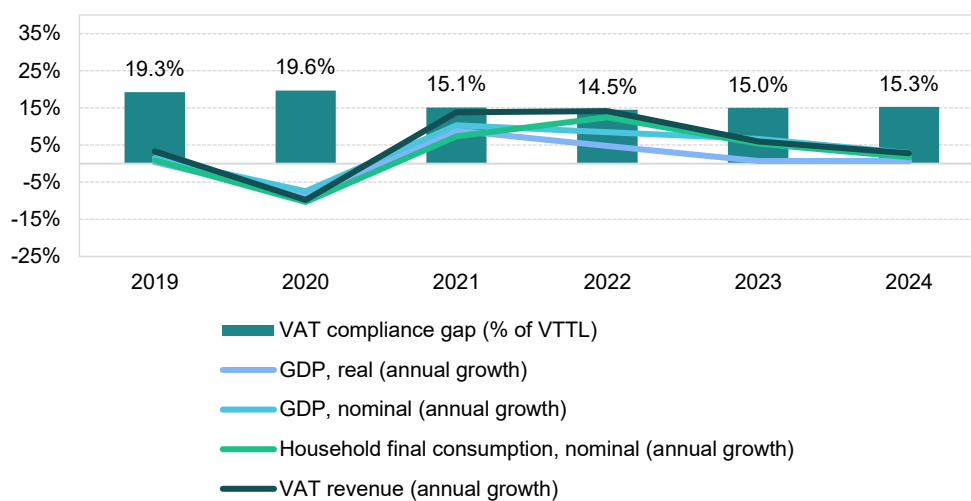
Source: own elaboration. Download underlying data [here](#). Note: fast estimates for 2024 are based on a simplified method.

Italy

VAT revenues in Italy increased in 2023 (6.0%), but at a slower pace than around the post-pandemic peak of 2022 (14.2%). The VAT compliance gap increased to 15.0% in 2023, up from 14.5% in 2022, but remained below estimates for 2019 (19.3%). The fast estimate for 2024 indicates a slight increase to 15.3%. In 2023, Italy extended reduced VAT rates on feminine hygiene products, baby items, face masks, natural gas, pellets and district heating. The VAT registration threshold rose to EUR 85 000, turnover limits for VAT payment periods increased and compliance measures were strengthened, including stricter penalties, enhanced checks and greater accountability for online platforms. Consequently, the VAT revenue was driven by those factors.

An initial recovery after the COVID-19 pandemic was relatively short-lived, with a significant rebound of domestic demand limited to 2021 and 2022. The economic challenges that curbed growth in Italy included high inflation driven by energy prices, continued bottlenecks in value chains, energy price volatility caused by Russian war of aggression against Ukraine and the ensuing sanctions and weak export demand. As a part of Italy economy benefits from international trade in final and intermediate goods, with the ratio of total trade to GDP at 65% in 2023, another limiting factor was slow recovery in Germany and the rest of the EU. The share of services in total value added increased slightly, indicating a higher overall risk of VAT non-compliance due to sectoral composition.

Figure 70. IT – VAT compliance gap, VAT revenues, GDP growth and household final consumption



Sources: own elaboration, Eurostat. Note: fast estimates for 2024 are based on a simplified method.

Real GDP growth in Italy in 2023 stood at 1.0%, a decline of 3.8pp compared to 2022, indicating an economic slowdown that may have potentially driven an **increase in the VAT compliance gap**. While household final consumption growth in real terms was relatively strong in 2022 at 5.3%, it fell to 0.5% in 2023. On the other hand, government consumption real growth slightly increased from 0.8% in 2022 to 1.1% in 2023. Similarly, GFCF grew faster, in real terms, in 2023 (10.1%) than it previously had in 2022 (7.4%).

While measures reported in real values capture the actual change in economic activity by excluding inflation effects, nominal growth rates more directly reflect changes in the VAT base and potential VAT revenues. Accordingly, nominal final consumption expenditure growth slowed from 10.3% in 2022 to 4.7% in 2023. In particular, growth of nominal household final consumption of food and non-alcoholic

beverages fell sharply (-18.5pp), which may have further reinforced **upward pressure on the VAT compliance gap**.

Inflation decreased to 5.9% in 2023 after peaking at 8.7% in 2022; this trend continued throughout 2024. The main drivers of inflation were housing, water, electricity, gas and other fuels, as well as food and transport. Inflationary pressures were present across the main components of household consumption. In the context of the VAT compliance gap, it is worth noting that recreational services, restaurants and accommodation services grew in nominal household final consumption in 2023 (8.7%), although their growth rate was higher in 2022. Similarly, year-over-year change in demand for tourism, as measured by nights spent in tourist accommodations, grew at a significantly lower rate in 2023 (8.5%) compared to 2022 (42.5%). These last two developments can be regarded as factors driving conditions conducive to the **decrease in the VAT compliance gap**.

GFCF, which reflects investment in fixed assets such as infrastructure, machinery and buildings, increased in nominal terms by 11.6% in 2023. In the context of inflation rates, as discussed earlier, this points to a real increase in investment activity.

On the supply side, performance varied across sectors. In 2023, services maintained positive growth in real value-added terms, except for financial and insurance activities. In contrast, real value added declined in sectors such as industry and manufacturing due to supply chain disruptions and high energy costs, while the construction sector grew relatively strongly. Overall, these shifts resulted in a 0.4 percentage point decrease in the share of services. Therefore, the shift in sectoral composition may have contributed to **downward pressure on the VAT compliance gap**, as the risk of non-compliance tends to be higher in the services sector.

Table 48. IT – Factors affecting VAT compliance gap (2022-2023)

Variable	2023	Difference (2023 vs 2022)	Expected impact on 2023 VAT compliance gap
GDP growth, real	1.0%	-3.8pp	Increase
Final consumption expenditure growth, nominal	4.7%	-5.6pp	Increase
Household final consumption of food and non-alcoholic beverages growth, nominal	14.2%	-18.5pp	Increase
Services susceptible to non-compliance growth, nominal	8.7%	-2.0pp	Decrease
Services share in GDP	71.6%	-0.4pp	Decrease
Tourism (nights spent), growth	8.5%	-34.0pp	Decrease
Bankruptcy declarations, growth	7.0%	27.3pp	Increase
Digital payments growth, nominal	0.6%	-30.9pp	Increase

Source: own elaboration based on Eurostat and ECB.

Note: for a discussion of the expected effects of these indicators, please see pages 18 and 19 in section II.a.

The number of bankruptcies in Italy increased by 7.0% in 2023 after declines in 2022. This trend may be attributed to a combination of factors, including persistent cost pressures from high energy prices and wages, as well as weaker consumer demand. This trend may have further reinforced **upward pressure on the VAT compliance gap**.

Other factors also influenced the compliance gap. In Italy, the nominal value of digital payments increased in 2023, although at a much slower pace than in 2022. This factor likely contributed to an **increase in the VAT compliance gap**.

IT: VAT compliance gap (2019-2024)



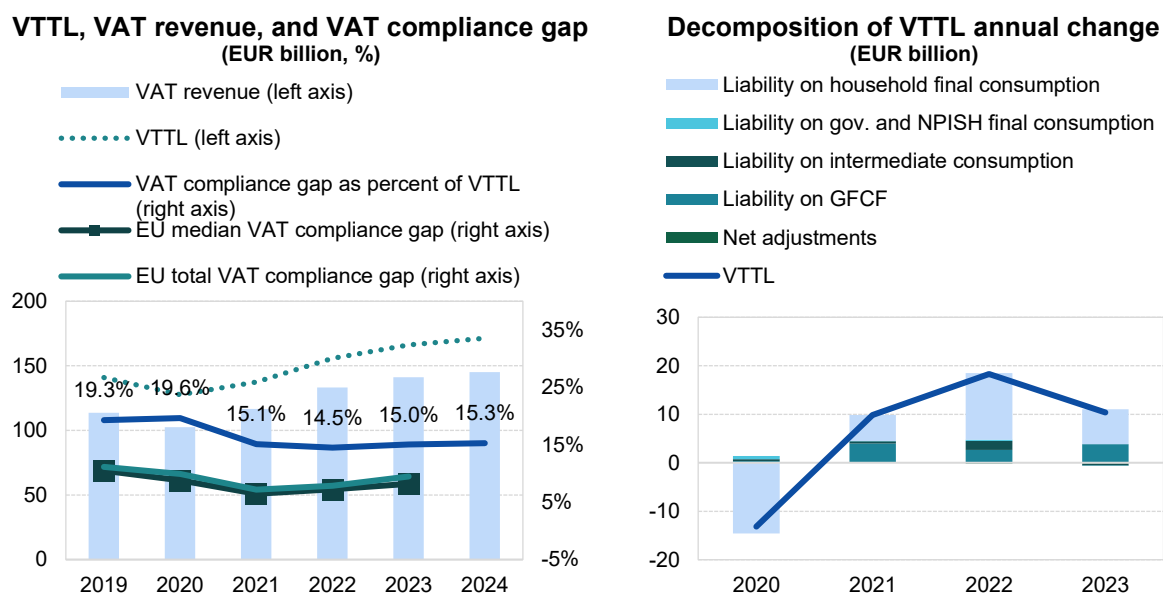
- In Italy, the VAT compliance gap increased to 15.0% in 2023, from 14.5% in 2022²⁹.
- The sudden rise in VAT compliance in 2021-2022 coincided with the *Superbonus 110*, which allowed for a 110% deduction for energy efficiency and other home improvement expenditures.
- During the 2019-2024 period, Italy has expanded its e-invoicing (Sistema di Interscambio). In 2019, it was introduced to B2B and systematically expanded.

Table 49. IT – VTTL, VAT revenue, and VAT compliance gap

	2019	2020	2021	2022	2023	2024
VTTL (EUR m)	140 832	127 664	137 521	155 819	166 211	171 372
<i>o/w liability on household final consumption</i>	<i>103 020</i>	<i>88 464</i>	<i>93 823</i>	<i>107 555</i>	<i>114 785</i>	<i>X</i>
<i>o/w liability on gov. and NPISH final consumption</i>	<i>1 605</i>	<i>2 255</i>	<i>2 344</i>	<i>2 591</i>	<i>2 514</i>	<i>X</i>
<i>o/w liability on intermediate consumption</i>	<i>22 629</i>	<i>23 062</i>	<i>23 513</i>	<i>25 353</i>	<i>24 973</i>	<i>X</i>
<i>o/w liability on GFCF</i>	<i>15 557</i>	<i>15 733</i>	<i>19 685</i>	<i>22 333</i>	<i>26 146</i>	<i>X</i>
<i>o/w net adjustments</i>	<i>-1 979</i>	<i>-1 850</i>	<i>-1 844</i>	<i>-2 012</i>	<i>-2 208</i>	<i>X</i>
VAT revenue (EUR m)	113 687	102 580	116 712	133 232	141 199	145 178
VAT compliance gap (EUR m)	27 145	25 084	20 809	22 587	25 012	26 194
VAT compliance gap (percent of VTTL)	19.3%	19.6%	15.1%	14.5%	15.0%	15.3%
<i>EU average VAT compliance gap (percent of VTTL)</i>	<i>11.1%</i>	<i>9.9%</i>	<i>7.2%</i>	<i>7.9%</i>	<i>9.5%</i>	<i>X</i>
VAT compliance gap change since 2019					-4.2pp	

Source: own elaboration. Download underlying data [here](#). Note: fast estimates for 2024 are based on a simplified method. Rounded changes may not equal the change between rounded values.

Figure 71. IT – VTTL, VAT revenue, and VAT compliance gap



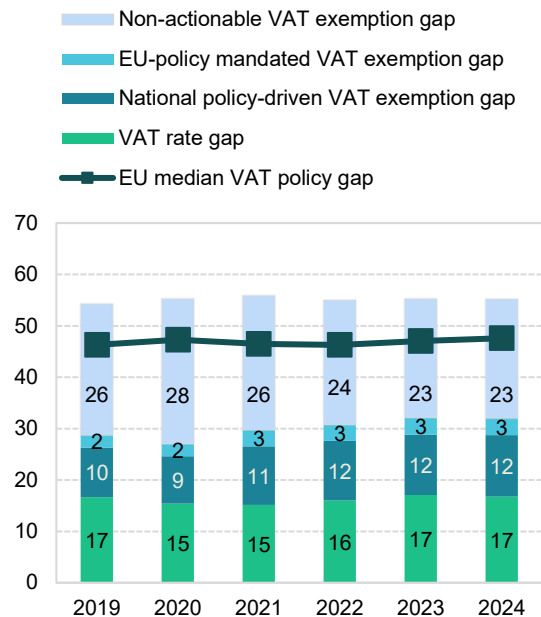
Source: own elaboration. Download underlying data [here](#). Note: fast estimates for 2024 are based on a simplified method.

²⁹ **Green traffic light:** estimates are based on up-to-date data, show no unexplained volatility, and reveal no unexpected patterns suggesting inaccuracies. This applies to both VAT compliance gap and VAT policy gap estimates. The estimates are based on the latest data available at the cut-off date for data collection (15/07/2025). As datasets are regularly revised, future editions will reassess and update the estimates accordingly.

IT: VAT policy gap (2019-2024)

- The VAT policy gap in Italy remained at a similar level over the 2022-2024 period, with estimated values around 55%. However, the structure within the disaggregated elements varied slightly across the analysed period.
- In 2023, Italy reduced VAT on feminine hygiene products, baby products, and face masks; extended the 5% VAT on natural gas until September 2023; and maintained a reduced 10% VAT on pellet sales. Furthermore, the reduced VAT rate of 5% on district heating services was extended for the first quarter of 2023 (January–March). These measures resulted in an increase of the VAT rate gap by 1.1pp in 2023.

Figure 72. IT – VAT policy gap (%)



Source: own elaboration. Download underlying data [here](#).

Table 50. IT – VAT policy gap decomposition

	2019	2020	2021	2022	2023	2024
Notional ideal VAT revenue (EUR m)	313 637	290 532	317 231	352 574	377 653	388 897
VTTL (EUR m)	140 832	127 664	137 521	155 819	166 211	171 372
VAT policy gap (EUR m)	170 264	160 499	177 239	194 075	208 619	214 661
VAT policy gap (%)	54.3	55.2	55.9	55.0	55.2	55.2
For comparison: EU median policy gap (%)	46.1	47.1	46.1	46.0	46.4	46.8
Actionable VAT policy gap	90 110	78 596	94 279	108 587	121 359	124 635
o/w VAT rate gap (EUR m)	52 261	44 729	48 000	56 458	64 493	65 271
o/w agricultural products, foodstuffs, beverages	21 074	21 418	18 327	19 224	20 828	21 204
o/w pharmaceuticals	710	677	456	764	620	1 094
o/w accommodation and restaurant services	12 680	7 556	8 955	11 674	13 482	13 725
o/w utilities services	1 333	1 180	1 469	2 001	2 960	3 015
o/w transport services	2 977	1 476	1 692	2 274	2 813	2 865
o/w other	13 488	12 421	17 101	20 520	23 789	23 368
o/w National policy-driven VAT exemption gap (EUR m)	30 167	26 860	36 294	40 892	44 138	46 410
o/w EU policy-mandated VAT exemption gap (EUR m)	7 681	7 007	9 985	11 238	12 728	12 954
Non-actionable VAT policy gap (EUR m)	80 154	81 902	82 960	85 488	87 261	90 026
o/w imputed rents	34 043	34 441	34 793	35 812	37 297	37 965
o/w public education	12 930	13 122	14 158	14 651	15 032	15 573
o/w public healthcare	17 911	18 259	19 228	20 159	20 454	21 249
o/w other	15 271	16 080	14 781	14 865	14 478	15 238
C-efficiency (%)	39.9	39.0	41.8	43.2	43.5	43.3

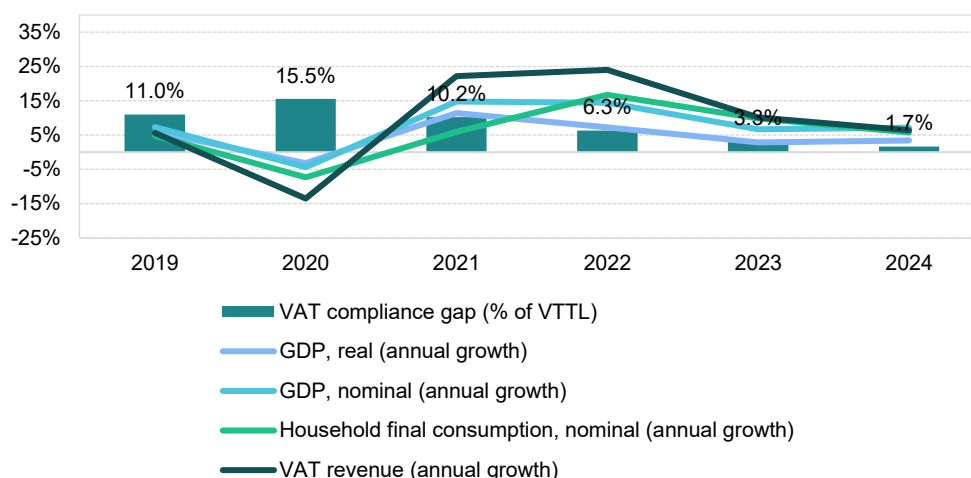
Source: own elaboration. Download underlying data [here](#). Note: fast estimates for 2024 are based on a simplified method.

Cyprus

VAT revenues in Cyprus grew by 10.1% in 2023, at a slower pace than around the post-pandemic peak of 24.0% in 2022. The VAT compliance gap, however, dropped to 3.3% in 2023, down from 6.3% in 2022, and declined significantly compared to 2019 (11.0%) and 2020 (15.5%). Fast estimates for 2024 indicate a further decline to 1.7%. In 2023, Cyprus introduced a new 3% VAT rate for certain goods and services and ended zero-rating on basic products after October. Several temporary 0% VAT measures were also applied to COVID-19 vaccines, diagnostic devices and essential commodities. Additionally, a reduced 5% VAT rate was applied to residential properties up to specific size and value limits, and temporary zero-ratings on basic goods, meat and vegetables were implemented beginning in late 2023 and into 2024. These measures were the main drivers of VAT revenue growth.

Following the COVID-19 pandemic, the economic recovery in Cyprus was relatively short-lived, with domestic demand rebounding mainly in 2021 and 2022. Economic challenges that curtailed growth in 2023 included high inflation driven by energy prices, continued bottlenecks in global value chains, energy price volatility caused by Russia's war of aggression against Ukraine and subsequent sanctions and weak export demand. Given Cyprus's reliance on international trade in final and intermediate goods – with a total trade-to-GDP ratio of 193% in 2023 – slow recovery in the rest of the EU further limited growth.

Figure 73: CY – VAT compliance gap, VAT revenues, GDP growth and household final consumption



Sources: own elaboration, Eurostat.

Real GDP growth in Cyprus reached 2.8% in 2023, marking a decline of 4.4pp compared to 2022. This indicates an economic slowdown, which may have exerted **upward pressure on the VAT compliance gap**. While real household final consumption growth was robust in 2022 at 9.9%, it slowed down to 5.9% in 2023. Conversely, real government consumption growth, which had been relatively high during the pandemic years (peaking at 11% in 2020), decelerated to 1.2% in 2023. Real GFCF grew at a similar pace in 2023 (10.7%) as in 2022 (10.8%). Furthermore, data for nominal trade showed a decrease in exports of goods and services, while import growth slowed down significantly, influenced by geopolitical disruptions in the region.

While measures reported in real values capture the actual change in economic activity by excluding inflation effects, nominal growth rates more directly reflect changes in the VAT base and potential VAT revenues. Accordingly, nominal final consumption expenditure growth slowed from 15.1% in 2022 to

9.8% in 2023. In particular, growth of nominal household final consumption of food and non-alcoholic beverages fell sharply (-18.9pp), which may have further reinforced **upward pressure on the VAT compliance gap**.

Inflation dropped significantly to 3.9% in 2023 from a peak of 8.1% in 2022, and this trend continued throughout 2024. The main drivers of inflation were the costs of housing, water, electricity, gas and other fuels, as well as transport and food. Inflationary tendencies were present in all components of household consumption except communication services. In the context of the VAT compliance gap, it is also worth noting that household final consumption of recreational services, as well as restaurant and accommodation services, increased rapidly in 2022, which likely created a difficult environment for improving VAT compliance during this period. Similarly, year-over-year change in demand for tourism, measured by nights spent in tourist accommodations, grew at a significantly lower rate in 2023 (9.7%) compared to 2022 (46.3%). These last two trends may be seen as forces influencing the **decrease in the VAT compliance gap**.

GFCF, which reflects the level of investment in fixed assets such as infrastructure, machinery and buildings, increased in nominal terms by 13.0% in 2023. Given the slowdown in inflation noted earlier, this points to an increase in real investment activity.

On the supply side of the economy, a slowdown in services was observed, while the industry, manufacturing and construction sectors showed some recovery after several years of contraction in real value-added terms. These trends are particularly relevant for Cyprus, where services account for a significant share of the country's GDP. This resulted in a 0.3pp decline in the share of services. Therefore, the observed changes in sectoral composition appear likely to have supported a **moderation of the VAT compliance gap**, as the risk of non-compliance tends to be higher in the services sector.

Table 51. CY – Factors affecting VAT compliance gap (2022-2023)

Variable	2023	Difference (2023 vs 2022)	Expected impact on 2023 VAT compliance gap
GDP growth, real	2.8%	-4.4pp	Increase
Final consumption expenditure growth, nominal	9.8%	-5.3pp	Increase
Household final consumption of food and non-alcoholic beverages growth, nominal	14.4%	-18.9pp	Increase
Services susceptible to non-compliance growth, nominal	10.6%	-4.3pp	Decrease
Services share in GDP	86.8%	-0.3pp	Decrease
Tourism (nights spent), growth	9.7%	-36.6pp	Decrease
Bankruptcy declarations, growth	-15.8%	20.9pp	Increase
Digital payments growth, nominal	7.6%	-20.7pp	Increase

Source: own elaboration based on Eurostat and ECB.

Note: for a discussion of the expected effects of these indicators, please see pages 18 and 19 in section II.a.

Economic conditions led to a 20.9pp increase in the growth of bankruptcy declarations compared to 2022, although the total number of bankruptcies remained lower than in the previous year. This year-over-year change may have exerted **upward pressure on the VAT compliance gap**.

Other factors also influenced the VAT compliance gap. The nominal value of digital payments increased in 2023 (7.6%), but at a slower pace than in 2022 (-20.7pp). The deceleration may have reinforced **upward pressure on the VAT compliance gap**.

CY: VAT compliance gap (2019-2024)



- In Cyprus, the VAT compliance gap dropped to 3.3% in 2023, down from 6.3% in 2022³⁰.
- VTTL estimates for 2021-2022 were revised upwards due to updated Eurostat national accounts and higher intermediate consumption and GFCF.

Table 52. CY – VTTL, VAT revenue, and VAT compliance gap

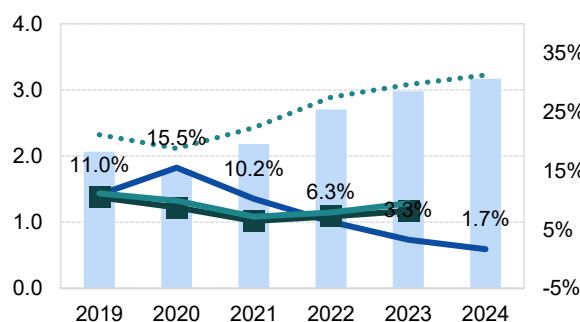
	2019	2020	2021	2022	2023	2024
VTTL (EUR m)	2 320	2 114	2 430	2 888	3 080	3 223
<i>o/w liability on household final consumption</i>	1 341	1 107	1 281	1 513	1 661	X
<i>o/w liability on gov. and NPISH final consumption</i>	29	33	40	44	47	X
<i>o/w liability on intermediate consumption</i>	502	516	585	722	685	X
<i>o/w liability on GFCF</i>	415	425	484	553	632	X
<i>o/w net adjustments</i>	33	33	40	55	55	X
VAT revenue (EUR m)	2 066	1 786	2 182	2 706	2 979	3 170
VAT compliance gap (EUR m)	254	328	248	182	101	54
VAT compliance gap (percent of VTTL)	11.0%	15.5%	10.2%	6.3%	3.3%	1.7%
<i>EU average VAT compliance gap (percent of VTTL)</i>	11.1%	9.9%	7.2%	7.9%	9.5%	X
VAT compliance gap change since 2019					-7.7pp	

Source: own elaboration. Download underlying data [here](#). Note: fast estimates for 2024 are based on a simplified method. Rounded changes may not equal the change between rounded values.

Figure 74. CY – VTTL, VAT revenue, and VAT compliance gap

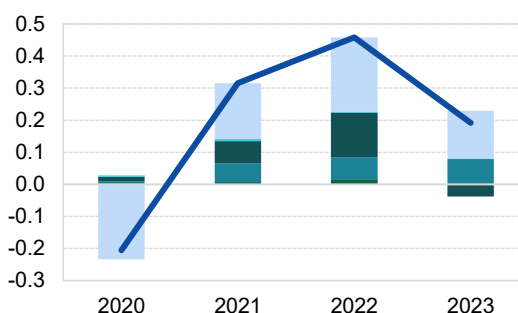
VTTL, VAT revenue, and VAT compliance gap (EUR billion, %)

- VAT revenue (left axis)
- VTTL (left axis)
- VAT compliance gap as percent of VTTL (right axis)
- EU median VAT compliance gap (right axis)
- EU total VAT compliance gap (right axis)



Decomposition of VTTL annual change (EUR billion)

- Liability on household final consumption
- Liability on gov. and NPISH final consumption
- Liability on intermediate consumption
- Liability on GFCF
- Net adjustments
- VTTL



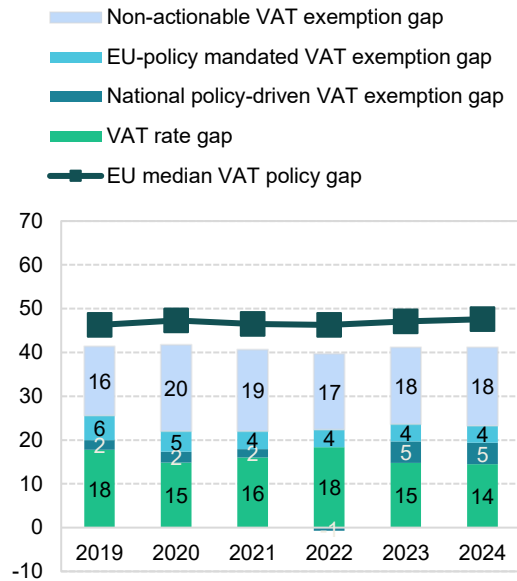
Source: own elaboration. Download underlying data [here](#). Note: fast estimates for 2024 are based on a simplified method.

³⁰ **Green traffic light:** estimates are based on up-to-date data, show no unexplained volatility, and reveal no unexpected patterns suggesting inaccuracies. This applies to both VAT compliance gap and VAT policy gap estimates. The estimates are based on the latest data available at the cut-off date for data collection (15/07/2025). As datasets are regularly revised, future editions will reassess and update the estimates accordingly.

CY: VAT policy gap (2019-2024)

- The VAT policy gap in Cyprus increased from 39.0% in 2022 to 41.2% in 2023 and remained stable in 2024 (41.2%). The largest changes in 2023 were observed in the national policy-driven VAT exemption gap (+5.6pp compared to 2022) and the non-actionable VAT policy gap (-3.6pp).
- In 2023, Cyprus extended zero-rating to selected goods while ending it for basic products. A reduced 5% VAT rate was applied to primary residences within set size and value limits. For certain products and services previously taxed at 5%, VAT rates were reduced to 0% and 3%. Additionally, essential commodities were zero-rated from May 2023 until September 2024.

Figure 75. CY – VAT policy gap (%)



Source: own elaboration. Download underlying data [here](#).

Table 53. CY – VAT policy gap decomposition

	2019	2020	2021	2022	2023	2024
Notional ideal VAT revenue (EUR m)	3 913	3 584	4 040	4 659	5 161	5 405
VTTL (EUR m)	2 320	2 114	2 430	2 888	3 080	3 223
VAT policy gap (EUR m)	1 619	1 498	1 642	1 815	2 125	2 226
VAT policy gap (%)	41.4	41.8	40.6	39.0	41.2	41.2
For comparison: EU median policy gap (%)	46.1	47.1	46.1	46.0	46.4	46.8
Actionable VAT policy gap	1 001	788	890	1 008	1 220	1 258
o/w VAT rate gap (EUR m)	695	532	647	857	764	783
o/w agricultural products, foodstuffs, beverages	232	241	256	300	272	264
o/w pharmaceuticals	39	47	47	56	60	64
o/w accommodation and restaurant services	179	81	174	274	264	277
o/w utilities services	12	12	23	48	23	24
o/w transport services	91	21	27	72	84	88
o/w other	142	131	120	107	62	66
o/w National policy-driven VAT exemption gap (EUR m)	88	89	77	-35	252	263
o/w EU policy-mandated VAT exemption gap (EUR m)	219	167	166	186	204	213
Non-actionable VAT policy gap (EUR m)	618	709	752	807	904	968
o/w imputed rents	292	301	334	367	420	440
o/w public education	96	101	98	104	115	125
o/w public healthcare	75	126	149	155	175	188
o/w other	155	182	170	181	194	215
C-efficiency (%)	60.4	58.0	63.2	67.8	67.7	68.6

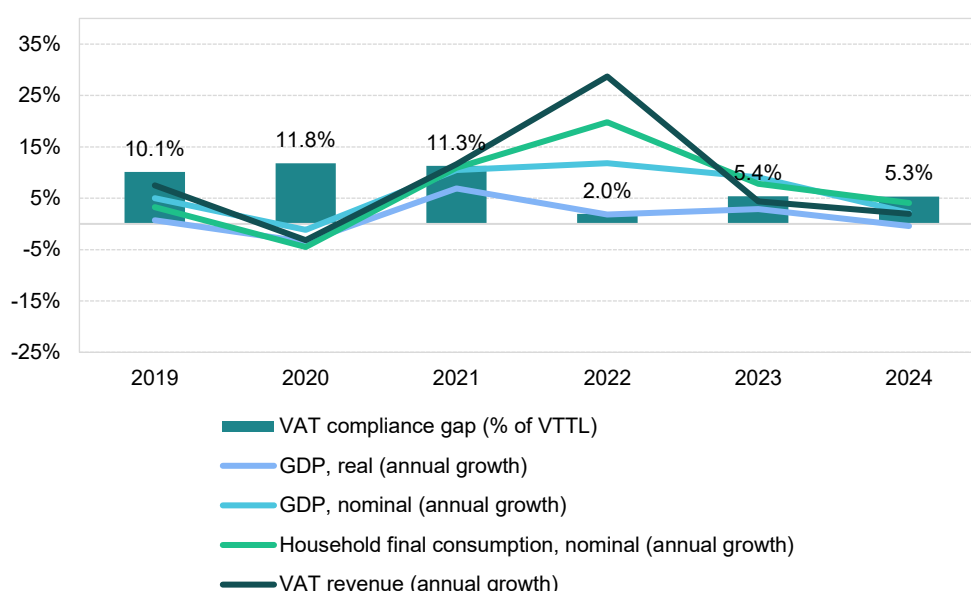
Source: own elaboration. Download underlying data [here](#). Note: fast estimates for 2024 are based on a simplified method.

Latvia

VAT revenues in Latvia grew by 4.4% in 2023, but at a slower pace than the post-pandemic peak of 28.7% in 2022. The VAT compliance gap increased to 5.4% in 2023, up from 2.0% in 2022, though it remained significantly lower than in 2019 (10.1%). A fast estimate for 2024 suggests a compliance gap of 5.3%. In 2023, Latvia ended the 0% VAT rate on COVID-19 vaccines and related medical devices, extended the 5% rate for certain fresh produce until the end of the year and eased rules for input tax adjustments on bad debts by raising threshold and improving conditions. These measures contributed to VAT revenue performance.

Latvia's post-pandemic recovery was relatively short-lived, with a significant rebound in domestic demand limited to 2021 and 2022. Economic challenges curbing growth included high inflation driven by energy prices, ongoing bottlenecks in value chains, energy price volatility resulting from Russia's war of aggression against Ukraine and related sanctions and weak export demand. As Latvia relies heavily on international trade of final and intermediate goods, with total trade-to-GDP ratio at 137% in 2023, slow recovery in Germany and the rest of the EU further constrained growth.

Figure 76. LV – VAT compliance gap, VAT revenues, GDP growth and household final consumption



Sources: own elaboration, Eurostat. Note: fast estimates for 2024 are based on a simplified method.

Real GDP growth in Latvia in 2023 stood at 2.9%, an increase of 1.0pp compared to 2022. This indicates an economic recovery likely contributing to **downward pressure on the VAT compliance gap**. While real household final consumption growth was relatively strong in 2021 at 8.0%, it slowed down significantly in 2022 (5.3%) and declined further in 2023 (-1.1%). In contrast, real government consumption growth increased from 2.4% in 2022 to 7.0% in 2023. After a year of decline in real GFCF, investment rebounded in 2023, growing by 9.9% in real terms.

While measures reported in real values capture the actual change in economic activity by excluding inflation effects, nominal growth rates more directly reflect changes in the VAT base and potential VAT revenues. Accordingly, nominal final consumption expenditure growth slowed from 16.5% in 2022 to 7.0% in 2023. In particular, growth of nominal household final consumption of food and non-alcoholic

beverages fell sharply (-47.6pp), which may have likely contributed to an **increase in the VAT compliance gap**.

Inflation fell to 9.1% in 2023 from a peak of 17.2% in 2022; this downward trend continued throughout 2024. The main drivers of inflation were housing, water, electricity, gas and other fuels, as well as food, transport and services such as restaurants and hotels. Inflationary pressures were present across most components of household consumption. In the context of the VAT compliance gap, it is worth noting that recreational services, restaurants and accommodation were among the fastest-growing categories in nominal household final consumption. However, their growth mainly reflected 2022 trends. Similarly, year-over-year change in demand for tourism, as measured by nights spent in tourist accommodations, grew at a much lower rate in 2023 (12.6%) compared to 2022 (63.2%), when tourism demand rebounded after the COVID-19 pandemic. These last two developments can be regarded as factors that drive conditions conducive to the **decrease in the VAT compliance gap**.

GFCF, reflecting investment in infrastructure, machinery and buildings, increased by 16.9% in nominal terms in 2023. In the context of lower inflation rates, this points to a real increase in investment activity.

On the supply side, performance varied across sectors. Services growth declined less in real value-added terms than other sectors. After a strong rebound in 2021 and 2022, value added in industry and manufacturing fell due to supply chain disruptions, high energy costs, weak external demand and a tight labour market. Conversely, construction experienced significant real value-added growth in 2023 (20.9%), reflecting increased investment activity. Overall, the share of services in the economy rose by 0.4pp. Therefore, the changes in the sectoral structure of the Latvian economy in 2023 appear likely to have contributed to an **increase in the VAT compliance gap**, as the risk of non-compliance tends to be higher in the services sector.

Table 54. LV – Factors affecting VAT compliance gap (2022-2023)

Variable	2023	Difference (2023 vs 2022)	Expected impact on 2023 VAT compliance gap
GDP growth, real	2.9%	1.0pp	Decrease
Final consumption expenditure growth, nominal	7.0%	-9.5pp	Increase
Household final consumption of food and non-alcoholic beverages growth, nominal	17.5%	-47.6pp	Increase
Services susceptible to non-compliance growth, nominal	9.5%	-10.6pp	Decrease
Services share in GDP	70.9%	0.4pp	Increase
Tourism (nights spent), growth	12.6%	-50.6pp	Decrease
Bankruptcy declarations, growth	-20.2%	-40.7pp	Decrease
Digital payments growth, nominal	121.8%	108.1pp	Decrease

Source: own elaboration based on Eurostat and ECB.

Note: for a discussion of the expected effects of these indicators, please see pages 18 and 19 in section II.a.

Latvia's comparatively favourable economic conditions relative to the rest of the EU contributed to a decline in the number of bankruptcies in 2023 (-20.2%), following the rise in 2022. The change may have exerted **downward pressure on the VAT compliance gap**.

Other factors also influenced the compliance gap. The nominal value of digital payments increased significantly in 2023, much faster than in 2022. The development may have exerted **downward pressure on the VAT compliance gap**.

LV: VAT compliance gap (2019-2024)



- In Latvia, the VAT compliance gap increased to 5.4% in 2023, up from 2.0% in 2022³¹.
- Latvian authorities provided adjustments to VAT revenue, improving accrual-based recording and VTTL estimates.
- Household final consumption updates contributed to downward revisions, most notably in 2022.

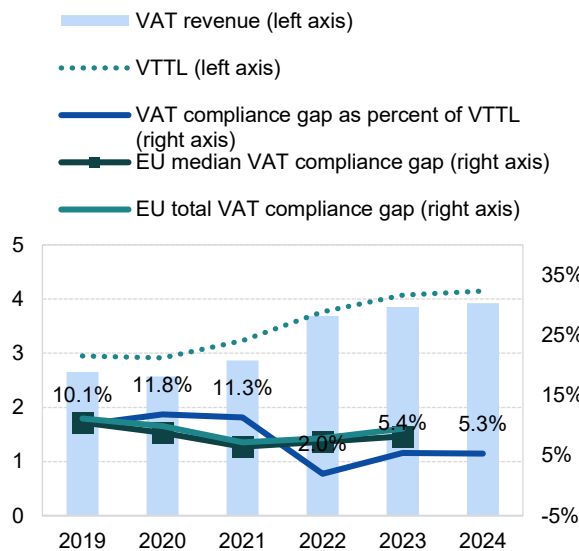
Table 55. LV – VTTL, VAT revenue, and VAT compliance gap

	2019	2020	2021	2022	2023	2024
VTTL (EUR m)	2 951	2 913	3 232	3 762	4 072	4 148
<i>o/w liability on household final consumption</i>	2 140	2 051	2 291	2 756	2 916	X
<i>o/w liability on gov. and NPISH final consumption</i>	69	73	96	99	109	X
<i>o/w liability on intermediate consumption</i>	498	496	537	626	657	X
<i>o/w liability on GFCF</i>	299	344	365	339	454	X
<i>o/w net adjustments</i>	-56	-51	-57	-58	-64	X
VAT revenue (EUR m)	2 653	2 569	2 866	3 689	3 851	3 926
VAT compliance gap (EUR m)	298	345	366	74	220	222
VAT compliance gap (percent of VTTL)	10.1%	11.8%	11.3%	2.0%	5.4%	5.3%
<i>EU average VAT compliance gap (percent of VTTL)</i>	11.1%	9.9%	7.2%	7.9%	9.5%	X
VAT compliance gap change since 2019					-4.7pp	

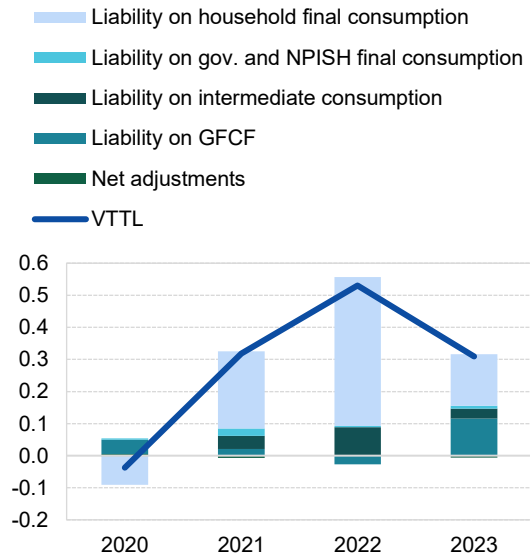
Source: own elaboration. Download underlying data [here](#). Note: fast estimates for 2024 are based on a simplified method. Rounded changes may not equal the change between rounded values.

Figure 77. LV – VTTL, VAT revenue, and VAT compliance gap

VTTL, VAT revenue, and VAT compliance gap (EUR billion, %)



Decomposition of VTTL annual change (EUR billion)



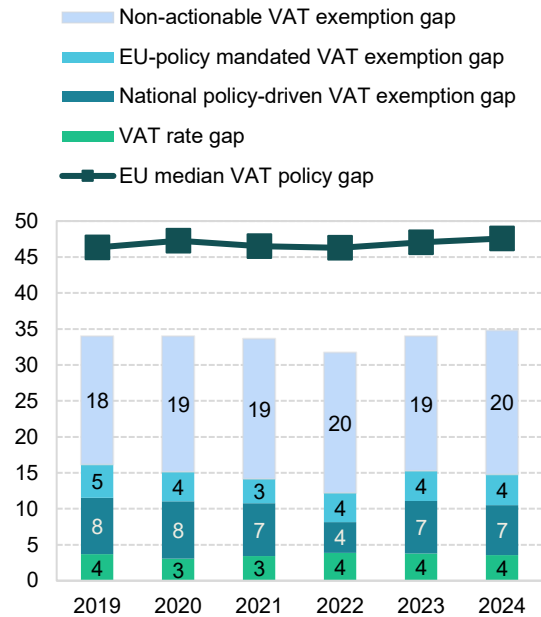
Source: own elaboration. Download underlying data [here](#). Note: fast estimates for 2024 are based on a simplified method.

³¹ **Green traffic light:** estimates are based on up-to-date data, show no unexplained volatility, and reveal no unexpected patterns suggesting inaccuracies. This applies to both VAT compliance gap and VAT policy gap estimates. The estimates are based on the latest data available at the cut-off date for data collection (15/07/2025). As datasets are regularly revised, future editions will reassess and update the estimates accordingly.

LV: VAT policy gap (2019-2024)

- The VAT policy gap in Latvia increased over the 2022-2024 period, rising from 31.7% to 34.0% in 2023 and further to 34.8% in 2024. This trend was primarily driven by the national policy-driven VAT exemption gap in 2023 and by the non-actionable VAT policy gap in 2024.
- The 5% VAT rate was extended to selected fresh fruits, berries and vegetables until the end of December 2023.
- In 2024, VAT on fresh fruits, berries, and vegetables increased from 5% to 12%. Additionally, fees for sports competitions and training in registered associations or foundations were made VAT-exempt.

Figure 78. LV – VAT policy gap (%)



Source: own elaboration. Download underlying data [here](#).

Table 56. LV – VAT policy gap decomposition

	2019	2020	2021	2022	2023	2024
Notional ideal VAT revenue (EUR m)	4 592	4 526	4 995	5 651	6 327	6 602
VTTL (EUR m)	2 951	2 913	3 232	3 762	4 072	2 930
VAT policy gap (EUR m)	1 561	1 538	1 680	1 793	2 150	2 299
VAT policy gap (%)	34.0	34.0	33.6	31.7	34.0	34.8
For comparison: EU median policy gap (%)	46.1	47.1	46.1	46.0	46.4	46.8
Actionable VAT policy gap	742	685	708	689	965	976
o/w VAT rate gap (EUR m)	169	139	171	219	239	236
o/w agricultural products, foodstuffs, beverages	36	41	51	52	52	54
o/w pharmaceuticals	29	27	37	41	45	48
o/w accommodation and restaurant services	21	15	15	17	24	24
o/w utilities services	17	16	21	31	24	25
o/w transport services	77	44	52	72	98	103
o/w other	-12	-5	-5	5	-4	-18
o/w National policy-driven VAT exemption gap (EUR m)	361	361	366	242	461	458
o/w EU policy-mandated VAT exemption gap (EUR m)	212	185	171	229	266	283
Non-actionable VAT policy gap (EUR m)	819	853	973	1 103	1 185	1 323
o/w imputed rents	256	269	286	318	321	334
o/w public education	213	216	217	150	146	179
o/w public healthcare	119	136	193	143	138	171
o/w other	231	233	277	492	580	639
C-efficiency (%)	62.1	61.6	61.5	68.8	65.5	63.3

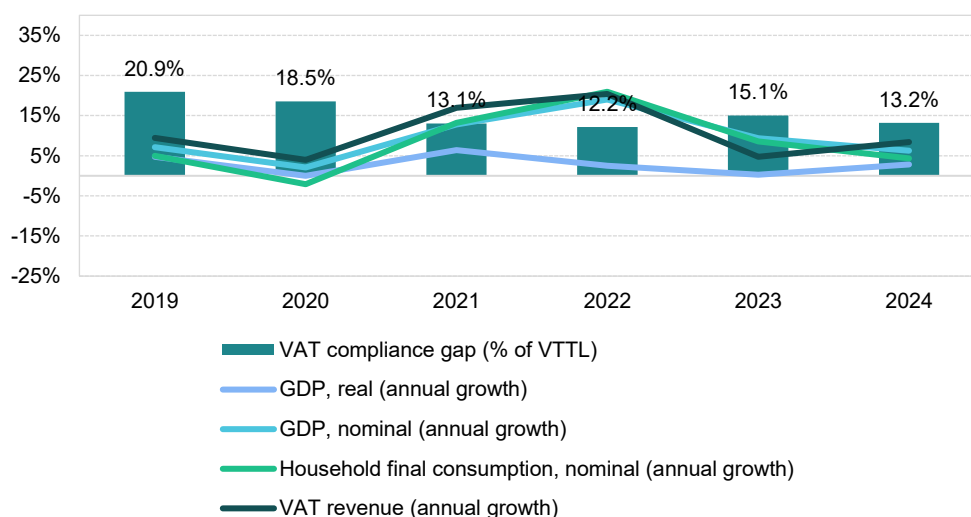
Source: own elaboration. Download underlying data [here](#). Note: fast estimates for 2024 are based on a simplified method.

Lithuania

VAT revenues in Lithuania grew by 4.7% in 2023, slowing down in comparison with the post-pandemic peak of 20.4% in 2022. The VAT compliance gap increased to 15.1% in 2023, up from 12.2% in 2022, but remained below the estimated 2019 level of 20.9%. A fast estimate for 2024 indicates a gap of 13.2%. In 2023, Lithuania maintained reduced VAT rates on e-books, accommodation, catering and cultural and sports events, applied a 5% VAT rate to special medical food and heating and ended the 0% VAT rate for COVID-19 vaccines. The i.EKA system was launched, with phased reporting obligations for cash receipts, becoming mandatory for all businesses in 2025. These factors contributed to VAT revenue growth.

The post-COVID-19 recovery was relatively short-lived, with a significant rebound of domestic demand limited to 2021 and 2022. Economic challenges in 2023 that curbed growth included high inflation driven by energy prices, continued bottlenecks in value chains, energy price volatility caused by Russia's war of aggression against Ukraine and the ensuing sanctions and weak export demand. Given Lithuania's reliance on international trade of final and intermediate goods, with a trade-to-GDP ratio of 149% in 2023, slow recovery in Germany and the rest of the EU also acted as a limiting factor.

Figure 79. LT – VAT compliance gap, VAT revenues, GDP growth and household final consumption



Sources: own elaboration, Eurostat.

Real GDP growth in Lithuania in 2023 stood at 0.3%, a decline of 2.2pp compared to 2022, which signifies an economic slowdown contributing to an **increase in the VAT compliance gap**. While household final consumption growth in real terms was relatively strong in 2021 at 8.1%, it slowed down to 2.0% in 2022 and fell to -0.4% in 2023. Similarly, real government consumption growth declined from 1.2% in 2022 to -0.2% in 2023. In contrast, real GFCF grew at a faster pace in 2023 (9.3%) compared to 2022 (5.2%).

While measures reported in real values capture the actual change in economic activity by excluding inflation effects, nominal growth rates more directly reflect changes in the VAT base and potential VAT revenues. Accordingly, nominal final consumption expenditure growth slowed from 19.5% in 2022 to 9.6% in 2023. In particular, growth of nominal household final consumption of food and non-alcoholic beverages fell sharply (-26.8pp), which may have further contributed to an **increase in the VAT compliance gap**.

Inflation decreased to 8.7% in 2023 from a peak of 18.9% in 2022; this downward trend continued into 2024. The main drivers of inflation were costs related to housing, water, electricity, gas and other fuels, as well as food, transport and restaurant and hotel services. Inflationary pressures impacted the majority of household consumption components. In the context of the VAT compliance gap, it is worth noting that recreational services, restaurant and accommodation services grew by 7.8% in nominal household final consumption in 2023, although this was lower than the growth observed in 2022. Similarly, overall demand for tourism, as measured by nights spent in tourist accommodations, grew at a significantly lower rate in 2023 (5.0%) compared to 2022 (45.7%). These last two developments can be regarded as factors driving conditions conducive to the **decrease in the VAT compliance gap**.

GFCF, which reflects investment in fixed assets such as infrastructure, machinery and buildings, increased in nominal terms by 15.3% in 2023. In the context of lower inflation rates discussed earlier, this indicates a significant rise in real investment activity.

On the supply side, the situation varied across sectors. After strong rebounds in 2021 and 2022, real value added in industry and manufacturing fell due to supply chain disruptions, high energy costs, low external demand and a tight labour market. Meanwhile, services continued to grow in real terms, although at a slower pace than in 2022, with particularly strong growth in the IT sector. These developments resulted in a 2.7pp increase in the share of services. Therefore, sectoral shifts appear likely to have contributed to an **increase in the VAT compliance gap**, as the risk of non-compliance tends to be higher in the services sector.

Table 57. LT – Factors affecting VAT compliance gap (2022-2023)

Variable	2023	Difference (2023 vs 2022)	Expected impact on 2023 VAT compliance gap
GDP growth, real	0.3%	-2.2pp	Increase
Final consumption expenditure growth, nominal	9.6%	-9.9pp	Increase
Household final consumption of food and non-alcoholic beverages growth, nominal	16.0%	-26.8pp	Increase
Services susceptible to non-compliance growth, nominal	7.8%	-9.9pp	Decrease
Services share in GDP	70.1%	2.7pp	Increase
Tourism (nights spent), growth	5.0%	-40.7pp	Decrease
Bankruptcy declarations, growth	-0.7%	-41.6pp	Decrease
Digital payments growth, nominal	49.7%	22.1pp	Decrease

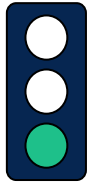
Source: own elaboration based on Eurostat and ECB.

Note: for a discussion of the expected effects of these indicators, please see pages 18 and 19 in section II.a.

Despite the challenging economic conditions in Lithuania, the overall number of bankruptcies showed little change, declining by 0.7%. However, this trend was not uniform across sectors, with the industry sector experiencing a 15% increase in bankruptcies. Overall, this shift may have exerted **downward pressure on the VAT compliance gap**.

Other factors also influenced the VAT compliance gap. The prevalence of digital payments (measured as the aggregate of payments with cards, e-money, direct debits and bank transfers) is generally associated with higher compliance, as digital and automated transactions are easier to monitor. The nominal value of digital payments increased significantly in 2023. This factor may have placed **downward pressure on the VAT compliance gap**.

LT: VAT compliance gap (2019-2024)



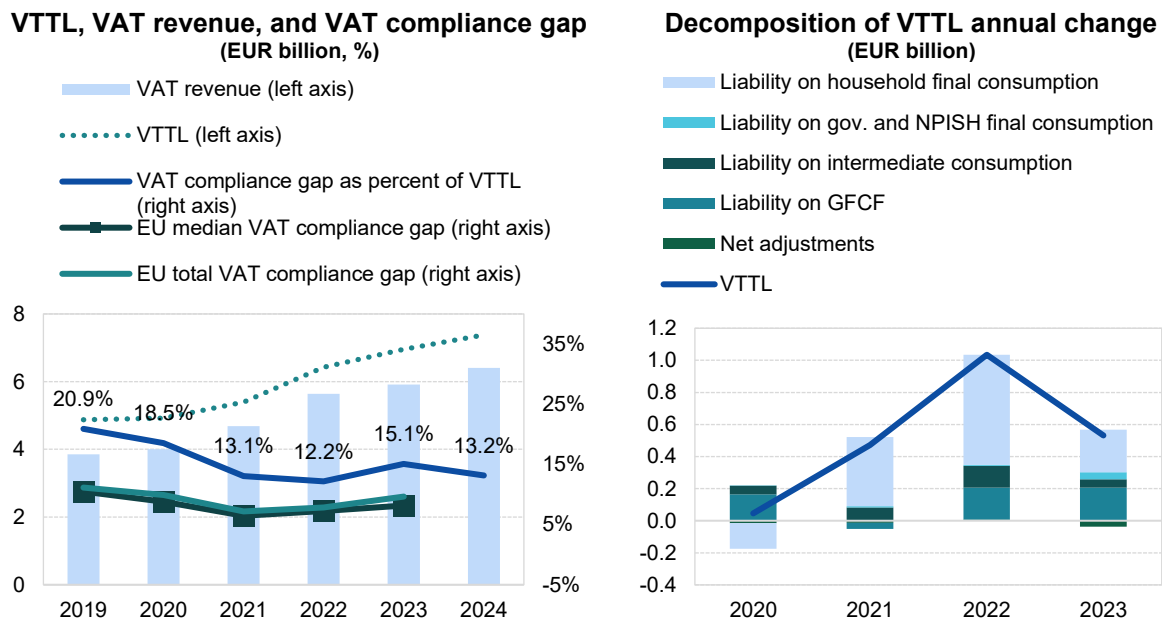
- In Lithuania, the VAT compliance gap increased to 15.1% in 2023, from 12.2% in 2022³².
- Downward revisions to the VAT compliance gap for the 2020-2022 period reflect updated household consumption data.

Table 58. LT – VTTL, VAT revenue, and VAT compliance gap

	2019	2020	2021	2022	2023	2024
VTTL (EUR m)	4 875	4 920	5 392	6 427	6 958	7 380
<i>o/w liability on household final consumption</i>	3 994	3 835	4 266	4 952	5 217	X
<i>o/w liability on gov. and NPISH final consumption</i>	52	52	61	67	112	X
<i>o/w liability on intermediate consumption</i>	501	556	638	775	827	X
<i>o/w liability on GFCF</i>	646	810	773	974	1 179	X
<i>o/w net adjustments</i>	-318	-333	-346	-340	-376	X
VAT revenue (EUR m)	3 856	4 009	4 688	5 644	5 911	6 408
VAT compliance gap (EUR m)	1 019	912	704	783	1 048	971
VAT compliance gap (percent of VTTL)	20.9%	18.5%	13.1%	12.2%	15.1%	13.2%
<i>EU average VAT compliance gap (percent of VTTL)</i>	11.1%	9.9%	7.2%	7.9%	9.5%	X
VAT compliance gap change since 2019					-5.8pp	

Source: own elaboration. Download underlying data [here](#). Note: fast estimates for 2024 are based on a simplified method. Rounded changes may not equal the change between rounded values.

Figure 80. LT – VTTL, VAT revenue, and VAT compliance gap



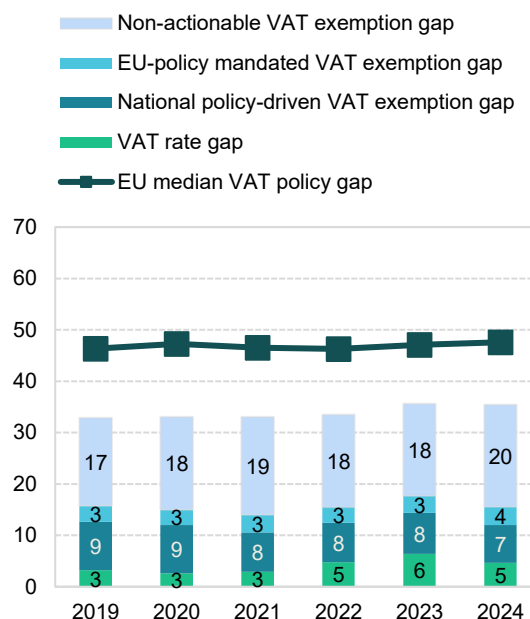
Source: own elaboration. Download underlying data [here](#). Note: fast estimates for 2024 are based on a simplified method.

³² **Green traffic light:** estimates are based on up-to-date data, show no unexplained volatility, and reveal no unexpected patterns suggesting inaccuracies. This applies to both VAT compliance gap and VAT policy gap estimates. The estimates are based on the latest data available at the cut-off date for data collection (15/07/2025). As datasets are regularly revised, future editions will reassess and update the estimates accordingly.

LT: VAT policy gap (2019-2024)

- The VAT policy gap in Lithuania increased between 2022 and 2023, from 33.5% to 35.6%, and declined slightly in 2024 to 35.4%.
- Temporary measures introduced in the aftermath of the COVID-19 pandemic in 2021 were kept in place until the end of 2022. These included a reduced 9% rate on catering services, cultural services, sports clubs, sports events and other public events. In 2023, Lithuania applied a reduced 9% VAT rate on e-books, accommodation, catering, performance services and sports events, a 5% rate for special medical food and a reduced 5% VAT for heating. Overall, these changes contributed to a 1.6pp increase in the VAT rate gap.

Figure 81. LT – VAT policy gap (%)



Source: own elaboration. Download underlying data [here](#).

Table 59. LT – VAT policy gap decomposition

	2019	2020	2021	2022	2023	2024
Notional ideal VAT revenue (EUR m)	7 760	7 872	8 610	10 215	11 424	12 091
VTTL (EUR m)	4 875	4 920	5 392	6 427	6 958	7 380
VAT policy gap (EUR m)	2 552	2 600	2 849	3 422	4 068	4 285
VAT policy gap (%)	32.9	33.0	33.1	33.5	35.6	35.4
For comparison: EU median policy gap (%)	46.1	47.1	46.1	46.0	46.4	46.8
Actionable VAT policy gap	1 222	1 178	1 205	1 580	2 020	1 880
o/w VAT rate gap (EUR m)	250	203	250	489	727	561
o/w agricultural products, foodstuffs, beverages	17	16	27	30	32	34
o/w pharmaceuticals	92	82	84	105	117	123
o/w accommodation and restaurant services	27	20	26	202	234	44
o/w utilities services	60	51	57	64	62	64
o/w transport services	76	30	41	62	94	98
o/w other	-22	4	16	26	188	198
o/w National policy-driven VAT exemption gap (EUR m)	732	743	660	781	911	888
o/w EU policy-mandated VAT exemption gap (EUR m)	240	232	295	310	381	431
Non-actionable VAT policy gap (EUR m)	1 330	1 422	1 644	1 842	2 048	2 405
o/w imputed rents	356	411	449	535	611	634
o/w public education	341	374	408	446	505	600
o/w public healthcare	302	364	417	475	547	651
o/w other	332	274	371	386	385	520
C-efficiency (%)	55.2	58.0	61.1	62.4	58.9	59.9

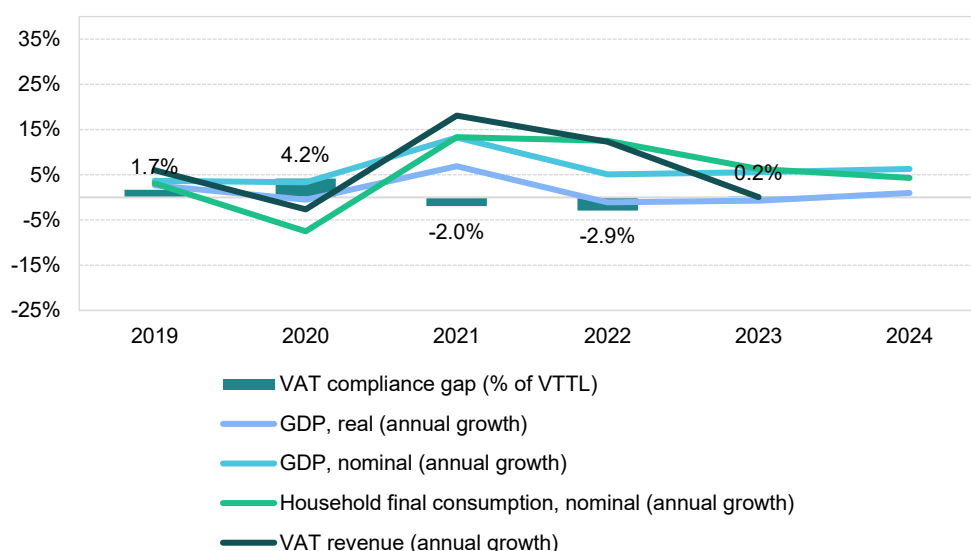
Source: own elaboration. Download underlying data [here](#). Note: fast estimates for 2024 are based on a simplified method.

Luxembourg

VAT revenues in Luxembourg reported only a marginal growth of 0.1% in 2023, following a strong post-pandemic rebound to 12.3% in 2022. The VAT compliance gap was estimated at 0.2% in 2023. In the same year, Luxembourg reduced all VAT rates by 1pp, setting the standard rate at 16% and the reduced rates at 13% and 7%. In addition, e-invoicing became mandatory for small and new taxpayers in B2G transactions. These factors largely shaped VAT revenue developments in 2023.

The post-COVID recovery proved relatively short-lived, with a significant rebound in domestic demand limited to 2021 and 2022. Economic challenges weighing on growth in 2023 included high inflation driven by energy prices, persistent supply-chain bottlenecks, energy price volatility linked to Russia's war of aggression against Ukraine and related sanctions and weak external demand. Given Luxembourg's strong reliance on international trade of final and intermediate goods – with the ratio of total trade to GDP reaching 403% in 2023 – slow recovery in Germany and other EU Member States added further pressures on the economy.

Figure 82. LU – VAT compliance gap, VAT revenues, GDP growth and household final consumption



Sources: own elaboration, Eurostat.

Real GDP growth in Luxembourg stood at 0.1% in 2023, an improvement of 1.2pp compared to 2022. This indicates an economic recovery likely exerting **downward pressure on the VAT compliance gap**. Household final consumption in real terms, which had surged by 10.9% in 2021, slowed down to 6.3% in 2022 and further to 3.6% in 2023. Government consumption also weakened, with real growth declining from 4.0% in 2022 to 1.6% in 2023. After falling to -13.9% in 2022, gross fixed capital formation (GFCF) continued to sharply decline, down to -5.1% in real terms in 2023.

While measures reported in real values capture the actual change in economic activity by excluding inflation effects, nominal growth rates more directly reflect changes in the VAT base and potential VAT revenues. Accordingly, nominal final consumption expenditure growth slowed from 11.5% in 2022 to 8.8% in 2023. In particular, growth of nominal household final consumption of food and non-alcoholic beverages fell (-3.0pp), which may have likely contributed to an **increase in the VAT compliance gap**.

Inflation fell to 2.9% in 2023, down from its 2022 peak of 8.2%, and the downward trend continued into 2024. The main drivers of inflation were energy, transport, food and housing costs, while communications was the only major consumption category not to experience upward price pressure. Within the context of the VAT compliance gap, it is notable that nominal household final consumption of recreational, restaurant and accommodation services grew by 11.0% in 2023, though registering a more moderate increase than in 2022. Similarly, demand for tourism, as measured by nights spent in tourist accommodations, grew by only 5.8% in 2023, compared to 48.3% in 2022. These last two developments can be regarded as factors that drive conditions conducive to a **decrease in the VAT compliance gap**.

In nominal terms, GFCF increased by 3.6% in 2023. However, given the inflation rate, this implies a contraction of investment activity in real terms, especially in fixed assets such as infrastructure, machinery and buildings.

The economy also experienced a slowdown on the supply side. However, impact varied across sectors, with some relatively high increases in real value-added growth (manufacturing, industry or information and communication services) and some negative trends (construction or financial and insurance activities). Overall, these transitions did not alter the share of services in GDP. As a result, the sectoral structure of the Luxembourg economy appears to have had a **neutral** effect on VAT compliance gap developments.

Table 60. LU – Factors affecting VAT compliance gap (2022-2023)

Variable	2023	Difference (2023 vs 2022)	Expected impact on 2023 VAT compliance gap
GDP growth, real	0.1%	1.2pp	Decrease
Final consumption expenditure growth, nominal	8.8%	-2.7pp	Increase
Household final consumption of food and non-alcoholic beverages growth, nominal	6.5%	-3.0pp	Increase
Services susceptible to non-compliance growth, nominal	11.0%	-13.0pp	Decrease
Services share in GDP	89.6%	0.0pp	Neutral
Tourism (nights spent), growth	5.8%	-42.5pp	Decrease
Bankruptcy declarations, growth	-0.9%	9.2pp	Increase
Digital payments growth, nominal	-7.8%	18.4pp	Decrease

Source: own elaboration based on Eurostat.

Note: for a discussion of the expected effects of these indicators, please see pages 18 and 19 in section II.a.

The number of bankruptcies fell by 0.9% in 2023, registering a 9.2pp increase compared to 2022. Trends varied across sectors, with construction experiencing an increase in bankruptcies. However, the overall shift indicates a potential **decrease in the VAT compliance gap**.

Other factors also influenced the compliance gap. The prevalence of digital payments (measured as the aggregate of payments with cards, e-money, direct debits and bank transfers) is generally associated with higher compliance, as digital and automated transactions are easier to monitor. In 2023, the nominal value of digital payments in Luxembourg declined by 7.8%, a much slower pace than in 2022. This development may have exerted **downward pressure on the VAT compliance gap**.



LU: VAT compliance gap (2019-2024)

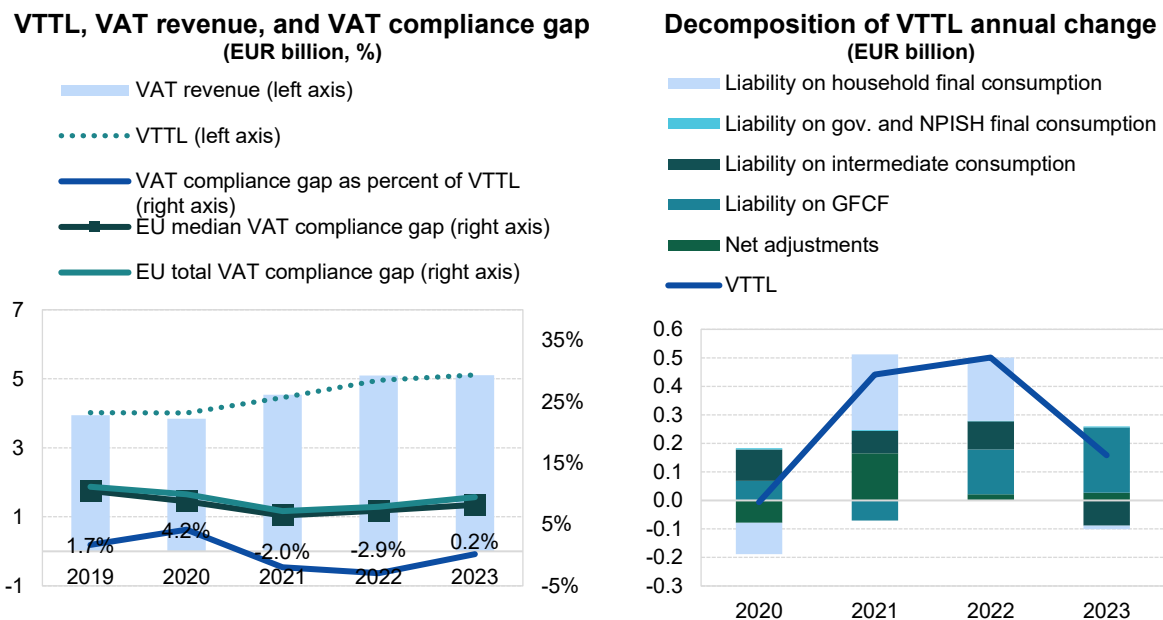
- In Luxembourg, the VAT compliance gap in 2023 was estimated at 0.2%, whereas the estimates for 2021 and 2022 are negative³³.
- Luxembourg's VTTL estimates were substantially revised downward due to corrections in revenue figures, particularly VAT on excise products (fuel, tobacco), with revisions reaching up to 8.5% of revenue.

Table 61. LU – VTTL, VAT revenue, and VAT compliance gap

	2019	2020	2021	2022	2023
VTTL (EUR m)	4 016	4 010	4 452	4 953	5 112
<i>o/w liability on household final consumption</i>	1 535	1 425	1 690	1 911	1 899
<i>o/w liability on gov. and NPISH final consumption</i>	38	41	45	47	50
<i>o/w liability on intermediate consumption</i>	1 471	1 581	1 659	1 759	1 670
<i>o/w liability on GFCF</i>	613	682	611	768	997
<i>o/w net adjustments</i>	359	281	446	468	495
VAT revenue (EUR m)	3 948	3 843	4 539	5 098	5 102
VAT compliance gap (EUR m)	68	167	-87	-146	9
VAT compliance gap (percent of VTTL)	1.7%	4.2%	-2.0%	-2.9%	0.2%
<i>EU average VAT compliance gap (percent of VTTL)</i>	11.1%	9.9%	7.2%	7.9%	9.5%
VAT compliance gap change since 2019					-1.5pp

Source: own elaboration. Download underlying data [here](#). Note: Rounded changes may not equal the change between rounded values.

Figure 83. LU – VTTL, VAT revenue, and VAT compliance gap



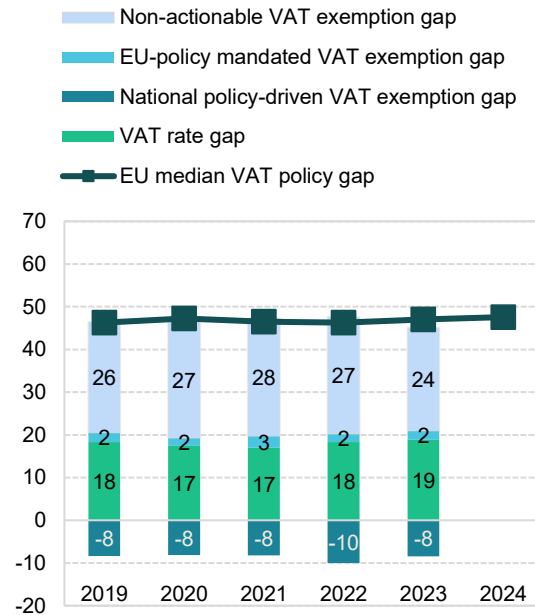
Source: own elaboration. Download underlying data [here](#).

³³ 🚫: estimates of the VAT compliance gap fall outside plausible range as explained in Box 2 (i.e., negative and near zero for several consecutive years). The estimates are based on the latest data available at the cut-off date for data collection (15/07/2025). As datasets are regularly revised, future editions will reassess and update the estimates accordingly.

LU: VAT policy gap (2019-2024)

- The VAT policy gap in Luxembourg decreased from 37.6% in 2022 to 36.7% in 2023.
- C-efficiency in Luxembourg was the highest in the EU indicating that a large fraction of the VTTL is not linked to domestic household final consumption.
- The negative national policy-driven VAT exemption gap is attributable to financial services. This reflects both the relatively high value of these services and the fact that they are used mainly as intermediate inputs or exported. In the counterfactual scenario in which these services were taxed, the financial services sector would be able to deduct input VAT, which would reduce overall VAT revenue.

Figure 84. LU – VAT policy gap (%)



Source: own elaboration. Download underlying data [here](#).

Table 62. LU – VAT policy gap decomposition

	2019	2020	2021	2022	2023
Notional ideal VAT revenue (EUR m)	5 904	6 032	6 573	7 184	7 291
VTTL (EUR m)	4 016	4 010	4 452	4 953	5 112
VAT policy gap (EUR m)	2 246	2 301	2 567	2 699	2 673
VAT policy gap (%)	38.0	38.2	39.1	37.6	36.7
<i>For comparison: EU median policy gap (%)</i>	46.1	47.1	46.1	46.0	46.4
Actionable VAT policy gap	719	672	758	739	916
o/w VAT rate gap (EUR m)	1 081	1 053	1 113	1 314	1 372
<i>o/w agricultural products, foodstuffs, beverages</i>	299	347	365	380	376
<i>o/w pharmaceuticals</i>	99	111	114	117	110
<i>o/w accommodation and restaurant services</i>	262	207	225	281	291
<i>o/w utilities services</i>	107	116	126	136	127
<i>o/w transport services</i>	154	166	181	205	202
<i>o/w other</i>	160	107	103	194	264
o/w National policy-driven VAT exemption gap (EUR m)	-495	-493	-539	-719	-615
o/w EU policy-mandated VAT exemption gap (EUR m)	133	112	183	144	159
Non-actionable VAT policy gap (EUR m)	1 527	1 629	1 809	1 959	1 758
<i>o/w imputed rents</i>	457	471	484	495	477
<i>o/w public education</i>	362	395	418	453	458
<i>o/w public healthcare</i>	224	247	267	291	297
<i>o/w other</i>	484	517	640	720	526
C-efficiency (%)	78.3	76.1	82.0	84.0	83.0

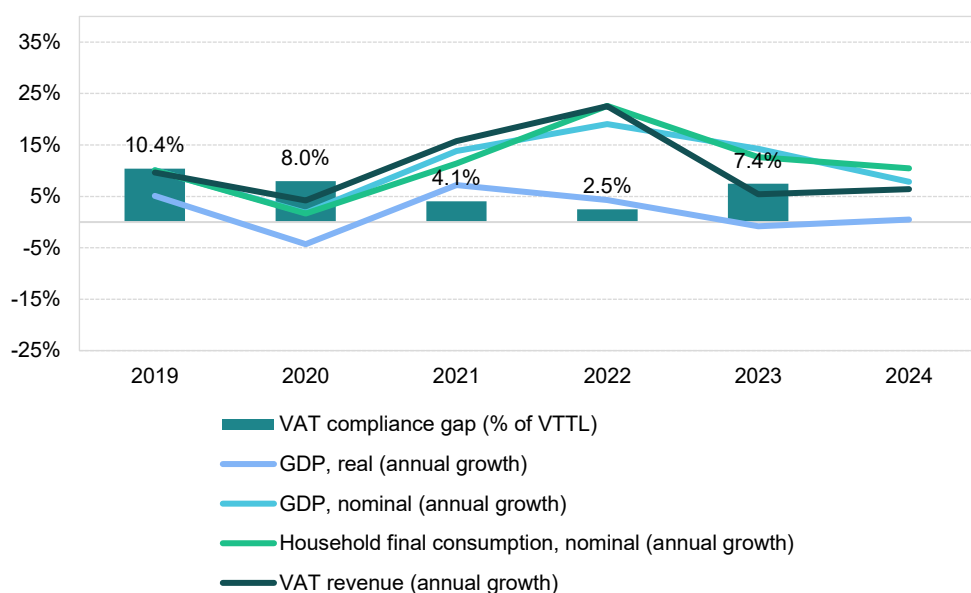
Source: own elaboration. Download underlying data [here](#).

Hungary

VAT revenues in Hungary grew by 5.4% in 2023, but at a slower pace than the 2022 post-pandemic peak of 22.5%. The VAT compliance gap increased to 7.4% in 2023, up from 2.5% in 2022, but remained below the estimated 2019 level of 10.4%. In 2023, Hungary extended the 5% VAT rate on new residential properties, prolonged the reverse charge mechanism for certain products until the end of 2026, allowed VAT recovery on certain bad debts before maturity and introduced VAT system simplifications, including rules for business cessation and succession. These factors drove VAT revenue growth.

The recovery after the COVID-19 pandemic was relatively short-lived, with a significant rebound in domestic demand limited to 2021 and 2022. The economic challenges in Hungary that constrained growth included high inflation driven by energy prices, continued bottlenecks in value chains, energy price volatility caused by the Russia's war of aggression against Ukraine and the ensuing sanctions and weak export demand. As Hungary relies heavily on international trade in both final and intermediate goods, with total trade accounting for 157% of GDP in 2023, another limiting factor was slow recovery in Germany and the rest of the EU.

Figure 85. HU – VAT compliance gap, VAT revenues, GDP growth and household final consumption



Sources: own elaboration, Eurostat.

Real GDP growth in Hungary in 2023 stood at -0.8%, a significant contraction of 5.1pp compared to 2022, which indicates an economic slowdown likely contributing to an **increase in the VAT compliance gap**. While household final consumption growth in real terms was relatively strong in 2022 at 6.5%, it declined sharply in 2023, falling to -1.4%. Government consumption real growth remained stable, changing slightly from 3.2% in 2022 to 3.3% in 2023. In contrast, real GFCF declined by 7.7% in 2023 after a modest 0.7% growth in 2022.

While measures reported in real values capture the actual change in economic activity by excluding inflation effects, nominal growth rates more directly reflect changes in the VAT base and potential VAT revenues. Accordingly, nominal final consumption expenditure growth slowed from 21.4% in 2022 to 13.1% in 2023. In particular, growth of nominal household final consumption of food and non-alcoholic

beverages fell sharply (-37.0pp), which may have further contributed to an **increase in the VAT compliance gap**.

Inflation increased to 17.0% in 2023 from 15.3% in 2022. The main drivers were costs of housing, water, electricity, gas and other fuels, as well as food, transport, furnishings and recreation services. Inflationary pressures were present across all components of household consumption. In the context of the VAT compliance gap, it is noteworthy that recreational services, restaurants and accommodation were among the fastest-growing categories in nominal household final consumption, though their growth primarily reflected 2022 trends. Similarly, year-over-year change in demand for tourism, measured by nights spent in tourist accommodations, grew at a much slower rate in 2023 (3.5%) compared to 2022 (69.5%). These last two developments can be regarded as factors driving conditions conducive to the **decrease in the VAT compliance gap**.

GFCF, reflecting investment in fixed assets such as infrastructure, machinery and buildings, increased by 5.0% in nominal terms in 2023. In the context of high inflation, this indicates a significant contraction in real investment activity.

On the supply side, a general slowdown was observed. Services growth declined in real value-added terms, though less than other sectors. After strong rebounds in 2021 and 2022, industry value added fell due to supply chain disruptions, high energy costs, low external demand and a tight labour market. However, agriculture, forestry, and fishing experienced unusually high growth. These developments led to a 0.6 percentage point decline in the share of services. Therefore, the changes in the sectoral structure of the Hungarian economy may have exerted some **downward pressure on the VAT compliance gap**, as the risk of non-compliance tends to be higher in the services sector.

Table 63. HU – Factors affecting VAT compliance gap (2022-2023)

Variable	2023	Difference (2023 vs 2022)	Expected impact on 2023 VAT compliance gap
GDP growth, real	-0.8%	-5.1pp	Increase
Final consumption expenditure growth, nominal	13.1%	-8.3pp	Increase
Household final consumption of food and non-alcoholic beverages growth, nominal	21.7%	-37.0pp	Increase
Services susceptible to non-compliance growth, nominal	16.4%	-2.4pp	Decrease
Services share in GDP	67.2%	-0.6pp	Decrease
Tourism (nights spent), growth	3.5%	-66.0pp	Decrease
Bankruptcy declarations, growth	155%	70.2pp	Increase
Digital payments growth, nominal	24.1%	-4.8pp	Increase

Source: own elaboration based on Eurostat and ECB.

Note: for a discussion of the expected effects of these indicators, please see pages 18 and 19 in section II.a.

Challenging economic conditions in Hungary led to a 155% rise in the number of bankruptcies in 2023. The impact varied across sectors, with the IT sector experiencing relatively higher increases than others. Overall, this suggests a potential **widening of the VAT compliance gap**.

Other factors also influenced the VAT compliance gap. In Hungary, the nominal value of digital payments increased in 2023 at a slightly slower pace than in 2022. This development may have likely contributed to an **increase in the VAT compliance gap**.

HU: VAT compliance gap (2019-2023)



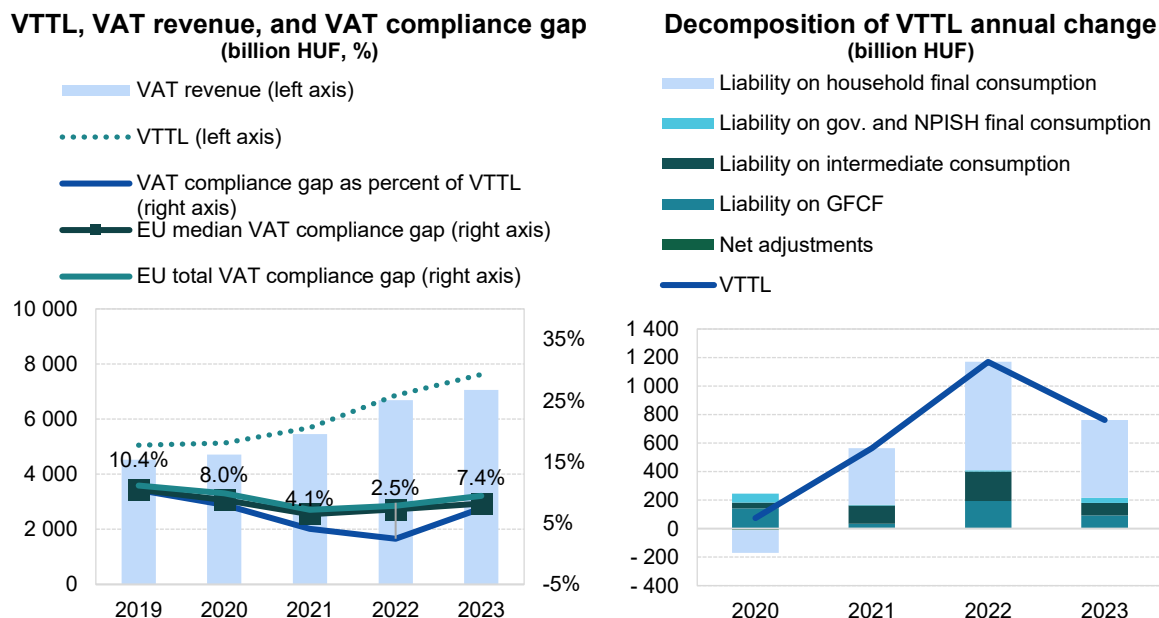
- Hungary's VAT compliance gap increased to 7.4% in 2023, up from 2.5% in 2022³⁴.
- In spite of this, it registered a decrease over the longer 2019-2023 period.
- The uncertainty surrounding the fast estimates of VAT compliance was high; therefore, the figures are not presented.

Table 64. HU – VTTL, VAT revenue, and VAT compliance gap

	2019	2020	2021	2022	2023
VTTL (HUF billions)	5 053	5 127	5 691	6 860	7 621
<i>o/w liability on household final consumption</i>	3 304	3 143	3 541	4 302	4 847
<i>o/w liability on gov. and NPISH final consumption</i>	198	259	264	273	308
<i>o/w liability on intermediate consumption</i>	713	754	882	1 088	1 174
<i>o/w liability on GFCF</i>	817	959	987	1 182	1 273
<i>o/w net adjustments</i>	22	12	18	16	19
VAT revenue (HUF billions)	4 527	4 717	5 460	6 691	7 054
VAT compliance gap (HUF billions)	526	409	231	169	567
VAT compliance gap (percent of VTTL)	10.4%	8.0%	4.1%	2.5%	7.4%
<i>EU average VAT compliance gap (percent of VTTL)</i>	11.1%	9.9%	7.2%	7.9%	9.5%
VAT compliance gap change since 2019					-3.0pp

Source: own elaboration. Download underlying data [here](#). Note: Rounded changes may not equal the change between rounded values.

Figure 86. HU – VTTL, VAT revenue, and VAT compliance gap



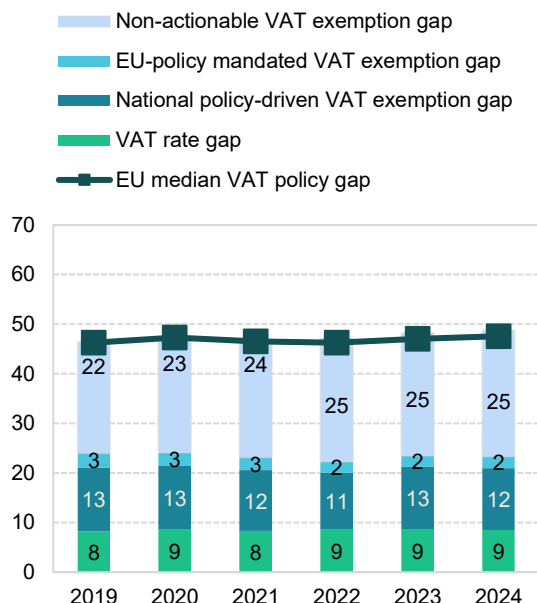
Source: own elaboration. Download underlying data [here](#).

³⁴ **Green traffic light:** estimates are based on up-to-date data, show no unexplained volatility and reveal no unexpected patterns suggesting inaccuracies. This applies to both VAT compliance gap and VAT policy gap estimates. The estimates are based on the latest data available at the cut-off date for data collection (15/07/2025). As datasets are regularly revised, future editions will reassess and update the estimates accordingly.

HU: VAT policy gap (2019-2024)

- The VAT policy gap in Hungary steadily increased over 2022, 2023 and 2024, from 47.2% to 48.2% to 48.8%, respectively. The observed growth was driven by a national policy-driven VAT exemption gap. However, since Hungary did not introduce far-reaching changes in the application of rates and exemptions, the overall VAT policy gap and its structure remained relatively stable.
- In 2023, Hungary extended the reduced 5% VAT rate on new residential properties.

Figure 87. HU – VAT policy gap (%)



Source: own elaboration. Download underlying data [here](#).

Table 65. HU – VAT policy gap decomposition

	2019	2020	2021	2022	2023	2024
Notional ideal VAT revenue (HUF billions)	9 457	9 709	10 745	13 031	14 753	16 068
VTTL (HUF billions)	5 053	5 126	5 691	6 860	7 621	8 208
VAT policy gap (HUF billions)	4 397	4 575	5 044	6 149	7 113	7 839
VAT policy gap (%)	46.5	47.1	46.9	47.2	48.2	48.8
For comparison: EU median policy gap (%)	46.1	47.1	46.1	46.0	46.4	46.8
Actionable VAT policy gap	2 273	2 343	2 487	2 906	3 466	3 749
o/w VAT rate gap (HUF billions)	780	834	896	1 118	1 262	1 368
o/w agricultural products, foodstuffs, beverages	255	290	309	363	406	447
o/w pharmaceuticals	139	147	149	156	173	189
o/w accommodation and restaurant services	204	224	226	317	389	428
o/w utilities services	14	15	15	15	15	17
o/w transport services	39	25	27	59	68	75
o/w other	130	134	169	208	211	212
o/w National policy-driven VAT exemption gap (HUF billions)	1 217	1 246	1 315	1 498	1 871	2 003
o/w EU policy-mandated VAT exemption gap (HUF billions)	276	263	276	291	333	378
Non-actionable VAT policy gap (HUF billions)	2 124	2 231	2 557	3 242	3 647	4 090
o/w imputed rents	852	906	1 047	1 351	1 505	1 660
o/w public education	380	379	356	392	456	521
o/w public healthcare	307	368	469	542	625	689
o/w other	586	578	685	957	1 061	1 219
C-efficiency (%)	56.0	57.7	60.1	60.5	55.6	53.5

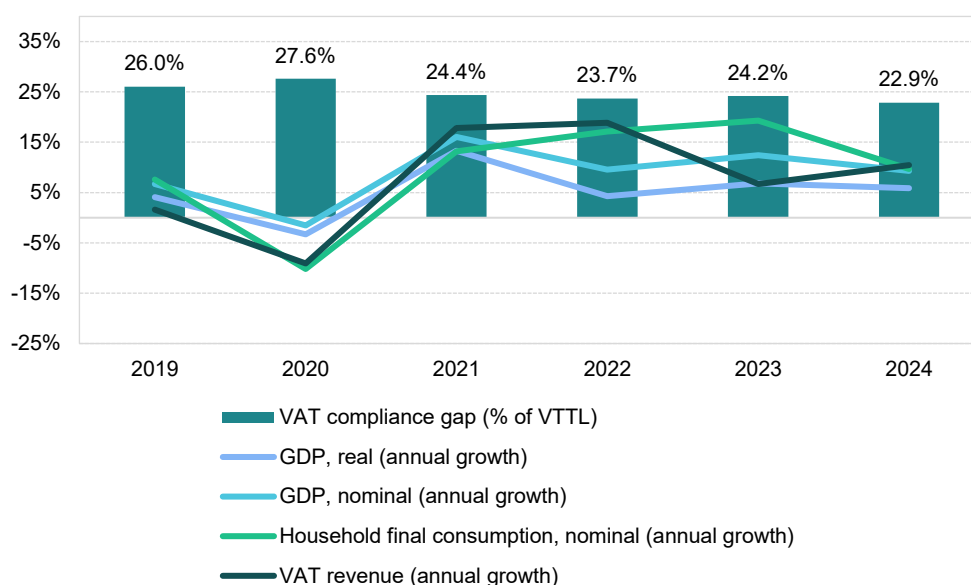
Source: own elaboration. Download underlying data [here](#). Note: fast estimates for 2024 are based on a simplified method.

Malta

VAT revenues in Malta grew by 4.4% in 2023, but at a slower pace than the 2022 post-pandemic peak of 28.7%. The VAT compliance gap increased to 24.2% in 2023, up from 23.7% in 2022, but remained below the 2019 level of 26.0%. The fast estimate for 2024 is 22.9%. In 2023, Malta extended the reduced tax rate on property transfers until June, increased penalties for late recapitulative statements, introduced new information retention and reporting requirements to combat VAT fraud and mandated online VAT return submission for registered taxpayers. These measures contributed to the observed VAT revenue.

Malta experienced a recovery following the COVID-19 pandemic, with a rebound in domestic demand during the 2021-2023 period. Nevertheless, economic challenges – including high inflation driven by energy prices, continued value chain bottlenecks, energy price volatility caused by Russia's war of aggression against Ukraine and the ensuing sanctions and weak export demand – posed pressures on growth. As Malta heavily relies on international trade of final and intermediate goods, with a total trade-to-GDP ratio of 221% in 2023, slow recovery in the rest of the EU was a further limiting factor.

Figure 88. MT – VAT compliance gap, VAT revenues, GDP growth and household final consumption



Sources: own elaboration, Eurostat. Note: fast estimates for 2024 are based on a simplified method.

Real GDP growth in Malta in 2023 stood at 10.6%, an increase of 8.1 percentage points compared to 2022, reflecting a strong economic expansion that may have put **downward pressure on the VAT compliance gap**. Household final consumption also accelerated, with real growth rising from 9.7% in 2022 to 13.3% in 2023. Furthermore, government consumption real growth reversed from -0.2% in 2022 to 3.8% in 2023. In contrast, GFCF declined in real terms by -15.9% in 2023 after growing 14.4% in 2022.

While measures reported in real values capture the actual change in economic activity by excluding inflation effects, nominal growth rates more directly reflect changes in the VAT base and potential VAT revenues. Accordingly, nominal final consumption expenditure growth slowed from 11.8% in 2022 to 16.8% in 2023. However, nominal household final consumption of food and non-alcoholic beverages fell sharply (-42.9pp), which may have likely contributed to an **increase in the VAT compliance gap**.

Inflation dropped to 5.6% in 2023 from 6.1% in 2022; this trend continued throughout 2024. The main drivers of inflation were costs of housing, water, electricity, gas and other fuels, as well as food, recreation and culture services. Inflationary tendencies were generally present across the main components of household consumption. In the context of the VAT compliance gap, it is worth noting that recreational services, restaurant and accommodation services were among the fastest-growing categories in nominal household final consumption values. However, their growth was most pronounced in 2022, likely creating a difficult environment for increases in VAT compliance in this period. Similarly, year-over-year demand for tourism, as measured by nights spent in tourist accommodations, grew at a significantly lower rate in 2023 (20.5%) compared to 2022 (78%). These last two developments can be regarded as factors driving conditions conducive to the **decrease in the VAT compliance gap**.

GFCF, which reflects investment in fixed assets such as infrastructure, machinery and buildings, decreased in nominal terms by -10.9% in 2023, highlighting a decline in real investment activity.

On the supply side, the situation varied across sectors. Services growth in real value-added terms outpaced that of the rest of the economy in 2023, with real estate activities showing particularly strong increases. The industry and manufacturing sectors also recorded positive real value-added growth. Overall, this resulted in a 1.1pp increase in the share of services. Therefore, the changes in Malta's sectoral structure appear likely to have **increased the VAT compliance gap**, as the risk of non-compliance tends to be higher in the services sector.

Table 66. MT – Factors affecting VAT compliance gap (2022-2023)

Variable	2023	Difference (2023 vs 2022)	Expected impact on 2023 VAT compliance gap
GDP growth, real	10.6%	8.1pp	Decrease
Final consumption expenditure growth, nominal	16.8%	5.0pp	Decrease
Household final consumption of food and non-alcoholic beverages growth, nominal	23.7%	-42.9pp	Increase
Services susceptible to non-compliance growth, nominal	15.5%	-3.0pp	Decrease
Services share in GDP	88.0%	1.1pp	Increase
Tourism (nights spent), growth	20.5%	-57.5pp	Decrease
Bankruptcy declarations, growth	73.4%	85.2pp	Increase
Digital payments growth, nominal	5.7%	1.6pp	Decrease

Source: own elaboration based on Eurostat and ECB.

Note: for a discussion of the expected effects of these indicators, please see pages 18 and 19 in section II.a.

Malta's comparatively favourable economic conditions relative to the rest of the EU failed to effect a decline in the number of bankruptcies in 2023, which rose by 73.4%. While this may partly reflect a low base effect, the year-over-year change suggests a potential **widening of the VAT compliance gap**.

Other factors also influenced the VAT compliance gap. In Malta, the nominal value of digital payments increased in 2023 by 5.7% at the slightly faster pace than in 2022. This sustained expansion in digital payments may have exerted some **downward pressure on the VAT compliance gap**.

MT: VAT compliance gap (2019-2024)



- The VAT compliance gap in Malta slightly increased from 23.7% in 2022 to 24.2% in 2023, following a significant decline since 2020³⁵.
- The gap is expected to decrease in 2024 down to 22.9% of the VTTL.

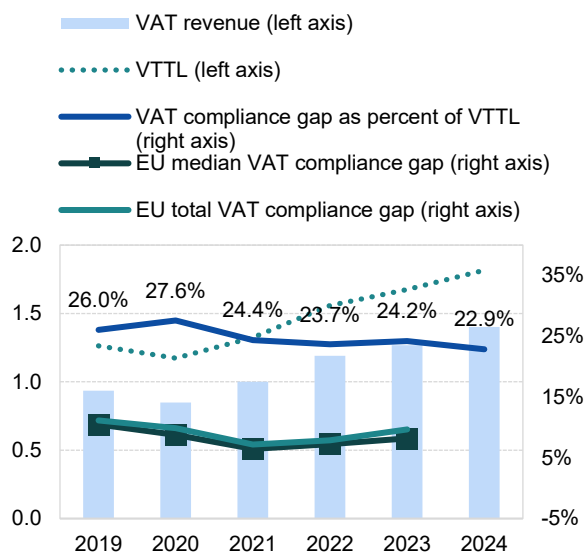
Table 67. MT – VTTL, VAT revenue, and VAT compliance gap

	2019	2020	2021	2022	2023	2024
VTTL (EUR m)	1 263	1 173	1 323	1 558	1 674	1 816
<i>o/w liability on household final consumption</i>	666	488	573	767	869	X
<i>o/w liability on gov. and NPISH final consumption</i>	63	74	81	83	91	X
<i>o/w liability on intermediate consumption</i>	431	498	529	565	560	X
<i>o/w liability on GFCF</i>	97	106	126	127	142	X
<i>o/w net adjustments</i>	7	7	14	16	12	X
VAT revenue (EUR m)	934	849	1 001	1 190	1 269	1 401
VAT compliance gap (EUR m)	329	324	323	369	405	415
VAT compliance gap (percent of VTTL)	26.0%	27.6%	24.4%	23.7%	24.2%	22.9%
<i>EU average VAT compliance gap (percent of VTTL)</i>	11.1%	9.9%	7.2%	7.9%	9.5%	X
VAT compliance gap change since 2019					-1.8pp	

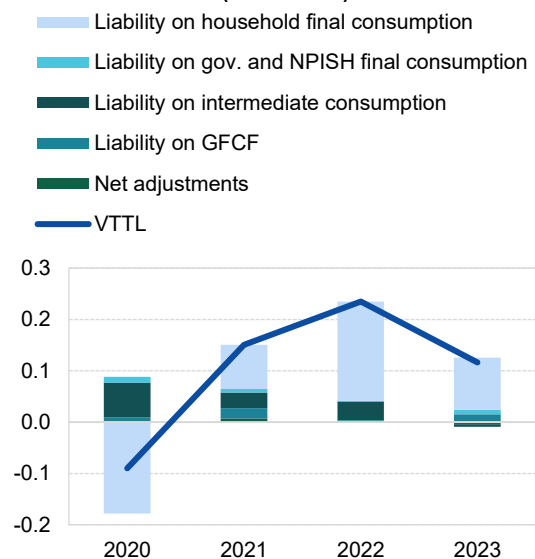
Source: own elaboration. Download underlying data [here](#). Note: fast estimates for 2024 are based on a simplified method. Rounded changes may not equal the change between rounded values.

Figure 89. MT – VTTL, VAT revenue, and VAT compliance gap

VTTL, VAT revenue, and VAT compliance gap (EUR billion, %)



Decomposition of VTTL annual change (EUR billion)



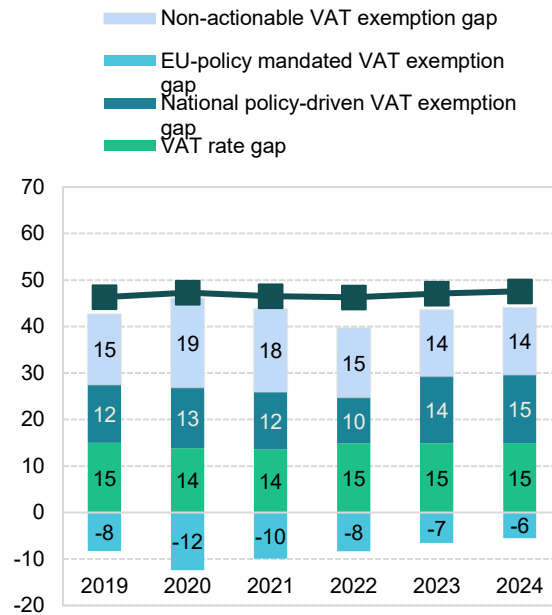
Source: own elaboration. Download underlying data [here](#). Note: fast estimates for 2024 are based on a simplified method.

³⁵ **Green traffic light:** estimates are based on up-to-date data, show no unexplained volatility, and reveal no unexpected patterns suggesting inaccuracies. This applies to both VAT compliance gap and VAT policy gap estimates. The estimates are based on the latest data available at the cut-off date for data collection (15/07/2025). As datasets are regularly revised, future editions will reassess and update the estimates accordingly.

MT: VAT policy gap (2019-2024)

- The VAT policy gap in Malta increased over the 2022-2024 period, from 31.4% in 2022 to 37.0% in 2023 and further to 38.5% in 2024. This increase was primarily driven by the national policy-driven VAT exemption gap.
- In 2023, Malta extended the reduced tax rate on the transfer of immovable property until 31 June 2023.
- In 2024, Malta introduced a 12% reduced VAT rate in addition to the existing 5% and 7% rates, to be applied to the hiring of certain boats, health care services, securities custody services and certain credit services.

Figure 90. MT – VAT policy gap (%)



Source: own elaboration. Download underlying data [here](#).

Table 68. MT – VAT policy gap decomposition

	2019	2020	2021	2022	2023	2024
Notional ideal VAT revenue (EUR m)	1 933	1 773	2 007	2 271	2 666	2 980
VTTL (EUR m)	1 263	1 173	1 323	1 558	1 674	1 816
VAT policy gap (EUR m)	666	596	679	713	987	1 147
VAT policy gap (%)	34.4	33.6	33.8	31.4	37.0	38.5
For comparison: EU median policy gap (%)	46.1	47.1	46.1	46.0	46.4	46.8
Actionable VAT policy gap	372	257	321	373	606	719
o/w VAT rate gap (EUR m)	290	245	272	337	395	445
o/w agricultural products, foodstuffs, beverages	137	144	154	182	206	223
o/w pharmaceuticals	1	2	2	2	3	3
o/w accommodation and restaurant services	62	27	27	51	83	99
o/w utilities services	13	15	16	18	17	18
o/w transport services	42	17	24	36	33	38
o/w other	35	40	48	48	54	64
o/w National policy-driven VAT exemption gap (EUR m)	241	233	249	226	386	438
o/w EU policy-mandated VAT exemption gap (EUR m)	-160	-220	-199	-190	-175	-165
Non-actionable VAT policy gap (EUR m)	294	339	358	340	380	429
o/w imputed rents	88	92	93	91	124	142
o/w public education	78	92	101	101	107	120
o/w public healthcare	78	92	95	94	103	105
o/w other	50	62	69	54	46	61
C-efficiency (%)	54.5	56.3	58.3	58.9	53.3	52.3

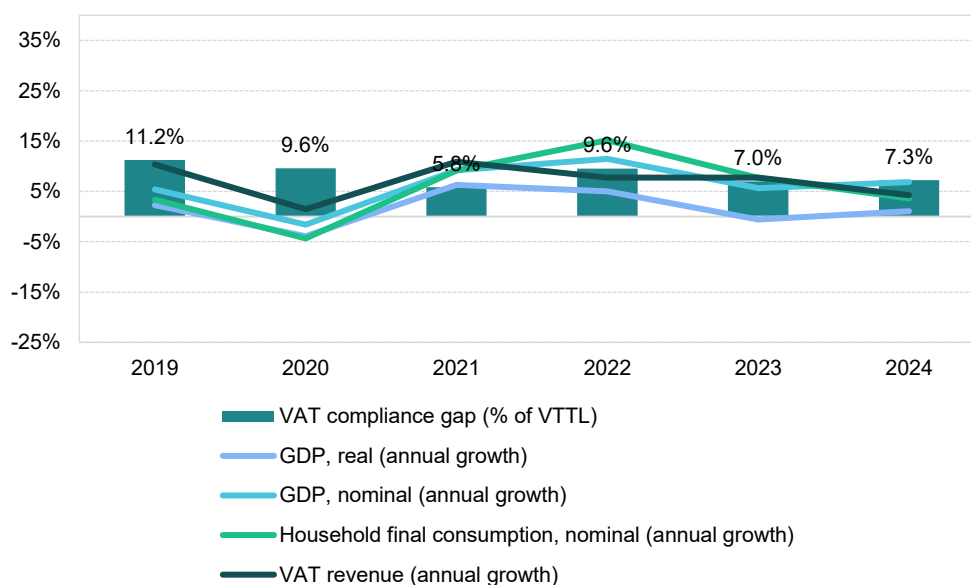
Source: own elaboration. Download underlying data [here](#). Note: fast estimates for 2024 are based on a simplified method.

Netherlands

VAT revenues in the Netherlands grew by 7.8% in 2023, matching the post-pandemic growth rate observed in 2022. However, the VAT compliance gap declined to 7.0% in 2023, down from 9.6% in 2022 and significantly lower than in 2019 (11.2%). A fast estimate for 2024 places the gap at 7.3%. In 2023, the Netherlands applied a 0% VAT rate to the supply and installation of solar panels and increased the VAT rate on non-medical nitrous oxide to 21%. Default penalties for non-compliant OSS taxpayers were waived until June 2024, including the reversal of previously imposed penalties. These factors contributed to the observed VAT revenue performance.

The recovery following the COVID-19 pandemic was relatively short-lived, with a significant rebound in domestic demand confined to 2021 and 2022. Economic challenges that limited growth in the Netherlands included high inflation driven by energy prices, persistent value chain bottlenecks, energy price volatility due to Russia's war of aggression against Ukraine and the resulting sanctions and weak export demand. Given that the Netherlands is heavily engaged in international trade – total trade amounted to 165% of GDP in 2023 – slow recovery in Germany and the rest of the EU was a further limiting factor.

Figure 91. NL – VAT compliance gap, VAT revenues, GDP growth and household final consumption



Sources: own elaboration, Eurostat.

Real GDP growth in the Netherlands in 2023 stood at -0.6%, marking a significant decline of 5.6pp compared to 2022. This indicates an economic slowdown, which may have put **upward pressure on the VAT compliance gap**. While real household final consumption grew strongly in 2022 at 7.1%, it fell to just 0.7% in 2023. By contrast, real government consumption growth increased from 1.3% in 2022 to 2.8% in 2023. GFCF growth also slowed down in real terms, down to 1.5% in 2023 compared to 3.4% in 2022. Additionally, both imports and exports of goods and services declined in nominal terms, reflecting ongoing global economic challenges.

While measures reported in real values capture the actual change in economic activity by excluding inflation effects, nominal growth rates more directly reflect changes in the VAT base and potential VAT revenues. Accordingly, nominal final consumption expenditure growth slowed from 12.0% in 2022 to

8.2% in 2023. In particular, growth of nominal household final consumption of food and non-alcoholic beverages fell sharply (-30.0pp), which may have further contributed to an **upward pressure on the VAT compliance gap**.

Inflation fell to 4.1% in 2023, down from a peak of 11.6% in 2022, with this downward trend continuing into 2024. Key drivers of inflation were housing, water, electricity, gas and other fuels, along with food and transport. Inflationary pressures were observed across nearly all components of household consumption except for communications. In the context of the VAT compliance gap, it is noteworthy that nominal household final consumption of recreational services, restaurants and accommodation increased by 7.8% in 2023, although this growth rate was lower than in 2022. Similarly, year-over-year demand for tourism, measured by nights spent in tourist accommodations, rose at a significantly slower pace in 2023 (7.3%) compared to 2022 (31.2%). These last two trends may be interpreted as forces that reinforce the **decrease in the VAT compliance gap**.

GFCF, which reflects investment in fixed assets such as infrastructure, machinery and buildings, increased in nominal terms by 5.0% in 2023. Accounting for inflation, this indicates relatively modest investment activity.

The supply side also slowed down. Services growth in real value-added terms declined less than in other sectors of the economy in 2023. After strong rebounds in 2021 and 2022, value added in industry fell due to supply chain disruptions, high energy costs, weak external demand and a tight labour market. As a result, the share of services in the economy increased by 0.6pp. The changes in the sectoral structure of the Dutch economy may have contributed to **upward pressure on the VAT compliance gap**, as non-compliance risks tend to be higher in the services sector.

Table 69. NL – Factors affecting VAT compliance gap (2022-2023)

Variable	2023	Difference (2023 vs 2022)	Expected impact on 2023 VAT compliance gap
GDP growth, real	-0.6%	-5.6pp	Increase
Final consumption expenditure growth, nominal	8.2%	-3.8pp	Increase
Household final consumption of food and non-alcoholic beverages growth, nominal	12.7%	-30.0pp	Increase
Services susceptible to non-compliance growth, nominal	7.8%	-1.6pp	Decrease
Services share in GDP	77.9%	0.6pp	Increase
Tourism (nights spent), growth	7.3%	-23.9pp	Decrease
Bankruptcy declarations, growth	54.4%	36.5pp	Increase
Digital payments growth, nominal	n/a	n/a	n/a

Source: own elaboration based on Eurostat and ECB.

Note: for a discussion of the expected effects of these indicators, please see pages 18 and 19 in section II.a.

Strained economic conditions in the Netherlands contributed to a 54.4% increase in the number of bankruptcies in 2023. Growth varied across sectors, with accommodation and food services experiencing relatively higher increases. Overall, this year-over-year change suggests a potential **widening of the VAT compliance gap**.

NL: VAT compliance gap (2019-2024)



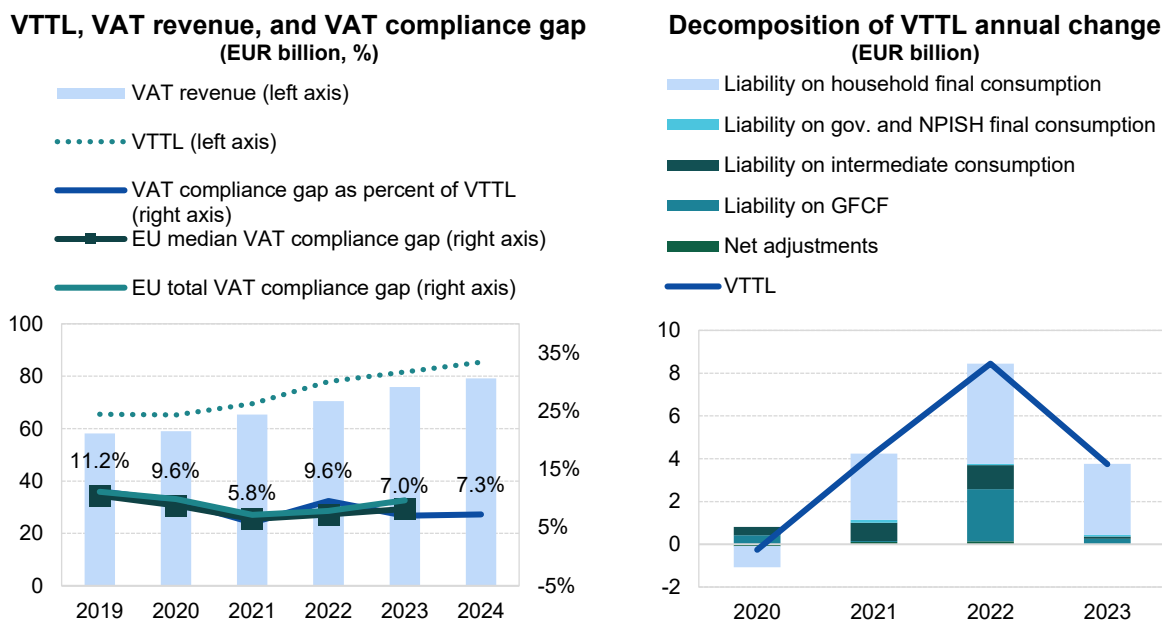
- In the Netherlands, the VAT compliance gap declined to 7.0% in 2023, down from 9.6% in 2022. The gap is expected to remain broadly stable in 2024³⁶.
- VAT compliance gap estimates were revised upward by an average of 0.8pp for the 2019-2022 period compared with the 2024 study. This adjustment reflects a further revision following the benchmark update of national accounts implemented in 2024.

Table 70. NL – VTTL, VAT revenue, and VAT compliance gap

	2019	2020	2021	2022	2023	2024
VTTL (EUR m)	65 480	65 220	69 460	77 905	81 645	85 348
<i>o/w liability on household final consumption</i>	33 284	32 304	35 400	40 082	43 416	X
<i>o/w liability on gov. and NPISH final consumption</i>	643	631	763	831	898	X
<i>o/w liability on intermediate consumption</i>	16 910	17 307	18 161	19 283	19 384	X
<i>o/w liability on GFCF</i>	14 183	14 603	14 657	17 096	17 359	X
<i>o/w net adjustments</i>	459	376	478	612	587	X
VAT revenue (EUR m)	58 115	58 971	65 400	70 458	75 920	79 145
VAT compliance gap (EUR m)	7 365	6 249	4 060	7 447	5 725	6 203
VAT compliance gap (percent of VTTL)	11.2%	9.6%	5.8%	9.6%	7.0%	7.3%
<i>EU average VAT compliance gap (percent of VTTL)</i>	11.1%	9.9%	7.2%	7.9%	9.5%	X
VAT compliance gap change since 2019					-4.2pp	

Source: own elaboration. Download underlying data [here](#). Note: fast estimates for 2024 are based on a simplified method. Rounded changes may not equal the change between rounded values.

Figure 92. NL – VTTL, VAT revenue, and VAT compliance gap



Source: own elaboration. Download underlying data [here](#). Note: fast estimates for 2024 are based on a simplified method.

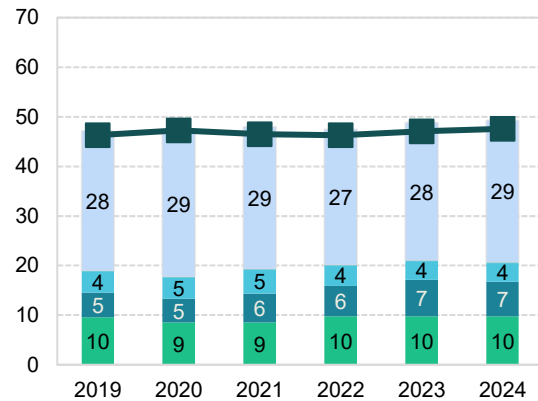
³⁶ **Green traffic light:** estimates are based on up-to-date data, show no unexplained volatility, and reveal no unexpected patterns suggesting inaccuracies. This applies to both VAT compliance gap and VAT policy gap estimates. The estimates are based on the latest data available at the cut-off date for data collection (15/07/2025). As datasets are regularly revised, future editions will reassess and update the estimates accordingly.

NL: VAT policy gap (2019-2024)

- The VAT policy gap in the Netherlands increased from 47.4% in 2022 to 48.8% in 2023 and 49.3% in 2024. However, the disaggregated structure remained relatively stable, with a notable exception: the national policy-driven VAT exemption gap rose by 1.3pp in 2023.
- Between 1 July and 31 December 2022, the Dutch government temporarily reduced VAT on energy (gas, electricity and district heating) from 21% to 9%. Rates reverted to 21% beginning in January 2023.
- Several COVID-19-related VAT measures ended in October 2021, influencing the VAT policy gap and its structure between 2021 and 2022.

Figure 93. NL – VAT policy gap (%)

Non-actionable VAT exemption gap
 EU-policy mandated VAT exemption gap
 National policy-driven VAT exemption gap
 VAT rate gap
 EU median VAT policy gap



Source: own elaboration. Download underlying data [here](#).

Table 71. NL – VAT policy gap decomposition

	2019	2020	2021	2022	2023	2024
Notional ideal VAT revenue (EUR m)	123 893	123 195	133 472	148 224	159 472	168 229
VTTL (EUR m)	65 480	65 220	69 460	77 905	81 645	85 348
VAT policy gap (EUR m)	58 411	57 972	64 007	70 314	77 821	82 878
VAT policy gap (%)	47.1	47.1	48.0	47.4	48.8	49.3
For comparison: EU median policy gap (%)	46.1	47.1	46.1	46.0	46.4	46.8
Actionable VAT policy gap	23 536	21 918	25 810	29 861	33 587	34 783
o/w VAT rate gap (EUR m)	11 819	10 521	11 409	14 515	15 597	16 468
o/w agricultural products, foodstuffs, beverages	4 724	5 223	5 378	5 682	6 076	6 186
o/w pharmaceuticals	563	548	575	633	684	747
o/w accommodation and restaurant services	2 718	1 823	2 077	3 311	3 714	3 902
o/w utilities services	1 138	1 157	1 380	2 012	1 704	1 835
o/w transport services	1 185	620	772	1 243	1 561	1 673
o/w other	1 491	1 149	1 227	1 633	1 859	2 124
o/w National policy-driven VAT exemption gap (EUR m)	6 187	5 844	7 759	9 026	11 725	11 672
o/w EU policy-mandated VAT exemption gap (EUR m)	5 530	5 553	6 642	6 321	6 265	6 643
Non-actionable VAT policy gap (EUR m)	34 876	36 054	38 197	40 452	44 234	48 095
o/w imputed rents	7 896	8 239	8 514	8 658	10 139	10 607
o/w public education	5 172	5 432	5 536	6 214	6 738	7 430
o/w public healthcare	6 018	6 003	6 968	7 106	7 778	8 630
o/w other	15 789	16 380	17 179	18 474	19 580	21 428
C-efficiency (%)	54.6	56.2	57.2	55.3	55.2	54.4

Source: own elaboration. Download underlying data [here](#). Note: fast estimates for 2024 are based on a simplified method.

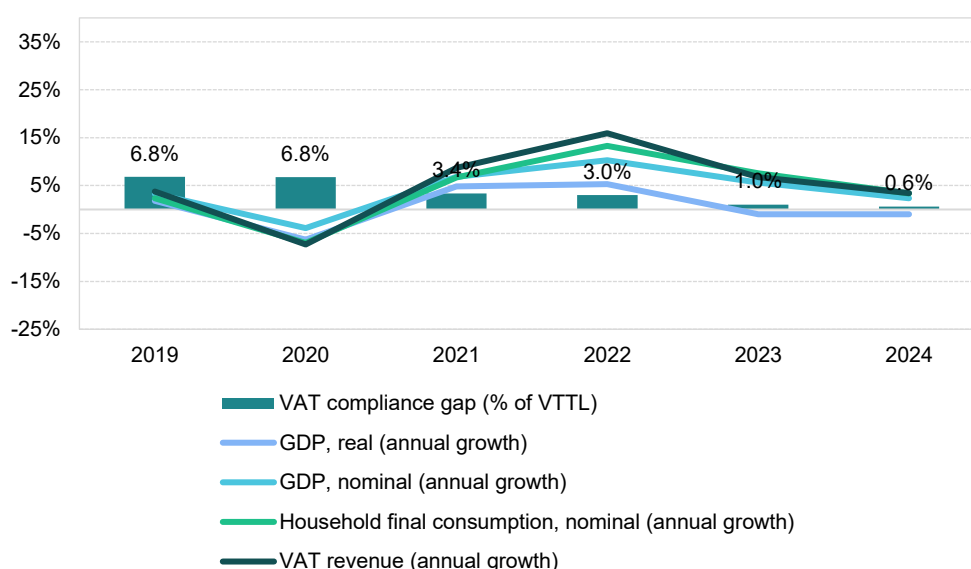
Austria

VAT revenues in Austria grew by 6.8% in 2023, a slower pace than the post-pandemic peak of 15.9% in 2022. However, the VAT compliance gap declined to 1.0% in 2023, down from 3.0% in 2022 and significantly lower than in 2019 (6.8%). A fast estimate for 2024 places the gap at 0.6%.

In 2023, Austria implemented several VAT changes, including an exemption for the Austrian section of cross-border passenger rail transport, a reduction of VAT on the supply and installation of solar panels to 0% and an increase in the turnover threshold for flat-rate farmers to EUR 600 000.

Recovery following the COVID-19 pandemic was relatively short-lived, with a strong rebound in domestic demand limited to 2021 and 2022. Economic challenges that constrained growth in Austria included high inflation driven by energy prices, persistent value chain bottlenecks, energy price volatility caused by Russia's war of aggression against Ukraine and related sanctions and weak export demand. Given Austria's reliance on international trade – total trade amounted to 117% of GDP in 2023 – another limiting factor was slow recovery in Germany and the rest of the EU.

Figure 94. AT – VAT compliance gap, VAT revenues, GDP growth and household final consumption



Sources: own elaboration, Eurostat.

Real GDP growth in Austria in 2023 fell to -1.0%, representing a significant contraction of 6.2 percentage points compared to 2022. This indicates an economic slowdown, which may have exerted **upward pressure on the VAT compliance gap**. While real household final consumption grew strongly in 2022 at 5.1%, it declined sharply in 2023 to -0.7%. In contrast, real government consumption growth reversed from -0.6% in 2022 to 1.2% in 2023. Furthermore, the real GFCF contracted, declining to -3.2% in 2023 after a modest growth of 0.4% in 2022.

While measures reported in real values capture the actual change in economic activity by excluding inflation effects, nominal growth rates more directly reflect changes in the VAT base and potential VAT revenues. Accordingly, nominal final consumption expenditure growth slowed from 10.3% in 2022 to 7.4% in 2023. In particular, growth of nominal household final consumption of food and non-alcoholic beverages fell sharply (-50.1pp), which may have further been regarded as a factor driving conditions conducive to an **increase in the VAT compliance gap**.

Inflation fell to 7.7% in 2023, down from a peak of 8.6% in 2022, and continued this downward trend into 2024. The main drivers of inflation were housing, water, electricity, gas and other fuels, as well as food, although inflationary pressures were observed across all components of household consumption, except for communications.

In the context of the VAT compliance gap, it is noteworthy that recreational services, restaurants and accommodation were among the fastest-growing categories in nominal household final consumption, although their contribution mainly affected 2022 measures. Similarly, the year-over-year change in demand for tourism, measured by nights spent in tourist accommodations, grew at a significantly lower pace in 2023 (11.0%) compared to 2022 (72.4%). These last two trends may be interpreted as forces that reinforce the **decrease in the VAT compliance gap**.

GFCF, which reflects investment in fixed assets such as infrastructure, machinery, and buildings, increased by 3.3% in nominal terms in 2023. Considering inflation, this indicates a contraction in real investment activity.

On the supply side, a slowdown was also evident. Services growth in real value-added terms declined less than in other sectors in 2023. After strong rebounds in 2021 and 2022, value added in industry fell due to supply chain disruptions, high energy costs, weak external demand, and a tight labour market. This resulted in a modest 0.1pp increase in the share of services. Overall, sectoral changes in the Austrian economy appear to have had a **neutral effect on VAT compliance gap**.

Table 72. AT – Factors affecting VAT compliance gap (2022-2023)

Variable	2023	Difference (2023 vs 2022)	Expected impact on 2023 VAT compliance gap
GDP growth, real	-1.0%	-6.2pp	Increase
Final consumption expenditure growth, nominal	7.4%	-2.9pp	Increase
Household final consumption of food and non-alcoholic beverages growth, nominal	14.8%	-50.1pp	Increase
Services susceptible to non-compliance growth, nominal	9.1%	-7.0pp	Decrease
Services share in GDP	70.4%	0.1pp	Neutral
Tourism (nights spent), growth	11.0%	-61.4pp	Decrease
Bankruptcy declarations, growth	12.4%	-44.6pp	Decrease
E-commerce, share of sectors	23.6%	-29.0pp	Increase

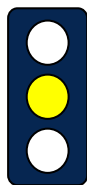
Source: own elaboration based on Eurostat and ECB.

Note: for a discussion of the expected effects of these indicators, please see pages 18 and 19 in section II.a.

Economic slowdown in Austria led to a 12.4% increase in the number of bankruptcies in 2023, indicating a potential **decrease in the VAT compliance gap**.

Other factors also influenced the VAT compliance gap. The prevalence of digital payments (measured as the aggregate of payments with cards, e-money, direct debits and bank transfers) is generally associated with higher tax compliance, as digital and automated transactions are easier to monitor. In Austria, the nominal value of digital payments increased in 2023, although at a slower pace than in 2022. This factor may have placed **upward pressure, constraining the decrease in the VAT compliance gap**.

AT: VAT compliance gap (2019-2024)



- In Austria, the VAT compliance gap declined to 1.0% in 2023, down from 3.0% in 2022. A further decrease, approaching a near-zero gap, is expected in 2024³⁷.
- Compared to 2019, following a stable downward trend, the VAT compliance gap has decreased by nearly 6pp.

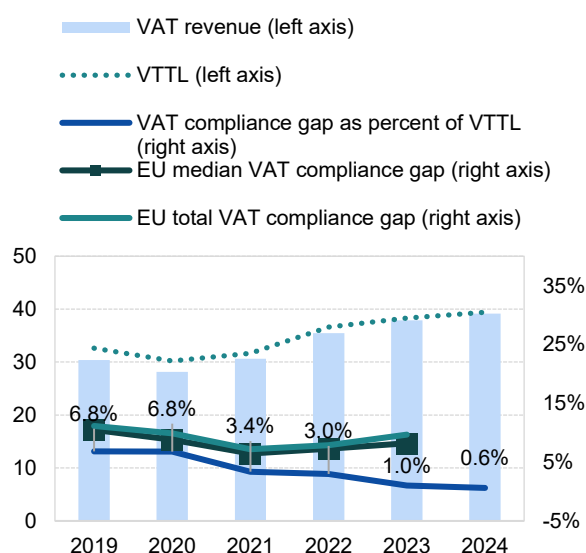
Table 73. AT – VTTL, VAT revenue, and VAT compliance gap

	2019	2020	2021	2022	2023	2024
VTTL (EUR m)	32 613	30 216	31 690	36 590	38 283	39 416
<i>o/w liability on household final consumption</i>	21 808	19 304	19 717	23 557	24 751	X
<i>o/w liability on gov. and NPISH final consumption</i>	1 533	1 587	1 644	1 764	1 879	X
<i>o/w liability on intermediate consumption</i>	4 574	4 637	5 091	5 494	5 702	X
<i>o/w liability on GFCF</i>	3 524	3 611	3 854	4 184	4 320	X
<i>o/w net adjustments</i>	1 175	1 077	1 384	1 591	1 631	X
VAT revenue (EUR m)	30 388	28 169	30 622	35 497	37 891	39 175
VAT compliance gap (EUR m)	2 226	2 048	1 068	1 094	392	241
VAT compliance gap (percent of VTTL)	6.8%	6.8%	3.4%	3.0%	1.0%	0.6%
<i>EU average VAT compliance gap (percent of VTTL)</i>	11.1%	9.9%	7.2%	7.9%	9.5%	X
VAT compliance gap change since 2019					-5.8pp	

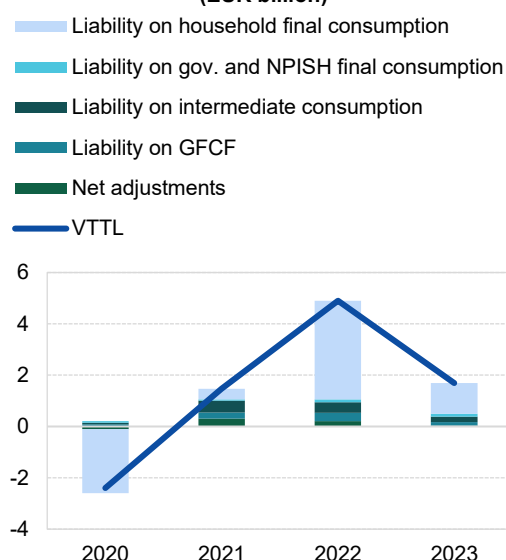
Source: own elaboration. Download underlying data [here](#). Note: fast estimates for 2024 are based on a simplified method. Rounded changes may not equal the change between rounded values.

Figure 95. AT – VTTL, VAT revenue, and VAT compliance gap

VTTL, VAT revenue, and VAT compliance gap (EUR billion, %)



Decomposition of VTTL annual change (EUR billion)



Source: own elaboration. Download underlying data [here](#). Note: fast estimates for 2024 are based on a simplified method.

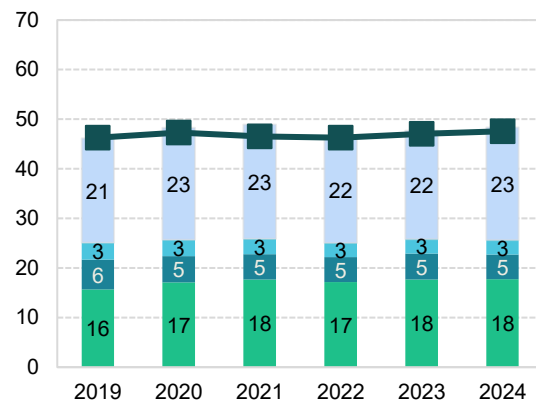
³⁷ **Yellow traffic light:** estimates based on somewhat outdated information or showing elevated unexplained volatility. This applies to both VAT compliance gap and policy gap estimates. The estimates are based on the latest data available at the cut-off date for data collection (15/07/2025). As datasets are regularly revised, future editions will reassess and update the estimates accordingly.

AT: VAT policy gap (2019-2024)

- The VAT policy gap in Austria increased from 46.6% in 2022 to 47.7% in 2023 and 48.4% in 2024. Overall, the structure remained largely unchanged, with a slightly larger increase in the non-actionable VAT policy gap in 2024 compared to 2023 (+0.9pp).
- This upward trend was the result of changes in VAT regulations. In 2023, the Austrian section of cross-border passenger rail transport was exempted. In 2024, a 0% VAT rate was applied to donations of food products to charitable organisations for charitable purposes, as well as to the supply, intra-community acquisition, import and installation of photovoltaic modules under certain conditions.

Figure 96. AT – VAT policy gap (%)

Non-actionable VAT exemption gap
 EU-policy mandated VAT exemption gap
 National policy-driven VAT exemption gap
 VAT rate gap
 EU median VAT policy gap



Source: own elaboration. Download underlying data [here](#).

Table 74. AT – VAT policy gap decomposition

	2019	2020	2021	2022	2023	2024
Notional ideal VAT revenue (EUR m)	58 871	57 023	60 513	66 882	71 486	74 545
VTTL (EUR m)	32 613	30 216	31 690	36 590	38 283	39 416
VAT policy gap (EUR m)	27 156	27 527	29 588	31 136	34 098	36 052
VAT policy gap (%)	46.1	48.3	48.9	46.6	47.7	48.4
For comparison: EU median policy gap (%)	46.1	47.1	46.1	46.0	46.4	46.8
Actionable VAT policy gap	14 794	14 629	15 642	16 752	18 462	19 078
o/w VAT rate gap (EUR m)	9 232	9 765	10 693	11 484	12 631	13 224
o/w agricultural products, foodstuffs, beverages	1 818	1 953	1 992	2 099	2 256	2 327
o/w pharmaceuticals	369	383	394	403	423	449
o/w accommodation and restaurant services	1 394	1 739	2 359	2 655	3 047	3 143
o/w utilities services	0	0	0	0	0	0
o/w transport services	967	664	638	812	953	994
o/w other	4 683	5 027	5 310	5 515	5 951	6 310
o/w National policy-driven VAT exemption gap (EUR m)	3 522	2 992	3 096	3 358	3 765	3 693
o/w EU policy-mandated VAT exemption gap (EUR m)	2 040	1 872	1 854	1 910	2 066	2 161
Non-actionable VAT policy gap (EUR m)	12 362	12 898	13 946	14 385	15 635	16 974
o/w imputed rents	3 944	4 139	4 286	4 483	4 996	5 161
o/w public education	2 153	2 207	2 223	2 264	2 379	2 617
o/w public healthcare	2 781	2 901	3 364	3 544	3 808	4 199
o/w other	3 484	3 650	4 072	4 093	4 453	4 997
C-efficiency (%)	58.7	56.5	58.5	61.1	60.6	59.8

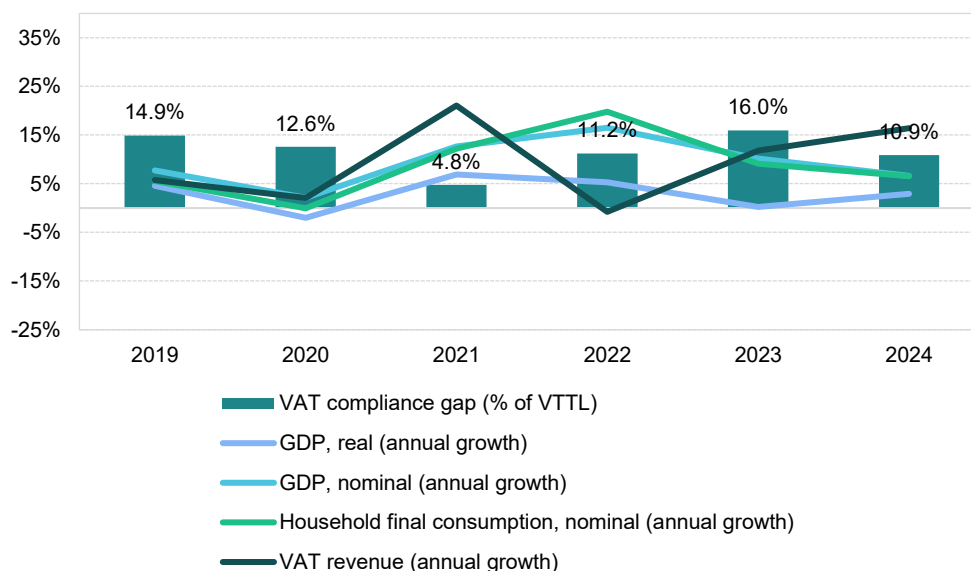
Source: own elaboration. Download underlying data [here](#). Note: fast estimates for 2024 are based on a simplified method.

Poland

VAT revenues in Poland grew by 11.8% in 2023, following a post-pandemic decline of 0.8% in 2022. The VAT compliance gap increased to 16.0% in 2023, up from 11.2% in 2022 and above the estimated 2019 level of 14.9%. A fast estimate for 2024 places the gap at 10.9%. In 2023, Poland restored the 23% VAT rate on gas, fuel, electricity and system heat, maintained a 0% rate on basic food products and applied an 8% VAT rate to fertilizers. Other changes included the introduction of VAT groups, adjustments to small taxpayer thresholds, clarified rules for invoice corrections and various compliance simplifications. These measures contributed to the observed VAT revenue performance.

The recovery following the COVID-19 pandemic was relatively short-lived, with a strong rebound in domestic demand limited to 2021 and 2022. Economic challenges that constrained growth in Poland included high inflation driven by energy prices, persistent value chain bottlenecks, energy price volatility due to Russia's war of aggression against Ukraine and the resulting sanctions and weak export demand. Given Poland's reliance on international trade – total trade amounted to 100% of GDP in 2023 – slow recovery in Germany and the rest of the EU was a further limiting factor.

Figure 97. PL – VAT compliance gap, VAT revenues, GDP growth and household final consumption



Sources: own elaboration, Eurostat. Note: fast estimates for 2024 are based on a simplified method.

Real GDP growth in Poland in 2023 stood at 0.2%, representing a decline of 5.0pp compared to 2022, which reflects an economic slowdown likely contributing to an **increase in the VAT compliance gap**. While real household final consumption exhibited a robust growth of 6.2% in 2021, it slowed down to 5.0% in 2022 and then declined to -0.3% in 2023. In contrast, real government consumption accelerated from 0.6% in 2022 to 4.5% in 2023. Similarly, GFCF grew in real terms at a much higher rate in 2023 (12.7%) compared to 1.7% in 2022.

While measures reported in real values capture the actual change in economic activity by excluding inflation effects, nominal growth rates more directly reflect changes in the VAT base and potential VAT revenues. Accordingly, nominal final consumption expenditure growth slowed from 18.5% in 2022 to 10.6% in 2023. In particular, growth of nominal household final consumption of food and non-alcoholic

beverages fell sharply (-8.4pp), which may have further contributed to an **increase in the VAT compliance gap**.

Inflation fell to 10.9% in 2023, down from a peak of 13.2% in 2022, with the downward trend continuing into 2024. Key drivers of inflation were housing, water, electricity, gas and other fuels, as well as food, transport and services such as restaurants and hotels. Inflationary pressures were observed across all components of household consumption. In the context of the VAT compliance gap, it is noteworthy that recreational services, restaurants and accommodation grew by 16.7% in nominal household final consumption in 2023, although this growth was lower than in 2022. Similarly, year-over-year change in demand for tourism, measured by nights spent in tourist accommodations, increased at a much slower pace in 2023 (3.2%) compared to 2022 (43.2%). These last two developments can be viewed as factors that drive conditions conducive to a **decrease in the VAT compliance gap**.

GFCF, which reflects investment in fixed assets such as infrastructure, machinery and buildings, increased by 20.0% in nominal terms in 2023. In the context of inflation as discussed above, this indicates an increase in real investment activity.

A slowdown was also observed on the supply side. Services growth in real value-added terms declined less than other sectors in 2023. After strong rebounds in 2021 and 2022, industrial value added fell due to supply chain disruptions, high energy costs and weak external demand. As a result, the share of services in the economy rose by 0.3pp. Overall, these changes in the sectoral structure of the Polish economy are likely to have **increased the VAT compliance gap**, as non-compliance risks tend to be higher in the services sector.

Table 75. PL – Factors affecting VAT compliance gap (2022-2023)

Variable	2023	Difference (2023 vs 2022)	Expected impact on 2023 VAT compliance gap
GDP growth, real	0.2%	-5.0pp	Increase
Final consumption expenditure growth, nominal	10.6%	-7.9pp	Increase
Household final consumption of food and non-alcoholic beverages growth, nominal	10.4%	-8.4pp	Increase
Services susceptible to non-compliance growth, nominal	16.7%	-4.6pp	Decrease
Services share in GDP	64.4%	0.3pp	Increase
Tourism (nights spent), growth	3.2%	-40.0pp	Decrease
Bankruptcy declarations, growth	15.7%	22.9pp	Increase
Digital payments growth, nominal	n/a	n/a	n/a

Source: own elaboration based on Eurostat.

Note: for a discussion of the expected effects of these indicators, please see pages 18 and 19 in section II.a.

In 2023, the number of bankruptcies in Poland increased by 15.7%, representing a 22.9pp change compared to 2022, which indicates a potential **widening of the VAT compliance gap**. The impact was not uniform across sectors, with accommodation and food services experiencing relatively faster growth. In 2024, the situation improved, with an overall 3.2% decrease in bankruptcies, although substantial disparities across sectors persisted.

PL: VAT compliance gap (2019-2024)



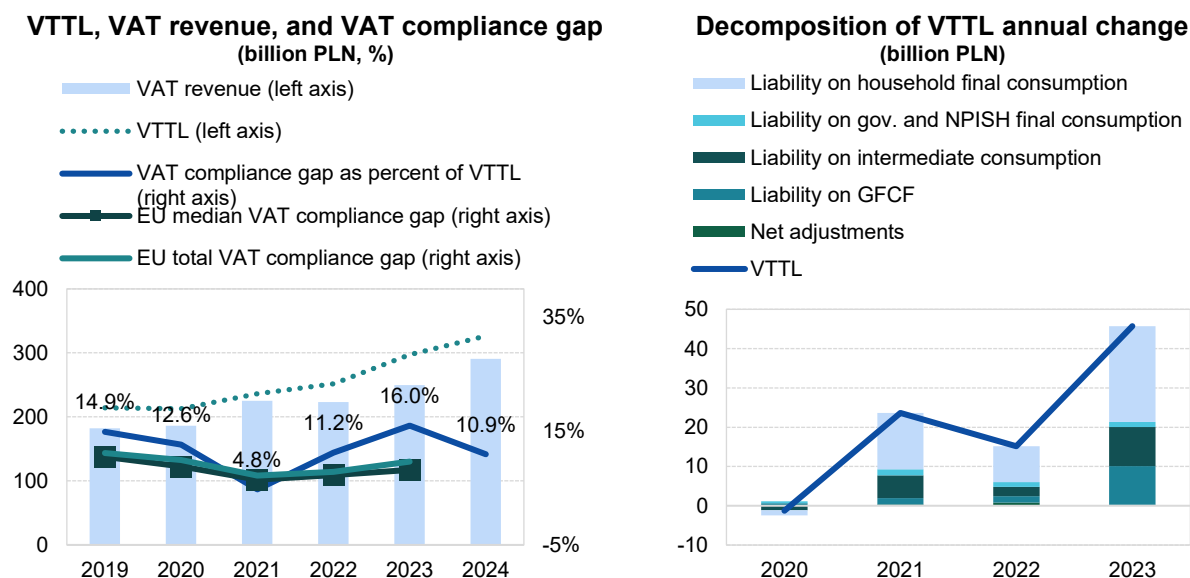
- In Poland, the VAT compliance gap increased to 16.0% in 2023, up from 11.2% in 2022. This increase is unlikely to establish a continued trend, as the gap is projected to again decline to 10.9% of VTTL in 2024³⁸.
- VAT compliance gap estimates for recent years are slightly higher than national figures, reflecting differences in tax base data and methodology. The developments of the gap, including a downward shift in 2021 and a hike in 2023, are confirmed by national estimates.

Table 76. PL – VTTL, VAT revenue, and VAT compliance gap

	2019	2020	2021	2022	2023	2024
VTTL (PLN m)	214 047	212 778	236 400	251 563	297 281	326 387
<i>o/w liability on household final consumption</i>	<i>148 410</i>	<i>147 153</i>	<i>161 507</i>	<i>170 677</i>	<i>195 059</i>	<i>X</i>
<i>o/w liability on gov. and NPISH final consumption</i>	<i>8 200</i>	<i>8 681</i>	<i>10 229</i>	<i>11 401</i>	<i>12 724</i>	<i>X</i>
<i>o/w liability on intermediate consumption</i>	<i>33 056</i>	<i>31 882</i>	<i>37 656</i>	<i>40 073</i>	<i>50 016</i>	<i>X</i>
<i>o/w liability on GFCF</i>	<i>21 607</i>	<i>22 293</i>	<i>23 910</i>	<i>25 467</i>	<i>35 280</i>	<i>X</i>
<i>o/w net adjustments</i>	<i>2 775</i>	<i>2 768</i>	<i>3 098</i>	<i>3 945</i>	<i>4 202</i>	<i>X</i>
VAT revenue (PLN m)	182 147	185 964	225 140	223 395	249 805	290 738
VAT compliance gap (PLN m)	31 900	26 814	11 260	28 168	47 476	35 649
VAT compliance gap (percent of VTTL)	14.9%	12.6%	4.8%	11.2%	16.0%	10.9%
<i>EU average VAT compliance gap (percent of VTTL)</i>	<i>11.1%</i>	<i>9.9%</i>	<i>7.2%</i>	<i>7.9%</i>	<i>9.5%</i>	<i>X</i>
VAT compliance gap change since 2019					1.1pp	

Source: own elaboration. Download underlying data [here](#). Note: fast estimates for 2024 are based on a simplified method. Rounded changes may not equal the change between rounded values.

Figure 98. PL – VTTL, VAT revenue, and VAT compliance gap



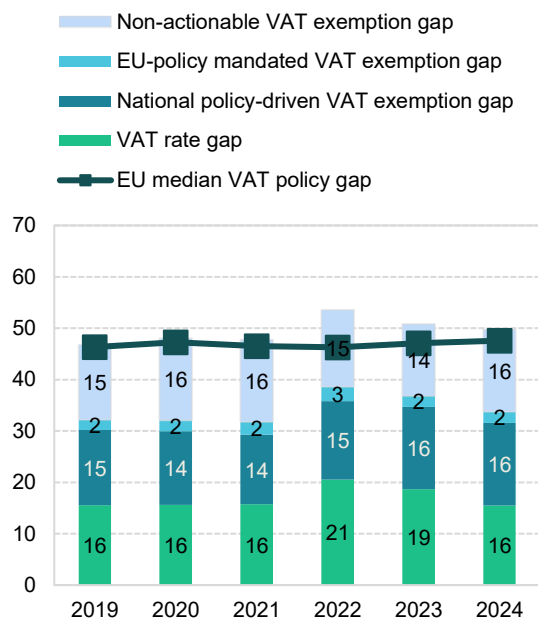
Source: own elaboration. Download underlying data [here](#). Note: fast estimates for 2024 are based on a simplified method.

³⁸ **Green traffic light:** estimates are based on up-to-date data, show no unexplained volatility and reveal no unexpected patterns suggesting inaccuracies. This applies to both VAT compliance gap and VAT policy gap estimates. The estimates are based on the latest data available at the cut-off date for data collection (15/07/2025). As datasets are regularly revised, future editions will reassess and update the estimates accordingly.

PL: VAT policy gap (2019-2024)

- The VAT policy gap in Poland declined from 53.6% in 2022 to 50.8% in 2023, and further to 49.8% in 2024, representing one of the most significant downward shifts among EU Member States. This change was primarily driven by adjustments in the application of VAT rates.
- Poland's extensive use of reduced VAT rates results in one of the EU's highest VAT rate gaps, even before temporary concessions in 2021.
- In 2022, Poland introduced the Government Anti-Inflation Shield, which included VAT rate cuts on electricity and natural gas. In July 2022, the reductions were extended to fuel and foodstuffs. In 2023, VAT on gas, fuel, electricity, and district heating was restored to the standard 23% rate, while the 0% rate on basic food products remained in effect until 2024.

Figure 99: PL – VAT policy gap (%)



Source: own elaboration. Download underlying data [here](#).

Table 77. PL – VAT policy gap decomposition

	2019	2020	2021	2022	2023	2024
Notional ideal VAT revenue (PLN m)	398 890	405 622	448 409	535 691	598 577	642 892
VTTL (PLN m)	214 047	212 778	236 400	251 563	297 281	326 387
VAT policy gap (PLN m)	186 620	194 751	214 184	286 953	304 350	319 994
VAT policy gap (%)	46.8	48.0	47.8	53.6	50.8	49.8
For comparison: EU median policy gap (%)	46.1	47.1	46.1	46.0	46.4	46.8
Actionable VAT policy gap	128 460	130 108	142 340	206 741	220 310	216 907
o/w VAT rate gap (PLN m)	62 132	63 258	70 606	109 975	111 600	99 760
o/w agricultural products, foodstuffs, beverages	28 950	31 583	34 959	51 106	61 368	49 029
o/w pharmaceuticals	5 809	6 702	7 557	8 794	9 880	8 997
o/w accommodation and restaurant services	6 728	5 474	7 280	9 672	11 499	12 256
o/w utilities services	1 814	2 196	2 254	9 981	3 736	4 054
o/w transport services	2 442	2 197	2 755	3 139	3 508	3 781
o/w other	16 389	15 107	15 801	27 282	21 609	21 642
o/w National policy-driven VAT exemption gap (PLN m)	58 373	58 206	60 611	81 887	96 155	103 267
o/w EU policy-mandated VAT exemption gap (PLN m)	7 956	8 644	11 122	14 879	12 556	13 880
Non-actionable VAT policy gap (PLN m)	58 160	64 644	71 844	80 212	84 040	103 087
o/w imputed rents	13 164	13 565	14 732	15 628	16 959	18 089
o/w public education	12 614	14 399	15 895	18 169	18 494	23 090
o/w public healthcare	10 605	11 902	15 793	18 515	19 793	24 273
o/w other	21 777	24 778	25 424	27 900	28 794	37 636
C-efficiency (%)	51.2	51.3	56.3	46.3	47.0	50.6

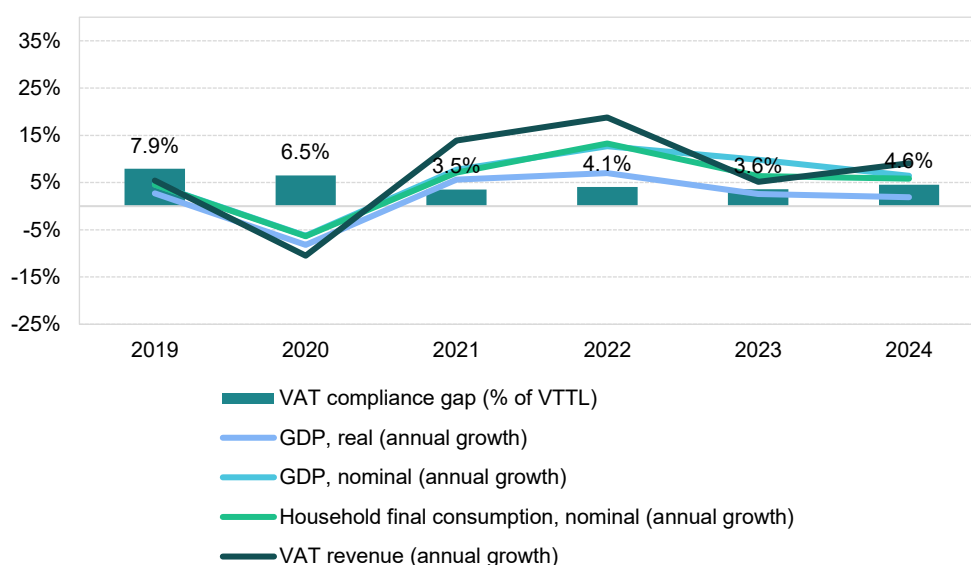
Source: own elaboration. Download underlying data [here](#). Note: fast estimates for 2024 are based on a simplified method.

Portugal

VAT revenues in Portugal grew in 2023 (5.1%), but at a slower pace than during the post-pandemic peak in 2022 (18.8%). The VAT compliance gap, however, declined to 3.6% in 2023 from 4.1% in 2022, marking a significant reduction compared to 2019 (7.9%). A fast estimate for 2024 puts the gap at 4.6%. In 2023, Portugal introduced several VAT policy changes: a 0% VAT rate on essential food products, an extension of reduced rates to various goods and services, and an increase in the VAT registration threshold to EUR 13 500. Foreign VAT-registered businesses also faced new compliance requirements, including certified invoicing software, QR codes on invoices and monthly SAF-T reporting. These factors contributed to the evolution of VAT revenues.

Recovery following the COVID-19 pandemic proved relatively short-lived, with the rebound in domestic demand largely confined to 2021 and 2022. Portugal's economic growth was subsequently constrained by several challenges: high inflation driven by energy prices, persistent supply chain bottlenecks, energy price volatility linked to Russia's war of aggression against Ukraine and the resulting sanctions and weak export demand. Given the Portuguese economy's substantial dependence on international trade in both final and intermediate goods – with a total trade-to-GDP ratio reaching 94% in 2023 – sluggish recovery in the rest of the EU also acted as a limiting factor.

Figure 100. PT – VAT compliance gap, VAT revenues, GDP growth and household final consumption



Sources: own elaboration, Eurostat. Note: fast estimates for 2024 are based on a simplified method.

Real GDP growth in Portugal reached 2.6% in 2023, representing a sharp decline of 4.4pp compared to 2022, which reflects an economic slowdown that may have exerted **upward pressure on the VAT compliance gap**. Household final consumption, which had grown robustly to 5.5% in real terms in 2022, dropped to 1.9% in 2023. Real government consumption growth also weakened, falling from 3.8% in 2021 to 1.7% in 2022 and just 0.6% in 2023. By contrast, GFCF increased marginally faster in real terms in 2023 (3.6%) than in 2022 (3.3%).

While measures reported in real values capture the actual change in economic activity by excluding inflation effects, nominal growth rates more directly reflect changes in the VAT base and potential VAT

revenues. Accordingly, nominal final consumption expenditure growth slowed from 11.5% in 2022 to 6.2% in 2023.

Inflation declined from a peak of 8.1% in 2022 to 5.3% in 2023, with the downward trend continuing through 2024. The main drivers of price pressures were housing, water, electricity, gas and other fuels, along with food, transport, restaurants and hotels. Inflationary pressures were observed across the main components of household consumption. In the context of the VAT compliance gap, it is noteworthy that tourism demand – as measured by nights spent in tourist accommodations – expanded by 11.0% in 2023, a significantly slower rate than the exceptional 72.4% increase recorded in 2022. This development may be interpreted as a force contributing to a **decrease in the VAT compliance gap**.

GFCF, reflecting investment in fixed assets such as infrastructure, machinery and buildings, grew in nominal terms by 7.2% in 2023. When adjusted for inflation, this points to a moderate real increase in investment activity.

On the supply side, a slowdown was also evident. Services experienced a smaller decline in real value-added growth compared to other sectors in 2023. By contrast, value added in manufacturing fell after strong rebounds in 2021 and 2022, reflecting ongoing supply chain disruptions, high energy costs and weak external demand. Nevertheless, elevated price levels supported nominal growth across all major sectors. As a result, the share of services in gross value added increased marginally by 0.1pp. Overall, changes in Portugal's sectoral structure in 2023 appear to have had a **neutral impact on VAT compliance gap**.

Table 78. PT – Factors affecting VAT compliance gap (2022-2023)

Variable	2023	Difference (2023 vs 2022)	Expected impact on 2023 VAT compliance gap
GDP growth, real	2.6%	-4.4pp	Increase
Final consumption expenditure growth, nominal	6.2%	-5.3pp	Increase
Household final consumption of food and non-alcoholic beverages growth, nominal	n/a	n/a	n/a
Services susceptible to non-compliance growth, nominal	n/a	n/a	n/a
Services share in GDP	76.7%	0.1pp	Neutral
Tourism (nights spent), growth	10.3%	-71.0pp	Decrease
Bankruptcy declarations, growth	20.5%	38.7pp	Increase
Digital payments growth, nominal	5.0%	-14.2pp	Increase

Source: own elaboration based on Eurostat and ECB.

Note: for a discussion of the expected effects of these indicators, please see pages 18 and 19 in section II.a.

The number of bankruptcies increased by 20.5% in 2023, representing a change of 38.7 percentage points compared to 2022, which may have exerted **upward pressure on the VAT compliance gap**. Sectoral patterns varied, with industry, construction and IT experiencing relatively faster growth of this indicator than other sectors.

Other factors also influenced the VAT compliance gap. The prevalence of digital payments (measured as the aggregate of payments with cards, e-money, direct debits and bank transfers) is generally associated with lower non-compliance, as digital and automated transactions are easier to monitor. In Portugal, the nominal value of digital payments increased in 2023, but at a slower pace than in 2022. This factor may have contributed to **upward pressure on the VAT compliance gap**.

PT: VAT compliance gap (2019-2024)



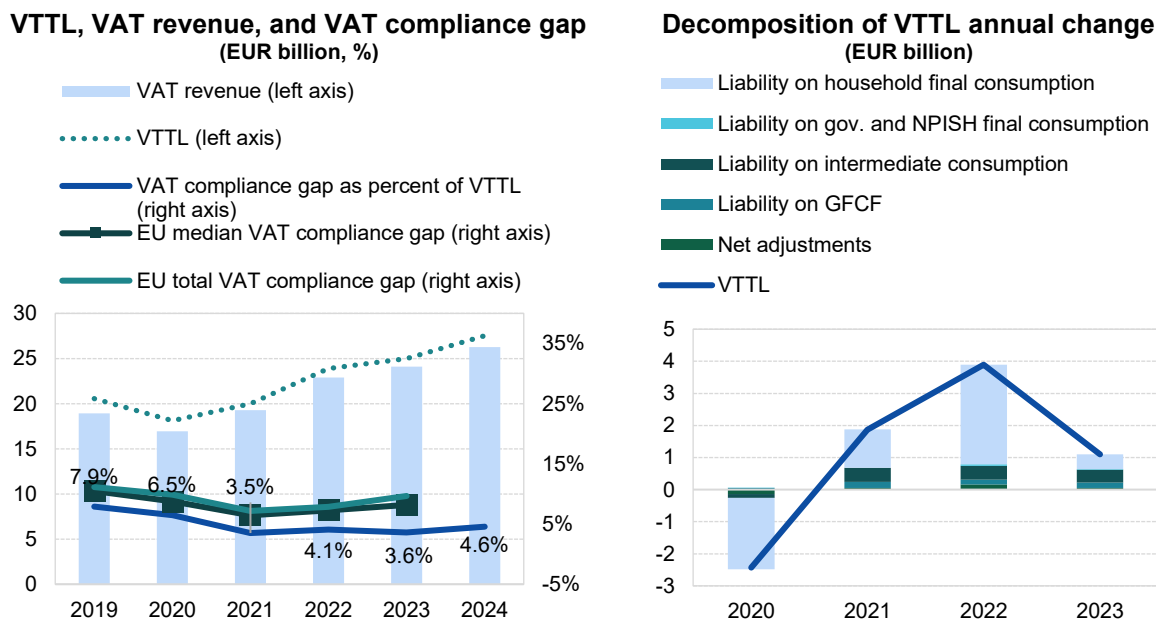
- The VAT compliance gap decreased from 4.1% in 2022 to 3.6% in 2023. For 2024, fast estimates place it at 4.6% of VTTL, indicating a relatively stable trajectory since 2021³⁹.
- Between 2022 and 2024, Portugal expanded its B2G e-invoicing and SAF-T reporting. Among others, e-invoicing was expanded to cover all the supplies to the public sector. Moreover, the frequency of SAF-T submissions for certain taxpayer categories was increased and the detail of these submissions was enhanced.

Table 79. PT – VTTL, VAT revenue, and VAT compliance gap

	2019	2020	2021	2022	2023	2024
VTTL (EUR m)	20 550	18 118	19 990	23 883	24 987	27 526
<i>o/w liability on household final consumption</i>	15 091	12 867	14 063	17 169	17 628	X
<i>o/w liability on gov. and NPISH final consumption</i>	593	598	592	637	664	X
<i>o/w liability on intermediate consumption</i>	3 190	3 067	3 507	3 935	4 330	X
<i>o/w liability on GFCF</i>	1 237	1 285	1 477	1 629	1 800	X
<i>o/w net adjustments</i>	438	302	352	513	563	X
VAT revenue (EUR m)	18 926	16 941	19 289	22 909	24 086	26 272
VAT compliance gap (EUR m)	1 623	1 177	701	974	900	1 254
VAT compliance gap (percent of VTTL)	7.9%	6.5%	3.5%	4.1%	3.6%	4.6%
<i>EU average VAT compliance gap (percent of VTTL)</i>	11.1%	9.9%	7.2%	7.9%	9.5%	X
VAT compliance gap change since 2019					-4.3pp	

Source: own elaboration. Download underlying data [here](#). Note: fast estimates for 2024 are based on a simplified method. Rounded changes may not equal the change between rounded values.

Figure 101. PT – VTTL, VAT revenue, and VAT compliance gap



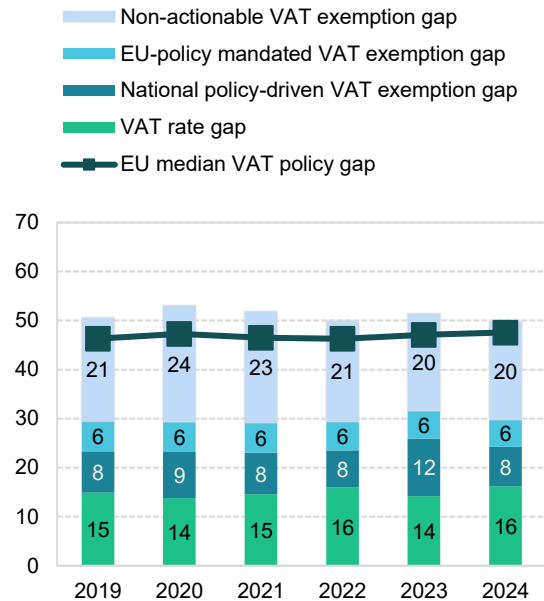
Source: own elaboration. Download underlying data [here](#). Note: fast estimates for 2024 are based on a simplified method.

³⁹ **Green traffic light:** estimates are based on up-to-date data, show no unexplained volatility and reveal no unexpected patterns suggesting inaccuracies. This applies to both VAT compliance gap and VAT policy gap estimates. The estimates are based on the latest data available at the cut-off date for data collection (15/07/2025). As datasets are regularly revised, future editions will reassess and update the estimates accordingly.

PT: VAT policy gap (2019-2024)

- The VAT policy gap in Portugal rose from 50.0% in 2022 to 51.4% in 2023, before declining to 49.9% in 2024. These shifts were mainly driven by the national policy-driven VAT exemption gap, which increased by 4.2pp in 2023 and then fell by 3.8pp in 2024. In addition, legislative adjustments affected the VAT rate gap, which decreased by 1.8pp in 2023 and rose by 2.0pp in 2024.
- In the second quarter of 2023, Portugal introduced a temporary measure applying a zero VAT rate (with the right to deduct) on a range of essential food products, including vegetables, fruits, oils, fish, and meat. The scope of the 6% reduced rate was also extended to cover additional products and services

Figure 102. PT – VAT policy gap (%)



Source: own elaboration. Download underlying data [here](#).

Table 80. PT – VAT policy gap decomposition

	2019	2020	2021	2022	2023	2024
Notional ideal VAT revenue (EUR m)	41 157	38 263	41 123	47 336	50 922	54 345
VTTL (EUR m)	20 550	18 118	19 990	23 883	24 987	27 526
VAT policy gap (EUR m)	20 841	20 319	21 320	23 662	26 167	27 094
VAT policy gap (%)	50.6	53.1	51.8	50.0	51.4	49.9
For comparison: EU median policy gap (%)	46.1	47.1	46.1	46.0	46.4	46.8
Actionable VAT policy gap	12 122	11 235	11 972	13 915	16 053	16 172
o/w VAT rate gap (EUR m)	6 132	5 282	5 983	7 563	7 220	8 817
o/w agricultural products, foodstuffs, beverages	2 503	2 595	2 804	3 164	2 364	3 639
o/w pharmaceuticals	410	420	514	563	598	641
o/w accommodation and restaurant services	2 087	1 303	1 516	2 411	2 696	2 862
o/w utilities services	102	112	116	114	122	130
o/w transport services	520	257	363	576	602	641
o/w other	510	594	669	735	837	903
o/w National policy-driven VAT exemption gap (EUR m)	3 470	3 586	3 494	3 585	5 993	4 338
o/w EU policy-mandated VAT exemption gap (EUR m)	2 520	2 368	2 495	2 767	2 841	3 017
Non-actionable VAT policy gap (EUR m)	8 719	9 083	9 348	9 747	10 114	10 922
o/w imputed rents	3 195	3 291	3 346	3 458	3 724	3 954
o/w public education	1 626	1 642	1 674	1 746	1 792	1 951
o/w public healthcare	1 469	1 621	1 815	1 947	1 986	2 167
o/w other	2 429	2 530	2 512	2 596	2 612	2 850
C-efficiency (%)	49.3	47.9	51.1	52.4	51.3	52.6

Source: own elaboration. Download underlying data [here](#). Note: fast estimates for 2024 are based on a simplified method.

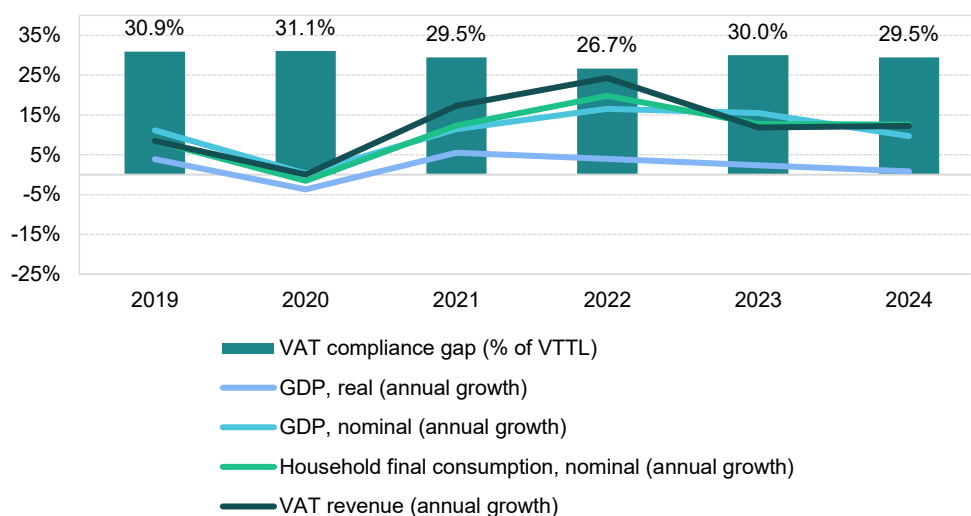
Romania

VAT revenues in Romania grew by 5.1% in 2023, but at a much slower pace than during the post-pandemic peak in 2022 (18.8%). The VAT compliance gap widened to 30.0% in 2023 from 26.7% in 2022, with fast estimates for 2024 suggesting a slight decline to 29.5%.

In 2023, Romania introduced several VAT policy changes: the standard rate of 19% was applied to non-alcoholic drinks, while the reduced rate for hotel, restaurant and catering services was increased to 9%. At the same time, the 5% reduced rate was extended to firewood and a new threshold of RON 600 000 was set for the application of the 5% housing VAT rate. On the compliance side, SAF-T and E-Transport reporting requirements were extended to medium taxpayers and to high-risk goods. These policy and compliance measures shaped the behaviour of VAT revenues in 2023.

Recovery after the COVID-19 pandemic proved relatively short-lived, with the rebound in domestic demand largely concentrated in 2021 and 2022. Romania's growth momentum was curbed by several headwinds: high inflation driven by energy prices, persistent supply chain bottlenecks, energy price volatility linked to Russia's war of aggression against Ukraine and the resulting sanctions and weak external demand. With international trade playing an important role in the Romanian economy – the ratio of total trade to GDP reached 83% in 2023 – slow recovery in Germany and across the EU posed an additional constraint.

Figure 103. RO – VAT compliance gap, VAT revenues, GDP growth and household final consumption



Sources: own elaboration, Eurostat. Note: fast estimates for 2024 are based on a simplified method.

Real GDP growth in Romania stood at 2.4% in 2023, marking a decline of 1.6pp compared to 2022. This indicates an economic slowdown, likely contributing to an **increase in the VAT compliance gap**. Household final consumption growth, strong in 2021 at 7.3% in real terms, slowed to 5.2% in 2022 and further to 2.8% in 2023. By contrast, real government consumption shifted from a contraction to -1.4% in 2022 to an expansion of 6.3% in 2023. GFCF also strengthened, with real growth accelerating to 14.5% in 2023 after rising to 5.4% in 2022.

While measures reported in real values capture the actual change in economic activity by excluding inflation effects, nominal growth rates more directly reflect changes in the VAT base and potential VAT

revenues. Accordingly, nominal final consumption expenditure growth slowed from 17.4% in 2022 to 14.2% in 2023.

Inflation fell from a peak of 12.0% in 2022 to 9.7% in 2023, with the downward trend continuing into 2024. Price pressures were mainly driven by housing, water, electricity, gas and other fuels, as well as transport and food. Inflationary tendencies were present across all major components of household consumption. In the context of the VAT compliance gap, it is noteworthy that tourism demand – as measured by nights spent in tourist accommodations – grew by 11.0% in 2023, a sharp slowdown compared to the exceptional 72.4% increase in 2022. This last trend may be regarded as a factor in driving conditions conducive to the **decrease in the VAT compliance gap**.

GFCF, reflecting investment in fixed assets such as infrastructure, machinery and buildings, grew strongly in nominal terms by 24.4% in 2023. Adjusted for inflation, this corresponds to a moderate increase in real investment activity.

On the supply side, Romania experienced a mixed performance across all sectors in 2023. Agriculture saw a moderate recovery following previous declines in real value-added terms, while industry and manufacturing recorded decreases, reflecting ongoing supply chains disruptions, high energy costs and weak external demand. On the other hand, construction activity experienced a relatively strong rebound. Furthermore, services continued to grow, albeit at a slower pace than in previous periods. As a result, the share of services in total gross value added increased by 0.4pp. Overall, these shifts in Romania's sectoral structure appear likely to have **increased the VAT compliance gap**, as non-compliance risks are generally higher in the services sector.

Table 81. RO – Factors affecting VAT compliance gap (2022-2023)

Variable	2023	Difference (2023 vs 2022)	Expected impact on 2023 VAT compliance gap
GDP growth, real	2.4%	-1.6pp	Increase
Final consumption expenditure growth, nominal	14.2%	-3.2pp	Increase
Household final consumption of food and non-alcoholic beverages growth, nominal	n/a	n/a	n/a
Services susceptible to non-compliance growth, nominal	n/a	n/a	n/a
Services share in GDP	66.5%	0.4pp	Increase
Tourism (nights spent), growth	9.7%	-9.0pp	Decrease
Bankruptcy declarations, growth	-5.6%	51.9pp	Increase
Digital payments growth, nominal	14.9%	28.4pp	Decrease

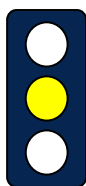
Source: own elaboration based on Eurostat and ECB.

Note: for a discussion of the expected effects of these indicators, please see pages 18 and 19 in section II.a.

Despite challenging economic conditions, Romania recorded a 5.6% decrease in bankruptcy declarations in 2023 (a change of 51.9pp compared to 2022). The change in pace of growth in the number of bankruptcies indicates a potential **increase in the VAT compliance gap**. The impact varied across sectors, with IT and transportation facing relatively higher rates of bankruptcy than others.

Other factors also influenced the VAT compliance gap. In Romania, the nominal value of digital payments increased in 2023 after a decline in 2022. This trend may have exerted **downward pressure, limiting the increase in the VAT compliance gap**.

RO: VAT compliance gap (2019-2024)



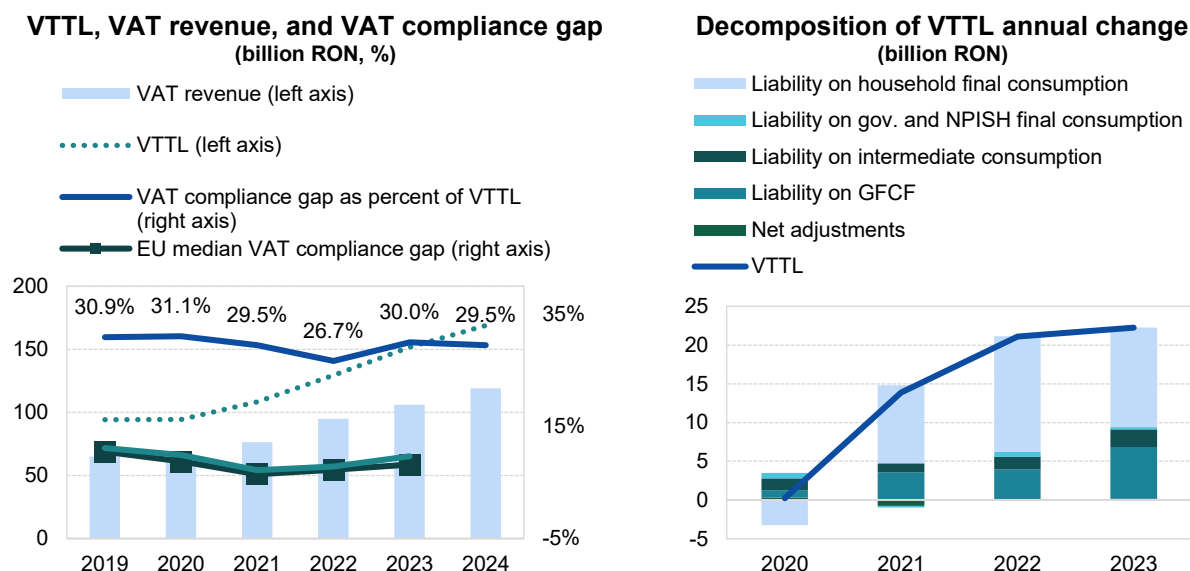
- In Romania, the VAT compliance gap increased to 30.0% in 2023, up from 26.7% in 2022⁴⁰.
- Estimates of the VTTL were revised for the entire period due to adjustments to non-deductible VAT on investments by non-financial corporations. However, some of the underlying survey-based data for this liability component may be inaccurate. In addition, GFCF data for financial corporations shows high variability. Given these potential inaccuracies, the reliability of the estimates was classified as yellow.
- Romania introduced the SAF-T reporting requirement for large taxpayers in 2022. Following a 12-month transition period, the requirement became mandatory in practice as of 2023.

Table 82. RO – VTTL, VAT revenue, and VAT compliance gap

	2019	2020	2021	2022	2023	2024
VTTL (RON m)	94 189	94 414	108 273	129 370	151 620	168 858
<i>o/w liability on household final consumption</i>	62 275	59 027	69 102	84 032	96 883	X
<i>o/w liability on gov. and NPISH final consumption</i>	4 743	5 408	5 237	5 886	6 158	X
<i>o/w liability on intermediate consumption</i>	10 795	12 344	13 529	15 135	17 416	X
<i>o/w liability on GFCF</i>	16 105	17 049	20 606	24 551	31 261	X
<i>o/w net adjustments</i>	271	585	-201	-234	-98	X
VAT revenue (RON m)	65 061	65 077	76 336	94 867	106 103	119 072
VAT compliance gap (RON m)	29 128	29 337	31 937	34 502	45 517	49 786
VAT compliance gap (percent of VTTL)	30.9%	31.1%	29.5%	26.7%	30.0%	29.5%
<i>EU average VAT compliance gap (percent of VTTL)</i>	11.1%	9.9%	7.2%	7.9%	9.5%	X
VAT compliance gap change since 2019					-0.9pp	

Source: own elaboration. Download underlying data [here](#). Note: fast estimates for 2024 are based on a simplified method.

Figure 104. RO – VTTL, VAT revenue, and VAT compliance gap



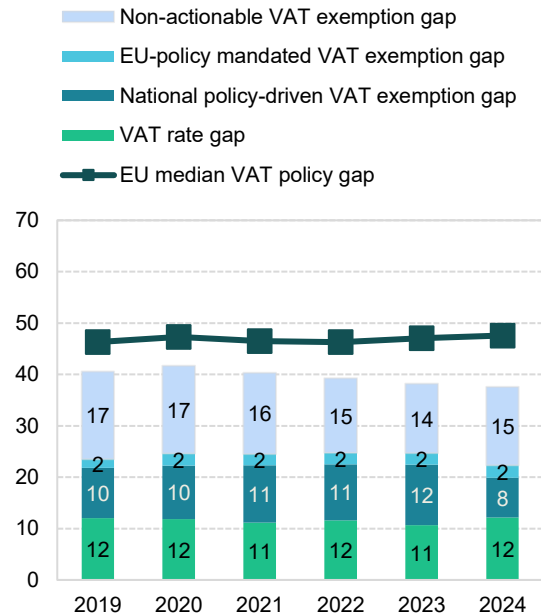
Source: own elaboration. Download underlying data [here](#). Note: fast estimates for 2024 are based on a simplified method.

⁴⁰ **Yellow traffic light:** estimates based on somewhat outdated information or showing elevated unexplained volatility of estimates. They are based on the latest data available at the cut-off date for data collection (15/07/2025). As datasets are regularly revised, future editions will reassess and update the estimates where necessary. In the case of Romania, the authors were informed that additional data may become available which could significantly affect the VAT gap estimates. Once these data are provided, they will be reviewed and the estimates updated accordingly.

RO: VAT policy gap (2019-2024)

- The VAT policy gap in Romania declined from 39.2% in 2022 to 38.2% in 2023 and further to 37.6% in 2024. This downward trend has continued uninterrupted since 2020, though the changes were driven by different components within the disaggregated structure of the VAT policy gap.
- In 2023, Romania increased the VAT rate on non-alcoholic drinks to 19% and raised the rate for hotel accommodation, restaurant, and catering services to 9%. At the same time, the 5% VAT rate was extended to cover firewood.
- In 2024, several items previously subject to the 5% rate were shifted to 9%. The VAT rate on alcohol-free beer and sugary foods increased from 9% to 19%. The VAT rate on sports facility use and train passenger transport rose from 5% to 19%. In addition, VAT exemptions with the right of deduction for certain public hospital supplies were withdrawn.

Figure 105. RO – VAT policy gap (%)



Source: own elaboration. Download underlying data [here](#).

Table 83. RO – VAT policy gap decomposition

	2019	2020	2021	2022	2023	2024
Notional ideal VAT revenue (RON m)	158 110	160 989	181 906	213 487	245 597	270 888
VTTL (RON m)	94 189	94 414	108 273	129 370	151 620	168 858
VAT policy gap (RON m)	64 151	67 111	73 343	83 790	93 799	101 829
VAT policy gap (%)	40.6	41.7	40.3	39.2	38.2	37.6
<i>For comparison: EU median policy gap (%)</i>	46.1	47.1	46.1	46.0	46.4	46.8
Actionable VAT policy gap	37 140	39 638	44 580	52 813	60 581	60 378
o/w VAT rate gap (RON m)	19 050	19 096	20 273	24 802	26 150	33 024
o/w agricultural products, foodstuffs, beverages	12 023	12 553	12 109	12 095	13 774	15 801
o/w pharmaceuticals	1 881	2 180	2 368	2 602	3 077	3 569
o/w accommodation and restaurant services	2 551	2 496	2 947	6 711	5 207	5 964
o/w utilities services	328	353	381	446	1 058	1 238
o/w transport services	1 087	607	1 063	1 343	1 505	1 756
o/w other	1 180	907	1 404	1 606	1 530	4 696
o/w National policy-driven VAT exemption gap (RON m)	15 450	16 688	20 336	23 256	29 005	20 884
o/w EU policy-mandated VAT exemption gap (RON m)	2 639	3 854	3 972	4 756	5 425	6 470
Non-actionable VAT policy gap (RON m)	27 011	27 474	28 763	30 977	33 218	41 451
o/w imputed rents	12 186	12 730	13 912	15 404	16 984	19 505
o/w public education	3 941	3 758	3 708	4 549	4 970	6 195
o/w public healthcare	4 967	6 086	7 038	6 650	7 155	9 374
o/w other	5 917	4 900	4 105	4 374	4 109	6 377
C-efficiency (%)	47.1	46.5	49.4	52.2	51.9	51.3

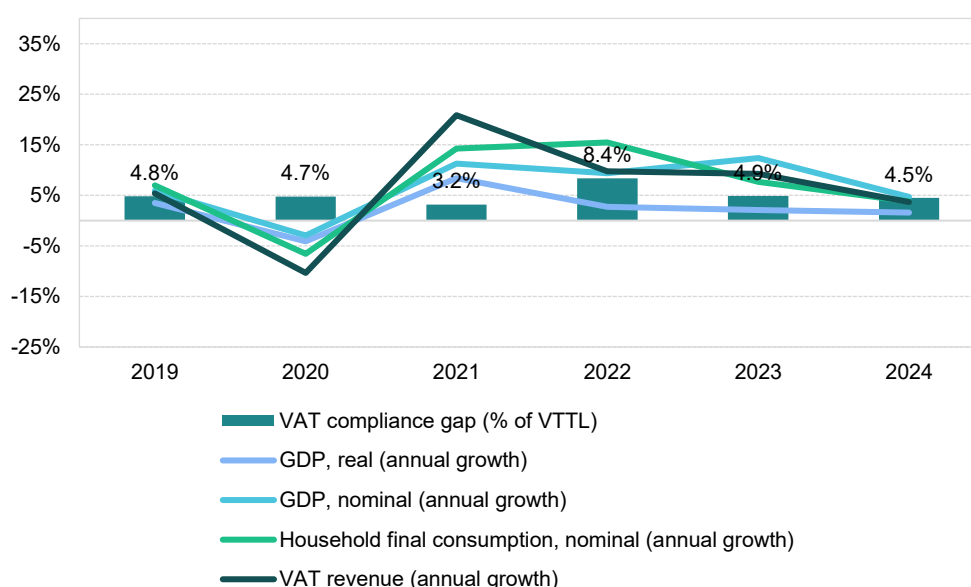
Source: own elaboration. Download underlying data [here](#). Note: fast estimates for 2024 are based on a simplified method.

Slovenia

VAT revenues in Slovenia grew by 9.3% in 2023, slightly below the post-pandemic peak of 9.7% recorded in 2022. The VAT compliance gap, however, fell sharply to 4.9% in 2023 from 8.4% in 2022, with a fast estimate for 2024 of 4.5%. In 2023, Slovenia introduced a special 5% VAT rate for certain fire-fighting vehicles and equipment supplied to public or voluntary fire services. In addition, new rules required businesses to issue invoices to final consumers in all cases, regardless of the payment method. These policy and compliance measures contributed to the evolution of VAT revenues.

Slovenia's post-COVID-19 recovery has seen a significant rebound in domestic demand in 2021 and 2022, with some slowdown in 2023. Economic growth was constrained by several factors: high inflation driven by energy prices, persistent supply chain bottlenecks, energy price volatility resulting from Russia's war of aggression against Ukraine and subsequent sanctions and weak external demand. Given Slovenia's high reliance on international trade in both final and intermediate goods – the ratio of total trade to GDP reached 160% in 2023 – slow recovery in Germany and across the EU also acted as a limiting factor.

Figure 106. SI – VAT compliance gap, VAT revenues, GDP growth and household final consumption



Sources: own elaboration, Eurostat. Note: fast estimates for 2024 are based on a simplified method.

Real GDP growth in Slovenia reached 2.4% in 2023, representing a slight decline of 0.3 percentage points compared to 2022. This suggests an economic slowdown that may have contributed to **upward pressure on the VAT compliance gap**. Household final consumption, which had exhibited a robust real growth of 11.2% in 2021, slowed down to 3.6% in 2022 and eventually stagnated at 0.0% growth in 2023. By contrast, government consumption growth reversed from -0.6% in 2022 to 2.1% in 2023. Furthermore, GFCF grew in real terms at a faster pace of 5.5% in 2023, compared to 4.7% in 2022.

While measures reported in real values capture the actual change in economic activity by excluding inflation effects, nominal growth rates more directly reflect changes in the VAT base and potential VAT revenues. Accordingly, nominal final consumption expenditure growth slowed from 10.7% in 2022 to 8.6% in 2023. In particular, growth of nominal household final consumption of food and non-alcoholic

beverages fell sharply (-32.6pp), which may have further **limited the decrease in the VAT compliance gap**.

Inflation declined from a peak of 9.3% in 2022 to 7.2% in 2023, with the downward trend continuing into 2024. The main drivers of inflation were housing, water, electricity, gas and other fuels, as well as food, transport, furnishings, restaurants and hotels. Overall, inflationary pressures were present across nearly all components of household consumption, except communications. In the context of the VAT compliance gap, it is notable that recreational services, restaurant and accommodation services grew by 10.3% in nominal household consumption in 2023, though at a slower pace than in 2022. Similarly, year-over-year change in demand for tourism – as measured by nights spent in tourist accommodations – increased by 3.5% in 2023, down from 38.5% in 2022. These last two trends may be interpreted as forces contributing to a **decrease in the VAT compliance gap**.

GFCF, which reflects investment in fixed assets such as infrastructure, machinery and buildings, rose by 10.6% in nominal terms in 2023. Adjusted for inflation, this indicates a moderate increase in real investment activity.

On the supply side, performance varied across sectors. Services growth in real value-added terms declined more than in other sectors in 2023, while construction experienced the largest real gains. These changes resulted in a 1.2pp decrease in the share of services. Overall, the sectoral shifts in Slovenia in 2023 appear likely to have **decreased the VAT compliance gap**, as non-compliance risks are generally higher in the services sector.

Table 84. SI – Factors affecting VAT compliance gap (2022-2023)

Variable	2023	Difference (2023 vs 2022)	Expected impact on 2023 VAT compliance gap
GDP growth, real	2.4%	-0.3pp	Increase
Final consumption expenditure growth, nominal	8.6%	-2.1pp	Increase
Household final consumption of food and non-alcoholic beverages growth, nominal	9.7%	-32.6pp	Increase
Services susceptible to non-compliance growth, nominal	10.3%	-5.3pp	Decrease
Services share in GDP	65.0%	-1.2pp	Decrease
Tourism (nights spent), growth	3.5%	-35.0pp	Decrease
Bankruptcy declarations, growth	-6.0%	2.1pp	Decrease
Digital payments growth, nominal	-0.5%	-10.3pp	Increase

Source: own elaboration based on Eurostat and ECB.

Note: for a discussion of the expected effects of these indicators, please see pages 18 and 19 in section II.a.

Slovenia's comparatively favourable economic conditions relative to the rest of the EU contributed to a 6.0% decline in the number of bankruptcies in 2023, which may have helped **reduce the VAT compliance gap**. However, sectoral patterns were uneven, with industry (excluding construction) experiencing relatively higher rates.

Other factors also influenced the VAT compliance gap. The prevalence of digital payments (measured as the aggregate of payments with cards, e-money, direct debits and bank transfers) is generally associated with higher compliance, as digital and automated transactions are easier to monitor. In Slovenia, the nominal value of digital payments decreased slightly in 2023. This factor may have **limited the decrease in the VAT compliance gap**.

SI: VAT compliance gap (2019-2024)



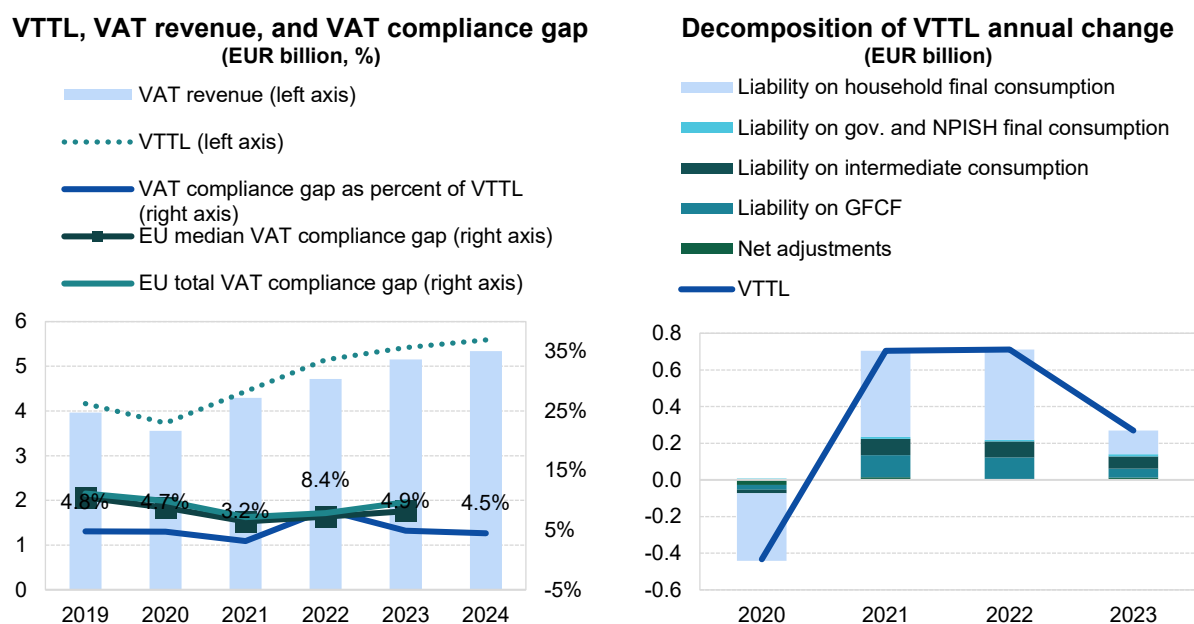
- The VAT compliance gap fell from 8.4% in 2022 to 4.9% in 2023, returning to roughly the pre-COVID-19-pandemic levels observed in 2019⁴¹.
- In 2024, the VAT compliance gap is expected to decline further by 0.4pp.

Table 85. SI – VTTL, VAT revenue, and VAT compliance gap

	2019	2020	2021	2022	2023	2024
VTTL (EUR m)	4 163	3 730	4 434	5 145	5 415	5 589
<i>o/w liability on household final consumption</i>	2 991	2 622	3 093	3 585	3 715	X
<i>o/w liability on gov. and NPISH final consumption</i>	99	107	117	125	136	X
<i>o/w liability on intermediate consumption</i>	560	541	630	717	784	X
<i>o/w liability on GFCF</i>	427	402	523	642	690	X
<i>o/w net adjustments</i>	86	58	71	76	89	X
VAT revenue (EUR m)	3 962	3 553	4 294	4 713	5 150	5 339
VAT compliance gap (EUR m)	200	177	141	432	264	251
VAT compliance gap (percent of VTTL)	4.8%	4.7%	3.2%	8.4%	4.9%	4.5%
<i>EU average VAT compliance gap (percent of VTTL)</i>	11.1%	9.9%	7.2%	7.9%	9.5%	X
VAT compliance gap change since 2019					0.1pp	

Source: own elaboration. Download underlying data [here](#). Note: fast estimates for 2024 are based on a simplified method. Rounded changes may not equal the change between rounded values.

Figure 107. SI – VTTL, VAT revenue, and VAT compliance gap



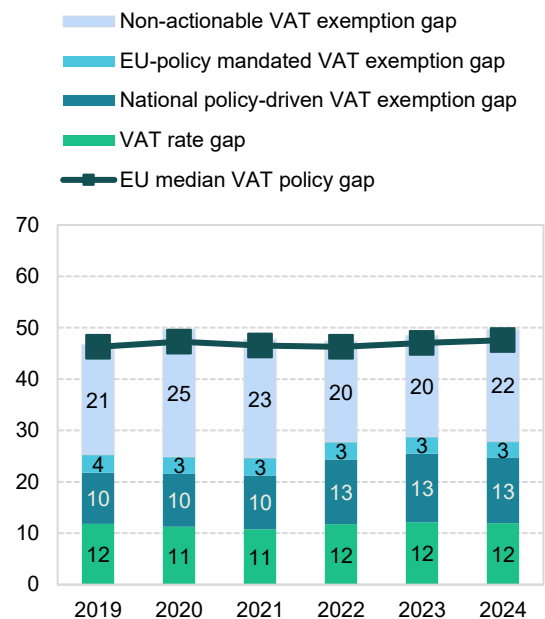
Source: own elaboration. Download underlying data [here](#). Note: fast estimates for 2024 are based on a simplified method.

⁴¹ **Green traffic light:** estimates are based on up-to-date data, show no unexplained volatility and reveal no unexpected patterns suggesting inaccuracies. This applies to both VAT compliance gap and VAT policy gap estimates. The estimates are based on the latest data available at the cut-off date for data collection (15/07/2025). As datasets are regularly revised, future editions will reassess and update the estimates accordingly.

SI: VAT policy gap (2019-2023)

- The VAT policy gap in Slovenia increased between 2022 and 2024, from 47.4% in 2022 to 48.4% in 2023 and 49.7% in 2024. This change was primarily driven by the national policy-driven VAT exemption gap in 2023 and the non-actionable VAT policy gap in 2024. Aside from these components, the overall structure of the VAT policy gap remained relatively stable.
- To mitigate the impact of rising energy prices, Slovenia introduced a package of temporary VAT rate reductions on electricity, natural gas supply, district heating, and firewood, effective from September 2022. In 2023, a special 5% VAT rate was introduced for standardised fire-fighting vehicles and equipment supplied to public fire services or voluntary fire-fighting units within fire brigades.

Figure 108. SI – VAT policy gap (%)



Source: own elaboration. Download underlying data [here](#).

Table 86. SI – VAT policy gap decomposition

	2019	2020	2021	2022	2023	2024
Notional ideal VAT revenue (EUR m)	7 727	7 360	8 410	9 703	10 407	11 003
VTTL (EUR m)	4 163	3 730	4 434	5 145	5 415	5 589
VAT policy gap (EUR m)	3 607	3 659	4 014	4 595	5 041	5 464
VAT policy gap (%)	46.7	49.7	47.7	47.4	48.4	49.7
For comparison: EU median policy gap (%)	46.1	47.1	46.1	46.0	46.4	46.8
Actionable VAT policy gap	1 960	1 832	2 079	2 694	2 996	3 073
o/w VAT rate gap (EUR m)	916	828	906	1 140	1 267	1 316
o/w agricultural products, foodstuffs, beverages	442	443	450	533	566	585
o/w pharmaceuticals	94	97	104	121	133	145
o/w accommodation and restaurant services	154	100	134	194	229	237
o/w utilities services	55	58	66	100	119	123
o/w transport services	54	31	39	46	52	56
o/w other	117	99	113	147	168	170
o/w National policy-driven VAT exemption gap (EUR m)	768	759	883	1 221	1 386	1 397
o/w EU policy-mandated VAT exemption gap (EUR m)	277	245	291	333	343	361
Non-actionable VAT policy gap (EUR m)	1 647	1 827	1 934	1 901	2 045	2 391
o/w imputed rents	571	583	611	691	726	751
o/w public education	384	395	467	446	484	569
o/w public healthcare	350	434	468	443	488	577
o/w other	341	415	388	322	347	494
C-efficiency (%)	57.2	54.1	57.7	55.6	56.7	55.1

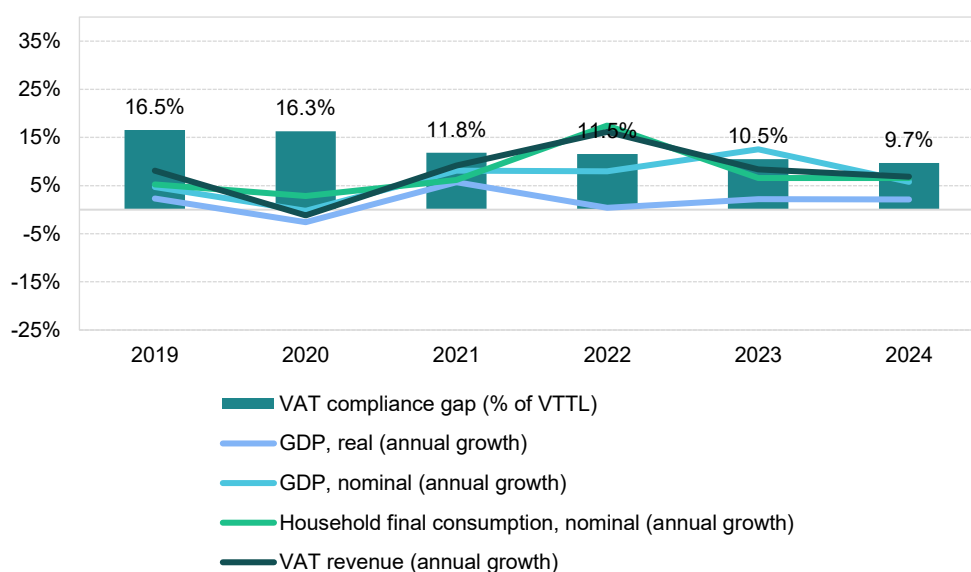
Source: own elaboration. Download underlying data [here](#). Note: fast estimates for 2024 are based on a simplified method.

Slovakia

VAT revenues in Slovakia grew by 8.4% in 2023, down from the post-pandemic peak of 16.2% recorded in 2022. The VAT compliance gap declined to 10.5% in 2023 from 11.5% in 2022, also remaining below 2019 levels (16.5%). Fast estimates for 2024 suggest a further decline to 9.7%. In 2023, Slovakia implemented several VAT policy measures: a temporary reduction of VAT for restaurant and catering services; a permanent 10% rate for accommodation, cable cars, sports facilities, and pools; and a 5% rate applied to certain state-supported rental housing projects. Additionally, the VAT registration threshold was raised to EUR 75 000, mandatory registration for fully VAT-exempt activities was abolished and rules for bad debt relief were expanded and simplified. These policy and compliance changes contributed to VAT revenue dynamics.

Slovakia's post-COVID-19 recovery has been relatively short-lived, with a rebound in domestic demand largely limited to 2021 and 2022. Economic growth was constrained by several factors: high inflation driven by energy prices, persistent supply chain bottlenecks, energy price volatility resulting from Russia's war of aggression against Ukraine and related sanctions and weak export demand. Given Slovakia's high dependence on international trade in both final and intermediate goods – the total trade-to-GDP ratio reached 181% in 2023 – slow recovery in Germany and the rest of the EU also acted as a limiting factor.

Figure 109. SK – VAT compliance gap, VAT revenues, GDP growth and household final consumption



Sources: own elaboration, Eurostat. Note: fast estimates for 2024 are based on a simplified method.

Real GDP growth in Slovakia reached 2.2% in 2023, up 1.7pp compared to 2022, which could have acted as a force contributing to a **decrease in the VAT compliance gap**. Household final consumption, which had grown strongly in 2022 (5.0% in real terms), contracted sharply by -3.4% in 2023. Real government consumption growth remained negative, changing slightly from -2.9% in 2022 to -2.5% in 2023. GFCF grew more moderately in real terms, at 4.0% in 2023 compared with 4.3% in 2022.

While measures reported in real values capture the actual change in economic activity by excluding inflation effects, nominal growth rates more directly reflect changes in the VAT base and potential VAT revenues. Accordingly, nominal final consumption expenditure growth slowed from 15.0% in 2022 to

7.0% in 2023. However, nominal household final consumption of food and non-alcoholic beverages rose sharply (7.4pp), which may have reinforced a **decrease in the VAT compliance gap**.

Inflation declined from a peak of 12.1% in 2022 to 11.0% in 2023, with the downward trend continuing into 2024. Key inflation drivers included housing, water, electricity, gas and other fuels, as well as food, transport, restaurants and hotels. Inflationary pressures were present across all components of household consumption. In the context of the VAT compliance gap, recreational services, restaurant and accommodation services grew by 9.8% in nominal household consumption in 2023, although at a slower pace than in 2022. Growth in tourism demand – as measured by nights spent in tourist accommodations – reached 16.3% in 2023, down from 56.0% in 2022. These last two trends may be interpreted as other factors influencing the **decrease in the VAT compliance gap**.

In nominal terms, GFCF increased by 13.4% in 2023, which, after adjusting for inflation, points to a moderate increase in real investment activity.

On the supply side, sectoral performance varied. Services experienced the largest decline in real value-added growth compared to other sectors, contributing to a 2.3pp decrease in the share of services in the overall economy. Overall, the sectoral changes in Slovakia in 2023 appear likely to have **decreased the VAT compliance gap**, as non-compliance risks tend to be higher in the services sector.

Table 87. SK – Factors affecting VAT compliance gap (2022-2023)

Variable	2023	Difference (2023 vs 2022)	Expected impact on 2023 VAT compliance gap
GDP growth, real	2.2%	1.7pp	Decrease
Final consumption expenditure growth, nominal	7.0%	-8.0pp	Increase
Household final consumption of food and non-alcoholic beverages growth, nominal	15.7%	7.4pp	Decrease
Services susceptible to non-compliance growth, nominal	9.8%	-25.2pp	Decrease
Services share in GDP	65.8%	-2.3pp	Decrease
Tourism (nights spent), growth	16.3%	-39.7pp	Decrease
Bankruptcy declarations, growth	15.7%	41.8pp	Increase
Digital payments growth, nominal	21.3%	-5.0pp	Increase

Source: own elaboration based on Eurostat and ECB.

Note: for a discussion of the expected effects of these indicators, please see pages 18 and 19 in section II.a.

In Slovakia, the growth of bankruptcies accelerated in 2023 (up 41.8pp compared to 2022), indicating **upward pressure limiting the decrease in the VAT compliance gap**.

Other factors also influenced the VAT compliance gap. The prevalence of digital payments (measured as the aggregate of payments with cards, e-money, direct debits and bank transfers) is generally associated with higher compliance, as digital and automated transactions are easier to monitor. In Slovakia, the nominal value of digital payments grew in 2023, although at a slower pace than in 2022. This factor may have contributed to **upward pressure, limiting the decrease in the VAT compliance gap**.

SK: VAT compliance gap (2019-2024)



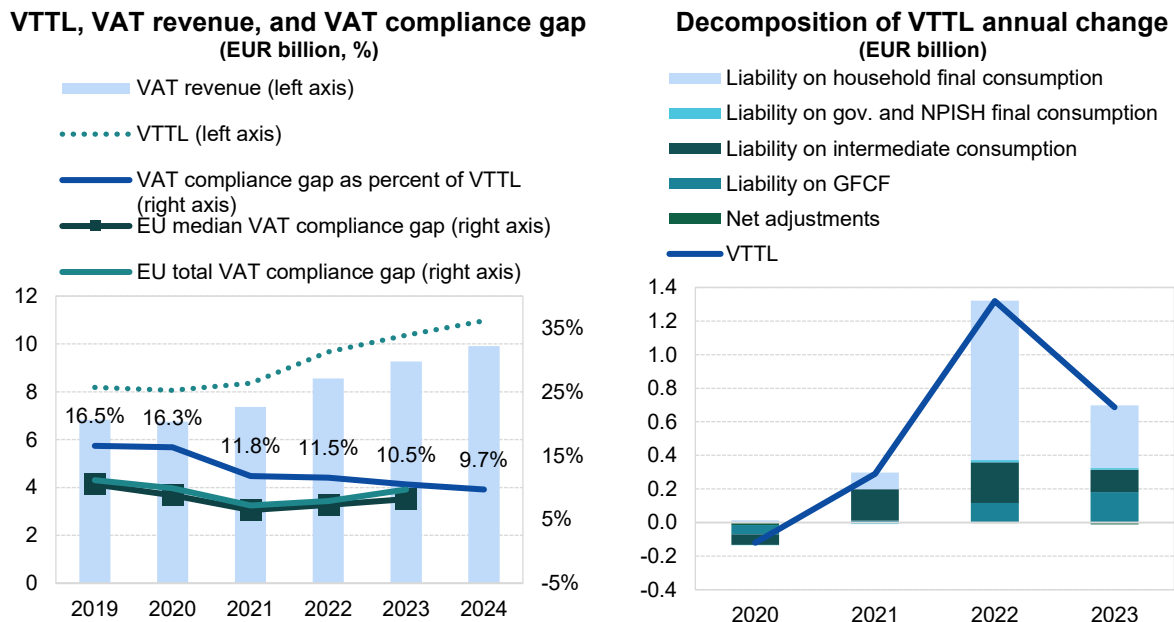
- In Slovakia, the VAT compliance gap fell from 11.5% in 2022 to 10.5% in 2023. A further decline, down to 9.7%, is expected for 2024⁴².
- Since the post-COVID-19 period, the VAT compliance gap has remained approximately 5-6pp lower than in 2019.

Table 88. SK – VTTL, VAT revenue, and VAT compliance gap

	2019	2020	2021	2022	2023	2024
VTTL (EUR m)	8 183	8 063	8 352	9 672	10 359	10 967
<i>o/w liability on household final consumption</i>	6 044	6 058	6 158	7 108	7 480	X
<i>o/w liability on gov. and NPISH final consumption</i>	104	103	94	107	118	X
<i>o/w liability on intermediate consumption</i>	1 162	1 100	1 288	1 531	1 664	X
<i>o/w liability on GFCF</i>	915	860	869	986	1 167	X
<i>o/w net adjustments</i>	-43	-59	-57	-60	-71	X
VAT revenue (EUR m)	6 830	6 749	7 366	8 556	9 272	9 904
VAT compliance gap (EUR m)	1 353	1 314	987	1 116	1 087	1 062
VAT compliance gap (percent of VTTL)	16.5%	16.3%	11.8%	11.5%	10.5%	9.7%
<i>EU average VAT compliance gap (percent of VTTL)</i>	11.1%	9.9%	7.2%	7.9%	9.5%	X
VAT compliance gap change since 2019					-6.0pp	

Source: own elaboration. Download underlying data [here](#). Note: fast estimates for 2024 are based on a simplified method. Rounded changes may not equal the change between rounded values.

Figure 110. SK – VTTL, VAT revenue, and VAT compliance gap



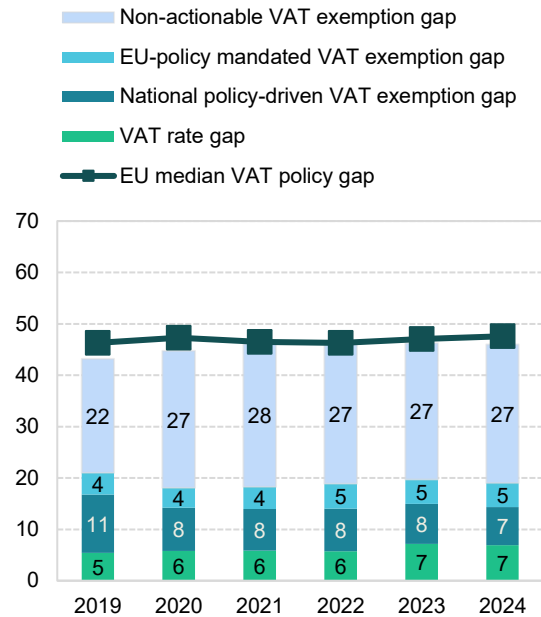
Source: own elaboration, [download underlying data](#). Note: fast estimates for 2024 are based on a simplified method.

⁴² **Green traffic light:** estimates are based on up-to-date data, show no unexplained volatility and reveal no unexpected patterns suggesting inaccuracies. This applies to both VAT compliance gap and VAT policy gap estimates. The estimates are based on the latest data available at the cut-off date for data collection (15/07/2025). As datasets are regularly revised, future editions will reassess and update the estimates accordingly.

SK: VAT policy gap (2019-2024)

- The VAT policy gap in Slovakia remained stably around 46% between 2022 and 2024. The disaggregated structure also showed little change, with the only notable movement being a 1.4pp increase in the VAT rate gap in 2023.
- In 2023, Slovakia introduced several VAT policy measures: a temporary reduction for restaurant and catering services; a permanent 10% rate for accommodation, cable car transportation, sports facilities and swimming pools; a 5% rate for the delivery of buildings – including building land – that qualify for state-supported rental housing, as well as for the restoration or reconstruction of such buildings.

Figure 111. SK – VAT policy gap (%)



Source: own elaboration. Download underlying data [here](#).

Table 89. SK – VAT policy gap decomposition

	2019	2020	2021	2022	2023	2024
Notional ideal VAT revenue (EUR m)	14 495	14 707	15 621	18 049	19 410	20 472
VTTL (EUR m)	8 183	8 063	8 352	9 672	10 359	10 967
VAT policy gap (EUR m)	6 262	6 578	7 199	8 304	8 969	9 419
VAT policy gap (%)	43.2	44.7	46.1	46.0	46.2	46.0
For comparison: EU median policy gap (%)	46.1	47.1	46.1	46.0	46.4	46.8
Actionable VAT policy gap	3 045	2 654	2 854	3 413	3 821	3 896
o/w VAT rate gap (EUR m)	783	852	917	1 030	1 386	1 419
o/w agricultural products, foodstuffs, beverages	109	173	239	263	249	260
o/w pharmaceuticals	164	179	171	188	203	218
o/w accommodation and restaurant services	23	20	22	30	336	295
o/w utilities services	66	48	48	54	59	64
o/w transport services	161	157	167	186	203	221
o/w other	260	275	271	309	335	361
o/w National policy-driven VAT exemption gap (EUR m)	1 644	1 239	1 259	1 499	1 519	1 518
o/w EU policy-mandated VAT exemption gap (EUR m)	618	564	678	883	916	960
Non-actionable VAT policy gap (EUR m)	3 217	3 924	4 344	4 891	5 148	5 523
o/w imputed rents	1 274	1 544	1 771	1 983	2 002	2 133
o/w public education	483	544	557	623	655	702
o/w public healthcare	519	626	712	819	892	961
o/w other	940	1 210	1 304	1 467	1 599	1 727
C-efficiency (%)	52.6	51.2	52.7	53.0	53.4	53.7

Source: own elaboration. Download underlying data [here](#). Note: fast estimates for 2024 are based on a simplified method.

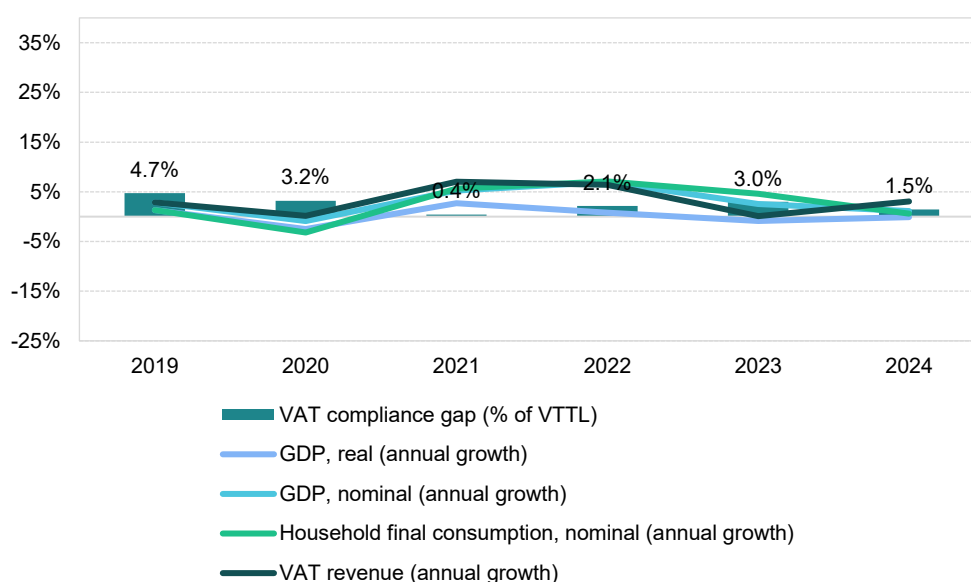
Finland

VAT revenues in Finland grew by 0.1% in 2023, well below the post-pandemic peak of 6.4% recorded in 2022. The VAT compliance gap increased to 3.0% in 2023 from 2.1% in 2022, though it remained below the estimated 2019 level of 4.7%. Fast estimates for 2024 suggest a decline to 1.5%.

In 2023, Finland temporarily applied a reduced 10% VAT rate to electricity sales and maintained a VAT exemption for passenger transport. These measures contributed to the evolution of VAT revenues.

Post-COVID-19 recovery in Finland was relatively short-lived, with a significant rebound in domestic demand largely confined to 2021 and 2022. Economic growth was constrained by several factors: high inflation driven by energy prices, ongoing supply chain bottlenecks, energy price volatility resulting from Russia's war of aggression against Ukraine and related sanctions and weak external demand. Given that Finland relies on international trade in both final and intermediate goods – the ratio of total trade to GDP reached 86% in 2023 – slow recovery in Germany and across the EU also presented a limiting factor.

Figure 112. FI – VAT compliance gap, VAT revenues, GDP growth and household final consumption



Sources: own elaboration, Eurostat. Note: fast estimates for 2024 are based on a simplified method.

The real GDP of Finland contracted by 0.9% in 2023 in real terms, a decline of 1.7pp compared to 2022, which could be interpreted as a measure of economic slowdown contributing to an **increase in the VAT compliance gap**. Household final consumption, which had grown moderately in 2021 to 3.4% in real terms, slowed down to 0.8% in 2022 and further declined to 0.2% in 2023. In contrast, government consumption real growth reversed from -0.6% in 2022 to 2.6% in 2023. Real GFCF declined sharply by 7.4% in 2023, following 1.5% growth in 2022.

While measures reported in real values capture the actual change in economic activity by excluding inflation effects, nominal growth rates more directly reflect changes in the VAT base and potential VAT revenues. Accordingly, nominal final consumption expenditure growth slowed from 6.3% in 2022 to 5.8% in 2023. In particular, growth of nominal household final consumption of food and non-alcoholic

beverages fell sharply (-20.3pp), which may have further contributed to an **increase in the VAT compliance gap**.

Inflation eased from a peak of 7.2% in 2022 to 4.3% in 2023, marking a downward trend that continued into 2024. Key inflation drivers included housing, water, electricity, gas and other fuels, as well as food and transport. Inflationary pressures were present across all components of household consumption. In terms of the VAT compliance gap, nominal household consumption categories such as recreational services, restaurants and accommodation grew by 4.9% in 2023, a slowdown of 1.8pp compared to 2022. Similarly, year-over-year change in demand for tourism – as measured by nights spent in tourist accommodations – increased by only 3.9% in 2023, down from 25.6% in 2022. These last two developments can be regarded as factors that drive conditions conducive to a **decrease in the VAT compliance gap**.

Nominal GFCF declined by 3.0% in 2023, indicating a substantial contraction in real investment activity.

On the supply side, a slowdown was observed across sectors. Services growth in real value-added terms declined less than other sectors, while industry experienced a contraction due to supply chain disruptions, high energy costs, weak external demand and a tight labour market. These shifts led to a 2.1pp increase in the share of services. Overall, the sectoral changes in Finland in 2023 appear likely to have **increased the VAT compliance gap**, as non-compliance risks are typically higher in the services sector.

Table 90. FI – Factors affecting VAT compliance gap (2022-2023)

Variable	2023	Difference (2023 vs 2022)	Expected impact on 2023 VAT compliance gap
GDP growth, real	-0.9%	-1.7pp	Increase
Final consumption expenditure growth, nominal	5.8%	-0.5pp	Increase
Household final consumption of food and non-alcoholic beverages growth, nominal	10.4%	-20.3pp	Increase
Services susceptible to non-compliance growth, nominal	4.9%	-1.8pp	Decrease
Services share in GDP	70.5%	2.1pp	Increase
Tourism (nights spent), growth	3.9%	-21.7pp	Decrease
Bankruptcy declarations, growth	25.5%	17.0pp	Increase
Digital payments growth, nominal	-7.6%	-45.9pp	Increase

Source: own elaboration based on Eurostat and ECB.

Note: for a discussion of the expected effects of these indicators, please see pages 18 and 19 in section II.a.

Economic slowdown in Finland led to a 25.5% increase in bankruptcy rates in 2023, indicating a potential **widening of the VAT compliance gap**.

Other factors also influenced the VAT compliance gap. The prevalence of digital payments (measured as the aggregate of payments with cards, e-money, direct debits and bank transfers) is generally associated with lower non-compliance, as digital and automated transactions are easier to monitor. In Finland, the nominal value of digital payments declined by -7.6% between 2022 and 2023. This factor may have contributed to **upward pressure on the VAT compliance gap**.

FI: VAT compliance gap (2019-2024)



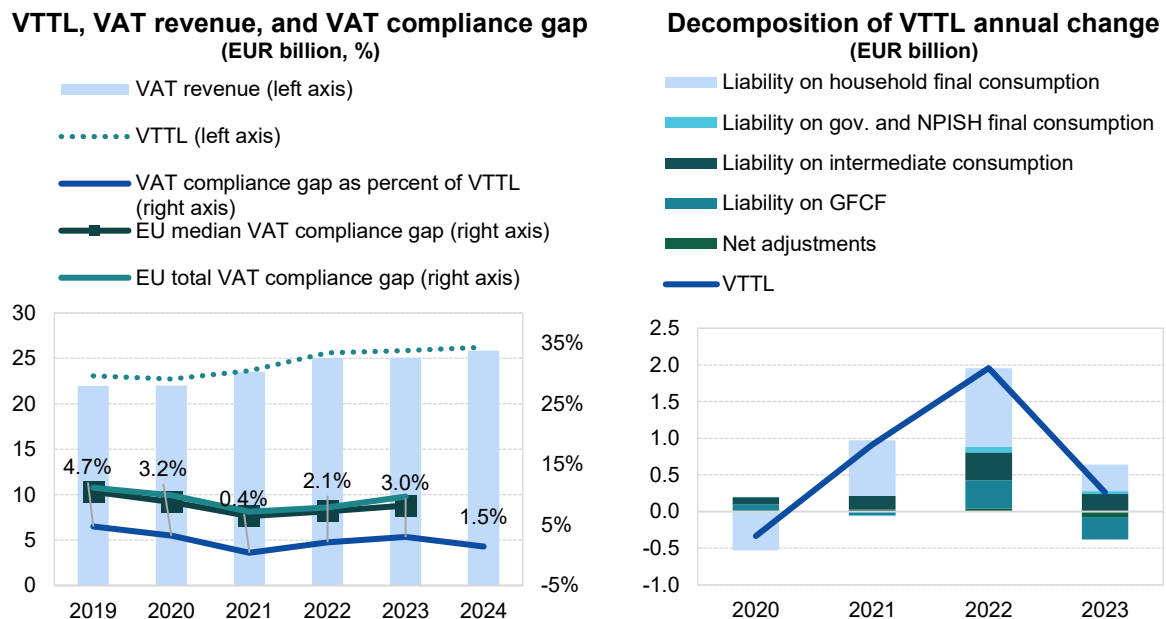
- In Finland, the VAT compliance gap increased to 3.0% in 2023, up from 2.1% in 2022⁴³.
- Overall, the gap remained stable and was among the lowest in the EU throughout the period from 2019 to 2024.

Table 91. FI – VTTL, VAT revenue, and VAT compliance gap

	2019	2020	2021	2022	2023	2024
VTTL (EUR m)	23 069	22 735	23 647	25 604	25 864	26 238
<i>o/w liability on household final consumption</i>	12 205	11 684	12 443	13 515	13 881	X
<i>o/w liability on gov. and NPISH final consumption</i>	565	566	557	634	672	X
<i>o/w liability on intermediate consumption</i>	4 850	4 943	5 129	5 508	5 748	X
<i>o/w liability on GFCF</i>	4 842	4 942	4 889	5 273	4 964	X
<i>o/w net adjustments</i>	608	600	629	674	600	X
VAT revenue (EUR m)	21 974	22 005	23 551	25 061	25 087	25 856
VAT compliance gap (EUR m)	1 095	730	96	543	777	382
VAT compliance gap (percent of VTTL)	4.7%	3.2%	0.4%	2.1%	3.0%	1.5%
<i>EU average VAT compliance gap (percent of VTTL)</i>	11.1%	9.9%	7.2%	7.9%	9.5%	X
VAT compliance gap change since 2019					-1.7pp	

Source: own elaboration. Download underlying data [here](#). Note: fast estimates for 2024 are based on a simplified method. Rounded changes may not equal the change between rounded values.

Figure 113. FI – VTTL, VAT revenue, and VAT compliance gap



Source: own elaboration. Download underlying data [here](#). Note: fast estimates for 2024 are based on a simplified method.

⁴³ **Green traffic light:** estimates are based on up-to-date data, show no unexplained volatility, and reveal no unexpected patterns suggesting inaccuracies. This applies to both VAT compliance gap and VAT policy gap estimates. The estimates are based on the latest data available at the cut-off date for data collection (15/07/2025). As datasets are regularly revised, future editions will reassess and update the estimates accordingly.

FI: VAT policy gap (2019-2024)

- The VAT policy gap in Finland increased from 48.8% in 2022 to 51.2% in 2023, eventually stabilising at 51.3% in 2024. However, variability across the disaggregated categories was notable: in 2023, the national policy-driven VAT exemption gap and the non-actionable VAT policy gap increased by 1.5pp and 2.4pp, respectively, while the VAT rate gap declined by 1.0pp.
- Several observed shifts were driven by legislative changes. The VAT rate for electricity consumption was temporarily reduced from 24% to 10% between December 2022 and April 2023. Additionally, Finland maintained a VAT exemption for passenger transport in 2023. In 2024, a new standard VAT rate of 25.5% was introduced.

Figure 114. FI – VAT policy gap (%)

Non-actionable VAT exemption gap
 EU-policy mandated VAT exemption gap
 National policy-driven VAT exemption gap
 VAT rate gap
 EU median VAT policy gap



Source: own elaboration. Download underlying data [here](#).

Table 92. FI – VAT policy gap decomposition

	2019	2020	2021	2022	2023	2024
Notional ideal VAT revenue (EUR m)	44 702	44 405	45 814	48 680	51 851	52 686
VTTL (EUR m)	23 069	22 735	23 647	25 604	25 864	26 238
VAT policy gap (EUR m)	22 229	22 256	22 784	23 738	26 573	27 039
VAT policy gap (%)	49.7	50.1	49.7	48.8	51.2	51.3
<i>For comparison: EU median policy gap (%)</i>	46.1	47.1	46.1	46.0	46.4	46.8
Actionable VAT policy gap	10 101	9 701	9 185	9 876	10 579	10 341
o/w VAT rate gap (EUR m)	4 321	4 068	4 216	4 687	4 500	4 654
o/w agricultural products, foodstuffs, beverages	1 236	1 298	1 300	1 352	1 437	1 509
o/w pharmaceuticals	419	429	421	443	487	511
o/w accommodation and restaurant services	693	542	547	689	780	835
o/w utilities services	0	0	0	35	83	0
o/w transport services	464	268	292	453	545	588
o/w other	1 508	1 530	1 656	1 716	1 168	1 212
o/w National policy-driven VAT exemption gap (EUR m)	3 765	3 726	3 074	3 217	4 188	3 879
o/w EU policy-mandated VAT exemption gap (EUR m)	2 015	1 907	1 895	1 972	1 892	1 808
Non-actionable VAT policy gap (EUR m)	12 127	12 555	13 599	13 862	15 994	16 698
o/w imputed rents	4 507	4 711	4 801	4 882	5 022	5 198
o/w public education	1 832	1 854	2 116	2 152	2 568	2 711
o/w public healthcare	2 268	2 342	2 659	2 654	3 111	3 268
o/w other	3 521	3 649	4 023	4 174	5 293	5 522
C-efficiency (%)	57.6	58.4	60.1	60.2	55.3	56.4

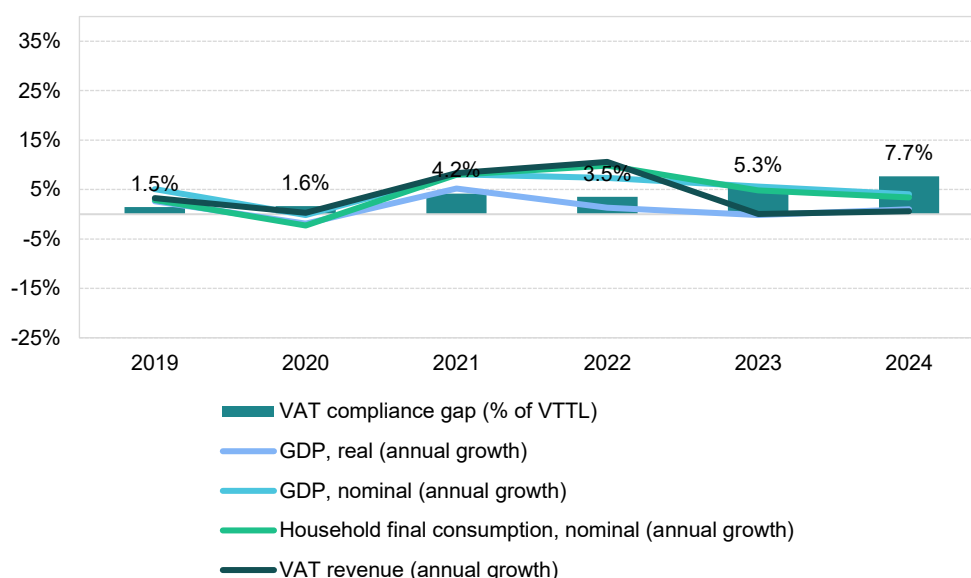
Source: own elaboration. Download underlying data [here](#). Note: fast estimates for 2024 are based on a simplified method.

Sweden

VAT revenues in Sweden grew by 0.1% in 2023, well below the post-pandemic peak of 10.6% in 2022. The VAT compliance gap increased to 5.3% in 2023, up from 3.5% in 2022, a sharp increase from 2019's rate of 1.5%. Fast estimates for 2024 suggest a further increase to 7.7%. In 2023, Sweden did not implement any major VAT legislative changes; therefore, other factors were the primary drivers of VAT revenue.

The post-COVID-19 recovery in Sweden was relatively short-lived, with a significant rebound in domestic demand limited to 2021 and 2022. Economic growth was constrained by several factors: high inflation driven by energy prices, ongoing supply chain bottlenecks, energy price volatility resulting from Russia's war of aggression against Ukraine and associated sanctions and weak external demand. Given Sweden's reliance on international trade in both final and intermediate goods – the ratio of total trade to GDP reached 108% in 2023 – slow recovery in Germany and across the EU also acted as a limiting factor.

Figure 115. SE – VAT compliance gap, VAT revenues, GDP growth and household final consumption



Sources: own elaboration, Eurostat. Note: fast estimates for 2024 are based on a simplified method.

Real GDP growth in Sweden declined to -0.2% in 2023, a decrease of 1.5pp compared to 2022, which signifies an economic slowdown contributing to an **increase in the VAT compliance gap**. Household final consumption, which had grown robustly in 2021 by 5.7% in real terms, slowed down to 2.9% growth in 2022 and contracted by 1.8% in 2023. In contrast, real government consumption increased slightly, from 0.7% in 2022 to 1.0% in 2023. Real GFCF was nearly flat in 2023, rising by 0.1% compared with 0.2% in 2022.

While measures reported in real values capture the actual change in economic activity by excluding inflation effects, nominal growth rates more directly reflect changes in the VAT base and potential VAT revenues. Accordingly, nominal final consumption expenditure growth slowed from 8.4% in 2022 to 6.2% in 2023. In particular, growth of nominal household final consumption of food and non-alcoholic beverages fell sharply (-17.9pp), which may have further contributed to an **increase in the VAT compliance gap**.

Inflation eased from a peak of 8.1% in 2022 to 5.9% in 2023; this downward trend continued into 2024. Key drivers of inflation included housing, water, electricity, gas and other fuels, as well as food, furnishings and transport. Inflationary pressures were present across all major components of household consumption. In terms of VAT-relevant consumption, recreational services, restaurants and accommodation grew by 8.3% in nominal household consumption in 2023, at a slightly faster pace than in 2022, which potentially points to an **increase in the VAT compliance gap**. On the other hand, year-over-year demand for tourism – as measured by nights spent in tourist accommodations – rose by only 1.5% in 2023, down sharply from 25.7% in 2022. This last trend may be interpreted as a force influencing the **decrease in the VAT compliance gap**.

GFCF, which reflects investment in fixed assets such as infrastructure, machinery, and buildings, declined by 4.9% in nominal terms in 2023. After accounting for inflation, this indicates a slowdown in investment activity.

On the supply side, sectoral performance varied. Services growth accelerated in real value-added terms in 2023, while industry, manufacturing and construction contracted following strong rebounds in 2021 and 2022. These shifts increased the share of services by 1.5pp. Overall, the sectoral changes in Sweden in 2023 are likely to have **increased the VAT compliance gap**, as the risk of non-compliance tends to be higher in the services sector.

Table 93. SE – Factors affecting VAT compliance gap (2022-2023)

Variable	2023	Difference (2023 vs 2022)	Expected impact on 2023 VAT compliance gap
GDP growth, real	-0.2%	-1.5pp	Increase
Final consumption expenditure growth, nominal	6.2%	-2.2pp	Increase
Household final consumption of food and non-alcoholic beverages growth, nominal	7.1%	-17.9pp	Increase
Services susceptible to non-compliance growth, nominal	8.3%	0.2pp	Increase
Services share in GDP	73.3%	1.5pp	Increase
Tourism (nights spent), growth	1.5%	-24.2pp	Decrease
Bankruptcy declarations, growth	21.0%	15.4pp	Increase
Digital payments growth, nominal	n/a	n/a	n/a

Source: own elaboration based on Eurostat.

Note: for a discussion of the expected effects of these indicators, please see pages 18 and 19 in section II.a.

The economic slowdown in Sweden led to a 21.0% increase in the number of bankruptcies in 2023, up 15.4pp compared to 2022, indicating a potential **widening of the VAT compliance gap**. Sectoral behaviours were uneven, with IT and construction experiencing relatively greater increases in bankruptcies compared to other sectors. In 2024, the situation worsened, with an overall 30.0% increase in bankruptcies, affecting all major sectors.

SE: VAT compliance gap (2019-2024)



- The VAT compliance gap increased from 3.5% in 2022 up to 5.3% in 2023. Further increase is expected in 2024 up to 7.7%, which is 6pp above the level estimated for 2019⁴⁴.
- A slight increase in the VAT compliance gap in 2021 may be attributed to a rise in insolvencies, as well as temporary extensions to tax payments introduced during the pandemic. In addition, recent increases in the estimated VAT compliance gap may also reflect changes in the calculation of national accounts by Statistics Sweden.

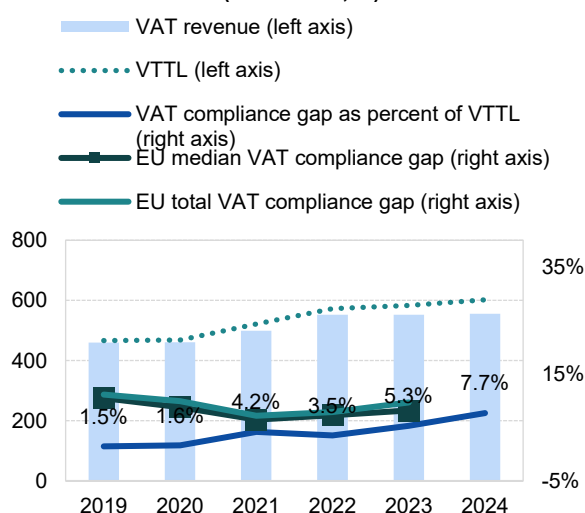
Table 94. SE – VTTL, VAT revenue, and VAT compliance gap

	2019	2020	2021	2022	2023	2024
VTTL (SEK m)	466 533	468 837	521 107	572 365	583 629	602 089
<i>o/w liability on household final consumption</i>	240 242	236 348	268 280	296 300	300 683	X
<i>o/w liability on gov. and NPISH final consumption</i>	20 158	19 982	22 694	24 740	26 918	X
<i>o/w liability on intermediate consumption</i>	112 857	115 609	122 756	135 938	141 992	X
<i>o/w liability on GFCF</i>	89 875	94 371	105 420	112 951	111 503	X
<i>o/w net adjustments</i>	3 402	2 527	1 957	2 436	2 533	X
VAT revenue (SEK m)	459 699	461 132	499 361	552 246	552 499	555 819
VAT compliance gap (SEK m)	6 834	7 705	21 746	20 119	31 130	46 270
VAT compliance gap (percent of VTTL)	1.5%	1.6%	4.2%	3.5%	5.3%	7.7%
<i>EU average VAT compliance gap (percent of VTTL)</i>	11.1%	9.9%	7.2%	7.9%	9.5%	X
VAT compliance gap change since 2019					3.9pp	

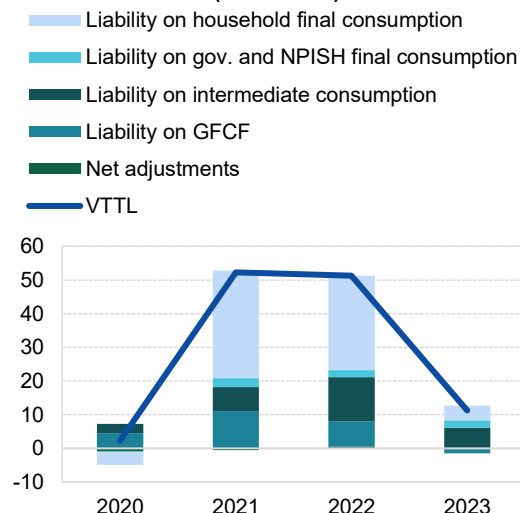
Source: own elaboration. Download underlying data [here](#). Note: fast estimates for 2024 are based on a simplified method. Rounded changes may not equal the change between rounded values.

Figure 116. SE – VTTL, VAT revenue, and VAT compliance gap

VTTL, VAT revenue, and VAT compliance gap
(billion SEK, %)



Decomposition of VTTL annual change
(billion SEK)



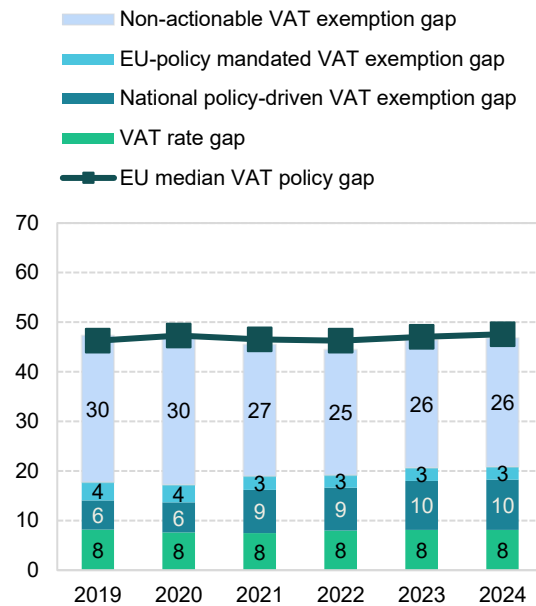
Source: own elaboration. Download underlying data [here](#). Note: fast estimates for 2024 are based on a simplified method.

⁴⁴ **Green traffic light:** estimates are based on up-to-date data, show no unexplained volatility, and reveal no unexpected patterns suggesting inaccuracies. This applies to both VAT compliance gap and VAT policy gap estimates. The estimates are based on the latest data available at the cut-off date for data collection (15/07/2025). As datasets are regularly revised, future editions will reassess and update the estimates accordingly.

SE: VAT policy gap (2019-2023)

- The VAT policy gap in Sweden increased from 44.5% in 2022 to 46.4% in 2023, and further to 46.8% in 2024. This change was primarily driven by the national policy-driven VAT exemption gap, although the overall structure remained relatively stable.
- In 2023 and 2024, Sweden did not introduce major changes to VAT rates or exemptions. Therefore, the slight variations observed in the VAT policy gap structure likely reflect shifts in consumption patterns rather than legislative changes.

Figure 117. SE – VAT policy gap (%)



Source: own elaboration. Download underlying data [here](#).

Table 95. SE – VAT policy gap decomposition

	2019	2020	2021	2022	2023	2024
Notional ideal VAT revenue (SEK m)	883 895	890 775	954 312	1 028 720	1 087 683	1 129 725
VTTL (SEK m)	466 533	468 837	521 107	572 365	583 629	602 089
VAT policy gap (SEK m)	418 268	422 731	434 061	457 275	505 035	528 660
VAT policy gap (%)	47.3	47.5	45.5	44.5	46.4	46.8
For comparison: EU median policy gap (%)	46.1	47.1	46.1	46.0	46.4	46.8
Actionable VAT policy gap (SEK m)	156 780	153 550	180 785	197 458	224 261	235 720
o/w VAT rate gap	72 280	67 594	71 640	82 476	88 648	91 872
o/w agricultural products, foodstuffs, beverages	31 930	33 880	35 365	38 180	40 599	42 069
o/w pharmaceuticals	4 481	5 180	5 282	5 654	6 027	6 256
o/w accommodation and restaurant services	15 341	13 253	14 720	19 014	20 198	20 930
o/w utilities services	0	0	0	0	0	0
o/w transport services	12 062	6 881	8 059	10 380	11 824	12 255
o/w other	8 466	8 401	8 215	9 248	10 000	10 362
o/w National policy-driven VAT exemption gap	52 168	54 128	82 879	88 847	107 373	114 631
o/w EU policy-mandated VAT exemption gap	32 332	31 828	26 267	26 134	28 240	29 217
Non-actionable VAT policy gap (SEK m)	261 488	269 181	253 276	259 817	280 774	292 940
o/w imputed rents	62 972	66 215	40 462	39 077	41 002	42 217
o/w public education	62 406	62 492	63 199	64 826	71 607	74 832
o/w public healthcare	54 509	59 427	62 883	61 797	66 781	69 656
o/w other	81 602	81 047	86 731	94 118	101 384	106 236
C-efficiency (%)	59.0	59.2	59.7	61.1	57.6	55.5

Source: own elaboration. Download underlying data [here](#). Note: fast estimates for 2024 are based on a simplified method.

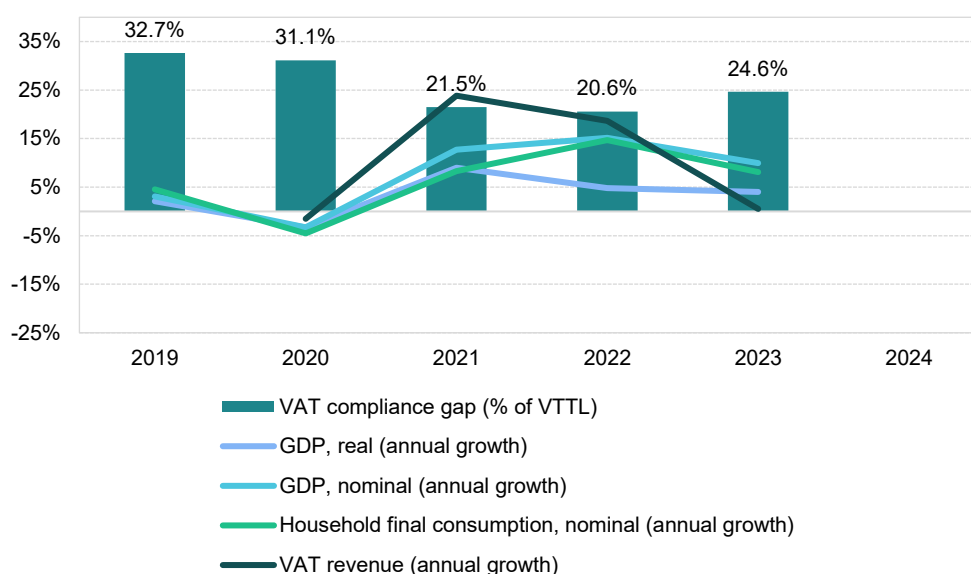
Albania

VAT revenues in Albania grew by 0.1% in 2023, well below the peak of 18.6% in 2021. The VAT compliance gap increased quite sharply to 24.6% in 2023, up from 20.6% in 2022, though it remained below the estimated 2019 level of 32.7%.

In 2023, Albania expanded VAT exemptions for the supply and import of fuel wood and for goods imported for projects financed through Council of Ministers-approved grants. A special VAT regime was also introduced for electricity traded via the Albanian Electricity Exchange. Additionally, Albania continued the implementation of its digital fiscal system, which requires real-time reporting of invoices and transactions – a process launched at an earlier point, yet still a key feature of VAT administration in 2023.

Albania experienced a strong post-pandemic rebound, with real GDP growth peaking at nearly 9% in 2021, driven by surges in domestic demand and nominal household consumption. This followed a sharp contraction down to approximately -3.3% in 2020, caused by the combined effects of the 2019 earthquake and the COVID-19 pandemic. In recent years, Albania has maintained macroeconomic stability, with steady real GDP growth of around 4%, despite persistent structural challenges stemming from geopolitical tensions and energy price volatility. As Albania is closely integrated into Europe's transnational trade networks – the ratio of total trade to GDP was 82% in 2023 – slow recovery in the EU represented a limiting factor for growth.

Figure 118. AL – VAT compliance gap, VAT revenues, GDP growth and household final consumption



Sources: own elaboration, Eurostat.

Real GDP growth in Albania stood at 4.0% in 2023, a slight decline of 0.8pp from 2022, which indicates an economic slowdown, likely contributing to the **increase in the VAT compliance gap**. Household final consumption, which had grown strongly in 2022 to 6.1% in real terms, slowed down to 3.1% in 2023. In contrast, real government consumption growth accelerated from 2.2% in 2022 to 4.4% in 2023. Real GFCF increased by 1.7% in 2023, following 1.6% growth in 2022.

While measures reported in real values capture the actual change in economic activity by excluding inflation effects, nominal growth rates more directly reflect changes in the VAT base and potential VAT

revenues. Accordingly, nominal final consumption expenditure growth slowed from 13.6% in 2022 to 8.1% in 2023. In particular, growth of nominal household final consumption of food and non-alcoholic beverages fell sharply (-4.9pp), which may have further contributed to an **increase in the VAT compliance gap**.

Inflation eased from a peak of 6.6% in 2022 to 5.3% in 2023; this downward trend continued into 2024. Key drivers included energy prices, transport and food, while inflationary pressures were generally present across most household consumption components, except for communications, health, education and clothing and footwear. Regarding VAT-relevant consumption, recreational services, restaurants and accommodation were among the fastest-growing categories in nominal household consumption, although their contribution primarily reflects 2022 trends. This may be interpreted as a force influencing the **decrease in the VAT compliance gap**. On the other hand, tourism demand – as measured by nights spent in tourist accommodations – registered a significant growth of 56.8% in 2023, up from 20.3% in 2022, indicating an **increase in the VAT compliance gap**.

GFCF, which reflects investment in fixed assets such as infrastructure, machinery and buildings, increased by 4.0% in nominal terms in 2023. After accounting for inflation, this suggests a moderate slowdown in real investment activity.

On the supply side, sectoral performance varied. Services grew faster in value-added terms than other parts of the economy, while industry's growth slowed following rebounds in 2021 and 2022, primarily due to supply chain disruptions and high energy costs. These shifts increased the share of services by 1.1pp. Overall, the sectoral changes in Albania in 2023 likely engendered a challenging environment for the **increase in the VAT compliance gap**, as the risk of non-compliance tends to be higher in the services sector.

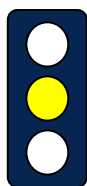
Table 96. AL – Factors affecting VAT compliance gap (2022-2023)

Variable	2023	Difference (2023 vs 2022)	Expected impact on 2023 VAT compliance gap
GDP growth, real	4.0%	-0.8pp	Increase
Final consumption expenditure growth, nominal	8.1%	-5.5pp	Increase
Household final consumption of food and non-alcoholic beverages growth, nominal	10.0%	-4.9pp	Increase
Services susceptible to non-compliance growth, nominal	27.3%	-10.5pp	Decrease
Services share in GDP	54.7%	+1.1pp	Increase
Tourism (nights spent), growth	56.8%	36.6pp	Increase
Bankruptcy declarations, growth	n/a	n/a	n/a
Digital payments growth, nominal	n/a	n/a	n/a

Source: own elaboration based on Eurostat, Instat – Institute of Statistics.

Note: for a discussion of the expected effects of these indicators, please see pages 18 and 19 in section II.a.

AL: VAT compliance gap (2019-2024)



- In Albania, the VAT compliance gap increased to 24.6% in 2023, up from 20.6% in 2022⁴⁵.
- Between 2019 and 2023, the VAT compliance gap declined by around 8pp.
- The relatively high volatility of the estimates, driven by shifts in customs VAT revenue, suggests that the results warrant further scrutiny.

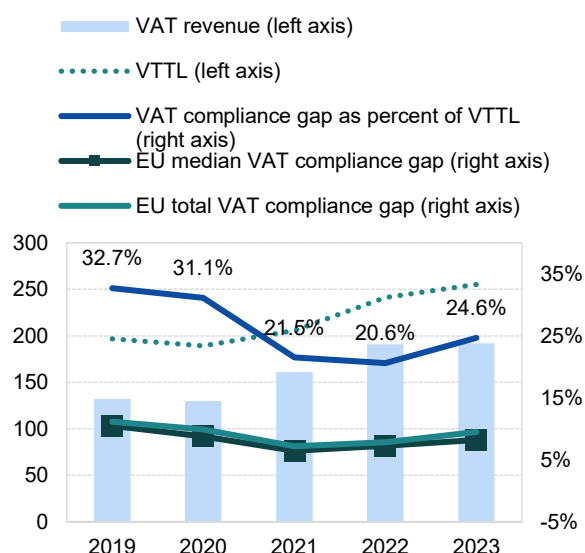
Table 97. AL – VTTL, VAT revenue, and VAT compliance gap

	2019	2020	2021	2022	2023
VTTL (ALL m)	196 671	189 192	205 757	241 054	255 222
<i>o/w liability on household final consumption</i>	<i>175 739</i>	<i>166 770</i>	<i>179 163</i>	<i>207 743</i>	<i>225 253</i>
<i>o/w liability on gov. and NPISH final consumption</i>	<i>2 378</i>	<i>2 608</i>	<i>2 540</i>	<i>3 457</i>	<i>3 770</i>
<i>o/w liability on intermediate consumption</i>	<i>14 300</i>	<i>14 669</i>	<i>15 689</i>	<i>17 780</i>	<i>18 841</i>
<i>o/w liability on GFCF</i>	<i>25 579</i>	<i>25 412</i>	<i>29 480</i>	<i>29 468</i>	<i>29 145</i>
<i>o/w net adjustments</i>	<i>-21 325</i>	<i>-20 267</i>	<i>-21 115</i>	<i>-17 394</i>	<i>-21 787</i>
VAT revenue (ALL m)	132 412	130 354	161 536	191 412	192 322
VAT compliance gap (ALL m)	64 259	58 838	44 221	49 642	62 900
VAT compliance gap (percent of VTTL)	32.7%	31.1%	21.5%	20.6%	24.6%
<i>EU average VAT compliance gap (percent of VTTL)</i>	<i>11.1%</i>	<i>9.9%</i>	<i>7.2%</i>	<i>7.9%</i>	<i>9.5%</i>
					-8.0pp

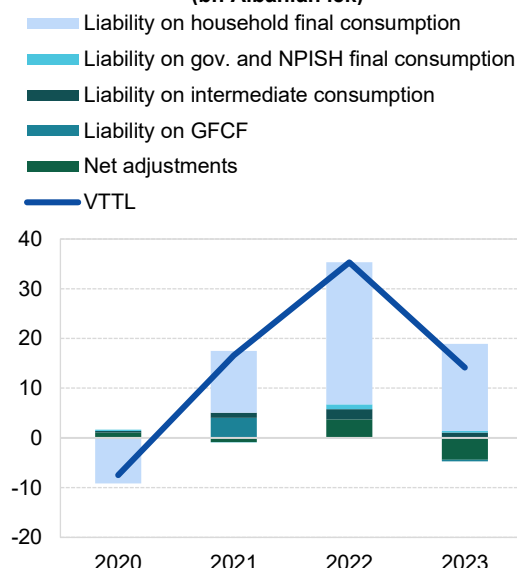
Source: own elaboration. Download underlying data [here](#). Rounded changes may not equal the change between rounded values.

Figure 119. AL – VTTL, VAT revenue, and VAT compliance gap

VTTL, VAT revenue, and VAT compliance gap (bn Albanian lek, %)



Decomposition of VTTL annual change (bn Albanian lek)



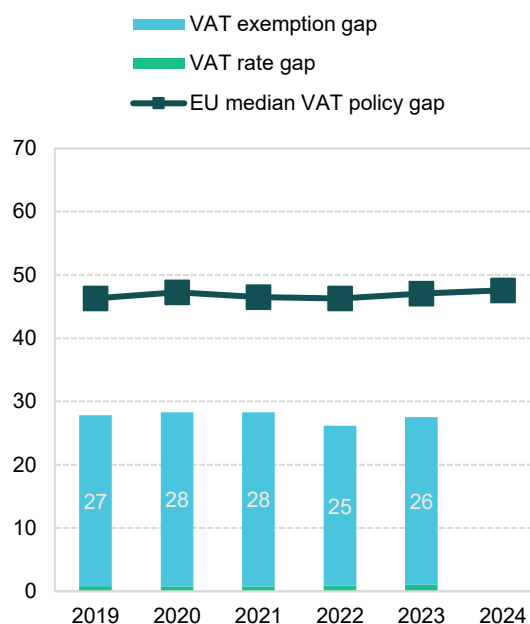
Source: own elaboration. Download underlying data [here](#).

⁴⁵ **Yellow traffic light:** estimates based on somewhat outdated information or showing elevated unexplained volatility. This applies to both VAT compliance gap and VAT policy gap estimates. The estimates are based on the latest data available at the cut-off date for data collection (15/07/2025). As datasets are regularly revised, future editions will reassess and update the estimates accordingly.

AL: VAT policy gap (2019-2023)

- The VAT policy gap in Albania increased from 26.2% in 2022 to 27.5% in 2023, primarily driven by the VAT exemption gap, which rose by 1.2pp.
- Part of this change may be attributed to legislative measures. In 2023, Albania introduced a temporary VAT exemption for the import and supply of fuel wood as an energy crisis response measure. However, the major driver of changes in the VAT policy gap were changes to household final consumption structure.
- The estimates of the VAT policy gap are substantially higher than the estimates of VAT expenditures available for the Albanian Ministry of Finance, which could be explained by differences in the assumed benchmark VAT systems.

Figure 120. AL – VAT policy gap (%)



Source: own elaboration. Download underlying data [here](#).

Table 98. AL – VAT policy gap decomposition

	2019	2020	2021	2022	2023
VAT policy gap (ALL m)	75 862	74 671	81 149	85 392	96 987
VAT exemption gap (ALL m)	73 658	72 660	78 929	82 342	93 156
VAT rate gap (ALL m)	2 204	2 010	2 220	3 049	3 831
C-efficiency (%)	48.7	49.5	59.4	65.0	54.7
VAT policy gap (%)	27.8	28.3	28.3	26.2	27.5
EU median policy gap (%)	46.1	47.1	46.1	46.0	46.4

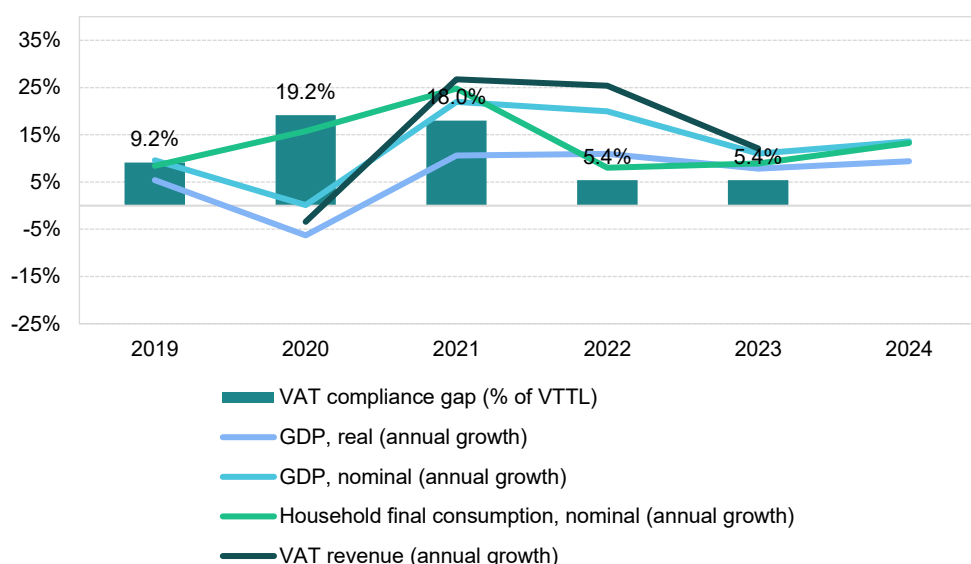
Source: own elaboration. Download underlying data [here](#).

Georgia

VAT revenues in Georgia grew by 12.5% in 2023, slowing down after the post-pandemic peak of 23.6% in 2022. The VAT compliance gap remained broadly stable at 5.4%, similarly to 2022, after declining from 18.0% in 2021. No major VAT legislative changes were introduced in 2023; consequently, other factors drove VAT revenue trends.

Between 2019 and 2023, Georgia experienced a rapidly changing socio-economic and political environment. On one hand, the period was marked by the continuation of institutional and fiscal reforms supported by international partners. On the other hand, the country faced multiple challenges stemming from global and regional crises. The COVID-19 pandemic imposed substantial restrictions on economic activity, reduced budget revenues and required the implementation of support measures. Since 2022, Georgia has also been affected by Russia's full-scale invasion of Ukraine, which triggered economic and geopolitical repercussions across the region, impacting trade, investment and energy security.

Figure 121. GE – VAT compliance gap, VAT revenues, GDP growth and household final consumption



Sources: own elaboration, National Statistics Office of Georgia.

Real GDP growth in Georgia stood at 7.8% in 2023, down 3.2pp from 2022, which signifies an economic slowdown contributing to an **increase in the VAT compliance gap**. Household and NPISH final consumption, which had grown strongly in 2021 to 12.3% in real terms, rebounded to 4.7% in 2023 after a decline to -2.8% in 2022. Real government consumption also showed fluctuations, dropping from 7.1% in 2021 to -0.8% in 2022 before rebounding to 7.5% in 2023. Real GFCF increased significantly by 29.4% in 2023, following 9.9% growth in 2022.

While measures reported in real values capture the actual change in economic activity by excluding inflation effects, nominal growth rates more directly reflect changes in the VAT base and potential VAT revenues. Accordingly, nominal final consumption expenditure growth slowed from 9.2% in 2022 to 8.4% in 2023. However, growth of nominal household final consumption of food and non-alcoholic beverages rose sharply (8.4pp), which may have contributed to **downward pressure on the VAT compliance gap**.

Inflation dropped sharply to 2.5% in 2023 from a peak of 11.9% in 2022. Key drivers included energy prices, housing, transport, food and services such as restaurants and hotels. Inflationary pressures were

broadly present across household consumption components. In the context of VAT compliance, recreational services, restaurants and accommodation were among the fastest-growing categories in nominal household consumption in 2023 at a faster pace than in 2022. This trend may be interpreted as a factor contributing to the **widening of the VAT compliance gap**. However, the year-over-year demand for tourism, measured by the average number of nights spent by inbound visitors, declined by 13.6% compared to the 2022 peak, down by 65.6pp, pointing to a contribution to the **downward pressure on the VAT compliance gap**.

GFCF, which reflects investment in fixed assets such as infrastructure, machinery and buildings, increased by 20.6% in nominal terms in 2023. After accounting for inflation, this indicates an increase in real investment activity.

On the supply side, sectoral performance varied. Services grew faster in value-added terms than other sectors, while manufacturing and industry declined after rebounds in 2021 and 2022, due to supply chain disruptions, high energy costs, low external demand, and a tight labour market. These shifts increased the share of services by 3.5pp. Overall, the sectoral changes in Georgia in 2023 are likely to have **increased the VAT compliance gap**, as the risk of non-compliance tends to be higher in the services sector.

Table 99. GE – Factors affecting VAT compliance gap (2022-2023)

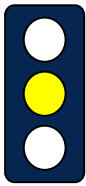
Variable	2023	Difference (2023 vs 2022)	Expected impact on 2023 VAT compliance gap
GDP growth, real	7.8%	-3.2pp	Increase
Final consumption expenditure growth, nominal	8.4%	0.8pp	Decrease
Food and beverages household final consumption expenditure growth, nominal	14.8%	8.4pp	Decrease
Services susceptible to non-compliance growth, nominal	25.8%	26.4pp	Increase
Services share in GDP	71.4%	3.5pp	Increase
Tourism (nights spent), growth	-13.6%	-65.6pp	Decrease
Enterprise deaths, growth	-4.8%	-5.6pp	Decrease
Digital payments growth, nominal	n/a	n/a	n/a

Sources: own elaboration based on National Statistics Office of Georgia.

Note: for a discussion of the expected effects of these indicators, please see pages 18 and 19 in section II.a.

In Georgia, 2022 was marked by market volatility and structural adjustments following the post-pandemic recovery and the negative effects of Russia's full-scale invasion of Ukraine. Enterprise closures increased, particularly in the construction, transportation, and accommodation and food service sectors. In 2023, however, the total number of closures declined, suggesting a trend toward market stabilization. This may indicate a **downward pressure on the VAT compliance gap**.

GE: VAT compliance gap (2019-2024)



- In 2023, the VAT compliance gap in Georgia remained at 5.4%, the same level as in 2022⁴⁶.
- The relatively high volatility of the estimates suggests that further validation of the results is required.

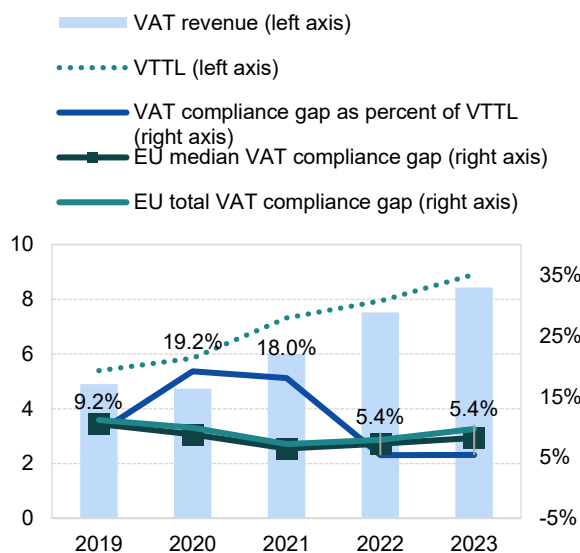
Table 100. GE – VTTL, VAT revenue, and VAT compliance gap

	2019	2020	2021	2022	2023
VTTL (GEL m)	5 391	5 851	7 314	7 944	8 910
<i>o/w liability on household final consumption</i>	3 663	4 195	5 345	5 679	6 184
<i>o/w liability on gov. and NPISH final consumption</i>	6	7	9	10	10
<i>o/w liability on intermediate consumption</i>	504	510	622	687	815
<i>o/w liability on GFCF</i>	1 156	1 074	1 223	1 396	1 684
<i>o/w net adjustments</i>	61	65	115	173	216
VAT revenue (GEL m)	4 898	4 730	5 995	7 518	8 431
VAT compliance gap (GEL m)	494	1 121	1 319	426	479
VAT compliance gap (percent of VTTL)	9.2%	19.2%	18.0%	5.4%	5.4%
<i>EU average VAT compliance gap (percent of VTTL)</i>	11.1%	9.9%	7.2%	7.9%	9.5%
VAT compliance gap change since 2019					-3.8pp

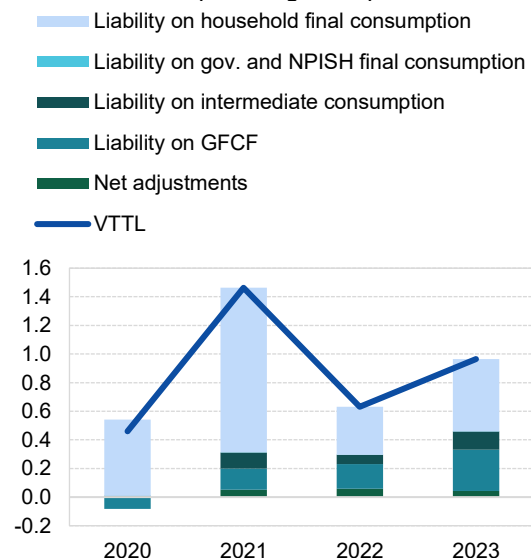
Source: own elaboration. Download underlying data [here](#). Note: Rounded changes may not equal the change between rounded values.

Figure 122. GE – VTTL, VAT revenue, and VAT compliance gap

VTTL, VAT revenue, and VAT compliance gap (bn Georgian lari, %)



Decomposition of VTTL annual change (bn Georgian lari)



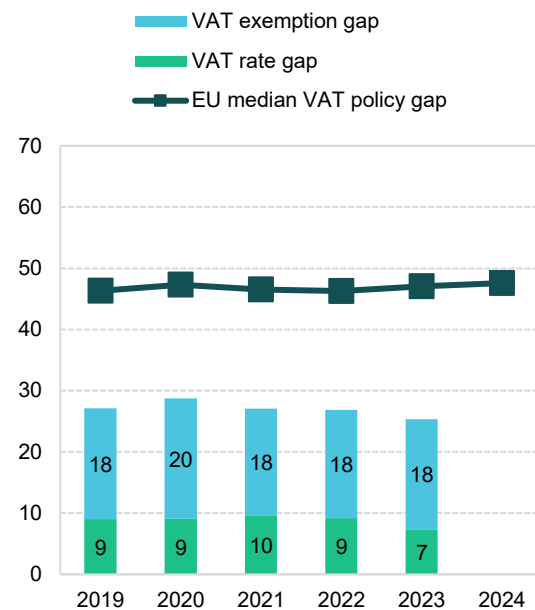
Source: own elaboration. Download underlying data [here](#).

⁴⁶ **Yellow traffic light:** estimates based on somewhat outdated information or showing elevated unexplained volatility. This applies to both VAT compliance gap and VAT policy gap estimates. The estimates are based on the latest data available at the cut-off date for data collection (15/07/2025). As datasets are regularly revised, future editions will reassess and update the estimates accordingly.

GE: VAT policy gap (2019-2023)

Figure 123. GE – VAT policy gap (%)

- The average VAT policy gap in Georgia between 2019 and 2023 was 27% of the notional ideal revenue, which was approximately 20pp below the EU median.
- The VAT policy gap in Georgia decreased between from 26.9% in 2022 to 25.3% in 2023. This change was primarily driven by the VAT rate gap.



Source: own elaboration. Download underlying data [here](#).

Table 101. GE – VAT policy gap decomposition

	2019	2020	2021	2022	2023
VAT policy gap (GEL m)	2 006	2 357	2 714	2 919	3 026
VAT exemption gap (GEL m)	1 340	1 612	1 759	1 923	2 150
VAT rate gap (GEL m)	666	745	955	996	875
C-efficiency (%)	74.9	62.1	64.0	76.1	79.1
VAT policy gap (%)	27.1	28.7	27.1	26.9	25.3
EU median policy gap (%)	46.1	47.1	46.1	46.0	46.4

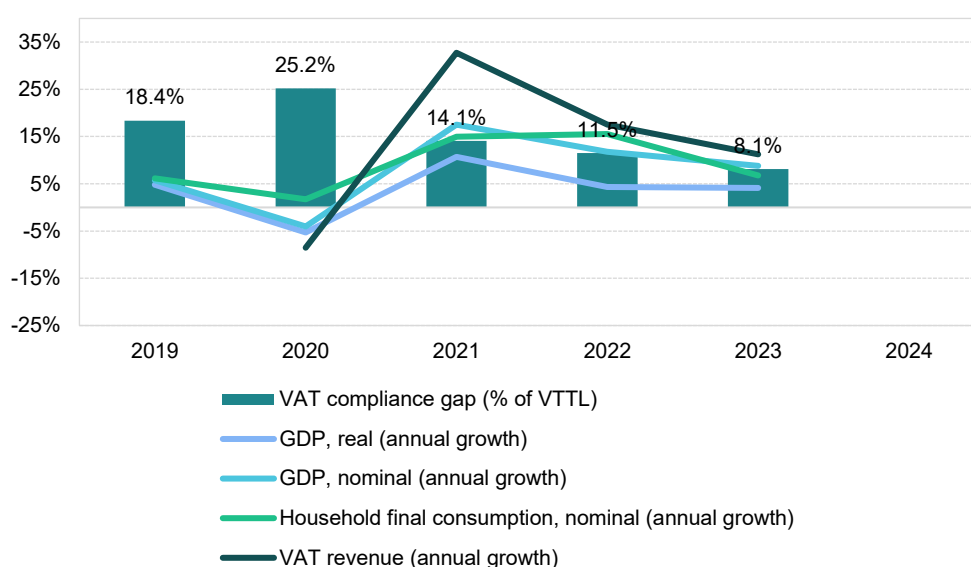
Source: own elaboration. Download underlying data [here](#).

Kosovo

VAT revenues in Kosovo grew by 11.3% in 2023, slower than the post-pandemic peak of 17.6% in 2022. The VAT compliance gap decreased to 8.1% in 2023, down from 11.5% in 2022, and was also lower than the 2019 level of 18.4%. Between 2022 and 2023, Kosovo implemented several VAT legislative changes, including a zero rate on bread and flour, an extension of the 9% rate to tourism, restaurant, catering, and sports services, and a permanent 9% rate for books, publications, baby food and hygiene products. These measures contributed to VAT revenue developments.

Kosovo experienced a post-pandemic economic rebound, with real GDP growth peaking at nearly 11% in 2021, driven by strong domestic demand and nominal household consumption, following a contraction to -5.3% in 2020 due to the COVID-19 pandemic. In recent years, Kosovo has maintained a steady real GDP growth of around 4%, despite structural challenges stemming from geopolitical tensions and energy price volatility. Given that Kosovo is strongly integrated into Europe's transnational trade networks, with a total trade-to-GDP ratio of 110% in 2023, a limiting factor for growth was slow recovery in the EU.

Figure 124. XK – VAT compliance gap, VAT revenues, GDP growth and household final consumption



Sources: own elaboration, Eurostat.

Real GDP growth in Kosovo stood at 4.1% in 2023, a slight increase of 0.2pp compared to 2022, which may be interpreted as a measure of the economic environment likely contributing to a **decrease in the VAT compliance gap**. Household final consumption, which had grown strongly in 2021 (7.3% in real terms), slowed to 3.4% growth in 2022 and further to 3.1% in 2023. Government consumption growth rebounded from 0.2% in 2022 to 5.9% in 2023. Real GFCF increased by 4.5% in 2023, following a contraction by 3.2% in 2022.

While measures reported in real values capture the actual change in economic activity by excluding inflation effects, nominal growth rates more directly reflect changes in the VAT base and potential VAT revenues. Accordingly, nominal final consumption expenditure growth slowed from 13.7% in 2022 to 7.9% in 2023.

Inflation rose to 4.9% in 2023 from a peak of 11.6% in 2022, a trend that continued into 2024. The main drivers of inflation were housing, water, electricity, gas, other fuels, food, transport and services such as restaurants and hotels. Inflationary pressures were broadly present across household consumption, except for the categories of communications and education.

GFCF, which reflects investment in fixed assets such as infrastructure, machinery and buildings, increased by 5.4% in nominal terms in 2023. Adjusted for inflation, this suggests a moderate increase in real investment activity.

On the supply side, sectoral performance varied. Services grew faster in value-added terms than other sectors, while the industry slowed down due to supply chain disruptions and high energy costs, declining from the steady growth seen in 2021 and 2022. These shifts increased the share of services by 3.5 percentage points. Overall, the sectoral changes in Kosovo in 2023 may have exerted **upward pressure on the VAT compliance gap**, as the risk of non-compliance tends to be higher in the services sector.

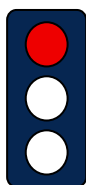
Table 102. XK – Factors affecting VAT compliance gap (2022-2023)

Variable	2023	Difference (2023 vs 2022)	Expected impact on 2023 VAT compliance gap
GDP growth, real	4.1%	-0.2pp	Neutral
Final consumption expenditure growth, nominal	7.9%	-5.8pp	Increase
Household final consumption of food and non-alcoholic beverages growth, nominal	n/a	n/a	n/a
Services susceptible to non-compliance growth, nominal	n/a	n/a	n/a
Services share in GDP	58.1%	1.2pp	Increase
Tourism (nights spent), growth	89.0%	47.9pp	Increase
Bankruptcy declarations, growth	n/a	n/a	n/a
Digital payments growth, nominal	n/a	n/a	n/a

Source: own elaboration based on Eurostat, Kosovo Agency of Statistics.

Note: for a discussion of the expected effects of these indicators, please see pages 18 and 19 in section II.a.

XK: VAT compliance gap (2019-2024)



- In Kosovo, the VAT compliance gap decreased to 8.1% in 2023, down from 11.5% in 2022⁴⁷.
- Since 2022, the VAT compliance gap has followed a downward trend.
- Due to the unavailability of recent SUTs, the estimates for Kosovo are subject to higher uncertainty.

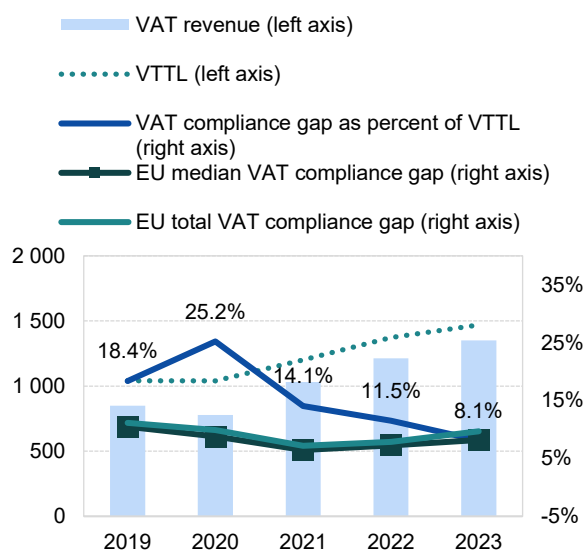
Table 103. XK – VTTL, VAT revenue, and VAT compliance gap

	2019	2020	2021	2022	2023
VTTL (EUR m)	1 042	1 040	1 202	1 372	1 469
<i>o/w liability on household final consumption</i>	744	757	868	1 005	1 073
<i>o/w liability on gov. and NPISH final consumption</i>	17	18	19	20	23
<i>o/w liability on intermediate consumption</i>	134	128	138	152	165
<i>o/w liability on GFCF</i>	128	117	152	168	177
<i>o/w net adjustments</i>	-11	-9	-10	-13	-12
VAT revenue (EUR m)	850	778	1 032	1 214	1 350
VAT compliance gap (EUR m)	191	262	169	158	119
VAT compliance gap (percent of VTTL)	18.4%	25.2%	14.1%	11.5%	8.1%
<i>EU average VAT compliance gap (percent of VTTL)</i>	11.1%	9.9%	7.2%	7.9%	9.5%
VAT compliance gap change since 2019					-10.3pp

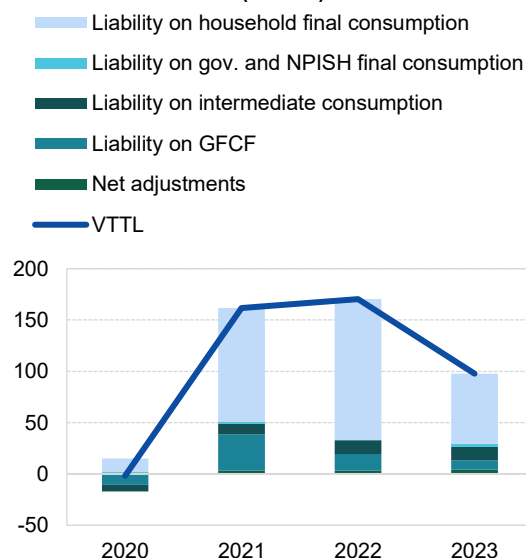
Source: own elaboration. Download underlying data [here](#). Note: Rounded changes may not equal the change between rounded values.

Figure 125: XK – VTTL, VAT revenue, and VAT compliance gap

VTTL, VAT revenue, and VAT compliance gap (EUR m, %)



Decomposition of VTTL annual change (EUR m)



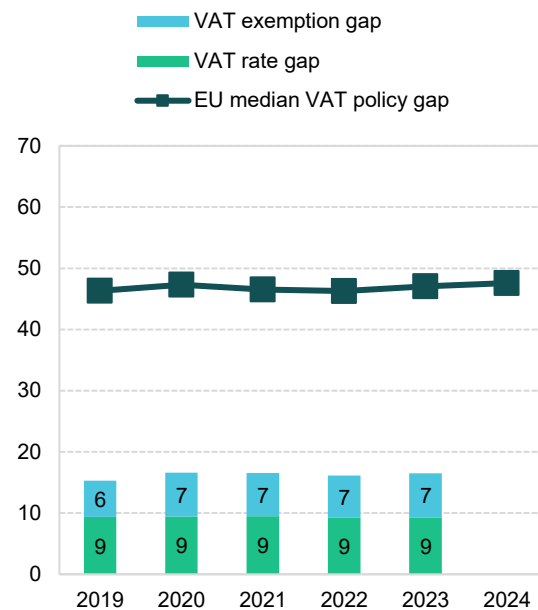
Source: own elaboration. Download underlying data [here](#).

⁴⁷ **Red traffic light:** estimates based on very outdated information, with large unexplained volatility, or other unexpected patterns of the liability subcomponents. This applies to both VAT compliance gap and VAT policy gap estimates. The estimates are based on the latest data available at the cut-off date for data collection (15/07/2025). As datasets are regularly revised, future editions will reassess and update the estimates accordingly.

XK: VAT policy gap (2019-2023)

Figure 126. XK – VAT policy gap (%)

- The average VAT policy gap in Kosovo between 2019 and 2023 was 16.2% of the notional ideal revenue.
- Forgone revenues were primarily caused by reduced rates, which accounted for 58% of the VAT policy gap over the 2019-2023 period.
- The VAT policy gap in Kosovo increased slightly from 16.1% in 2022 to 16.5% in 2023. This change was primarily driven by the VAT exemption gap, which rose by 0.4pp in 2023.



Source: own elaboration. Download underlying data [here](#).

Table 104. XK – VAT policy gap decomposition

	2019	2020	2021	2022	2023
VAT policy gap (EUR m)	188	207	238	264	290
VAT exemption gap (EUR m)	73	89	102	112	127
VAT rate gap (EUR m)	115	118	137	152	164
C-efficiency (%)	73.1	64.4	76.4	79.2	82.1
VAT policy gap (%)	15.3	16.6	16.6	16.1	16.5
EU median policy gap (%)	46.1	47.1	46.1	46.0	46.4

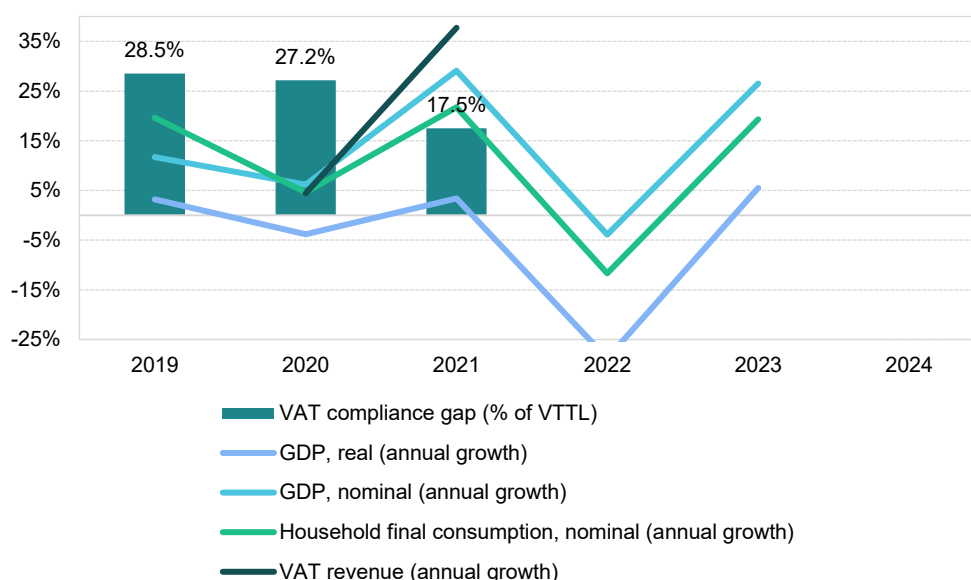
Source: own elaboration. Download underlying data [here](#).

Ukraine

VAT revenues in Ukraine grew by 37.7% in 2021, significantly outpacing the 4.4% growth recorded during the pandemic in 2020. The VAT compliance gap decreased to 17.5% in 2021, down from 27.2% in 2020; it was also lower than the 28.5% value observed in 2019. In 2021, Ukraine introduced customs duty exemptions for large investment projects and temporarily reduced the VAT rate for certain agricultural products. These measures were key drivers for VAT revenue growth.

Between 2019 and 2021, Ukraine operated under conditions of economic transformation coupled with rising geopolitical tensions. This period was characterised by ongoing structural reforms supported by international financial institutions, a slow pace of economic growth in the shadow of the global COVID-19 pandemic and a gradual escalation of security tensions with Russia. These macroeconomic and political factors influenced both the state's capacity to implement public policies and the broader institutional environment. It should be noted that this analysis does not cover more recent years due to Russia's full-scale invasion in 2022.

Figure 127. UA – VAT compliance gap, VAT revenues, GDP growth and household final consumption



Sources: own elaboration, Eurostat.

Real GDP growth in Ukraine in 2021 stood at 3.4%, a substantial increase of 7.2pp compared to 2020. This indicates an economic recovery contributing to a **decrease in the VAT compliance gap**. Household final consumption, which had been weak in 2020 at 1.7% due to the effects of the COVID-19 pandemic, rebounded strongly to 6.9% in 2021. Similarly, real government consumption growth improved, reverting from -0.7% in 2020 to 0.8% in 2021. Real GFCF also recovered, rising by 9.3% in 2021 following a 21.3% decline in 2020.

While measures reported in real values capture the actual change in economic activity by excluding inflation effects, nominal growth rates more directly reflect changes in the VAT base and potential VAT revenues. Accordingly, nominal final consumption expenditure growth accelerated from 1.2% in 2010 to 5.5% in 2021. In particular, growth of nominal household final consumption of food and non-alcoholic beverages rose sharply (4.4pp), which may have further contributed to the **decrease in the VAT compliance gap**.

According to the National Bank of Ukraine, inflation increased to 9.4% in 2021 from 2.7% in 2020. The main drivers were housing, water, electricity, gas and other fuels, as well as food, transport and education. Inflationary pressures were observed across nearly all components of household consumption except clothing and footwear. In the context of the VAT compliance gap, it is notable that recreational services, catering and temporary accommodation were among the fastest-growing categories in nominal household consumption, growing much faster than in 2020. This last trend may be interpreted as a measure to **limit the decline in VAT compliance gap**.

GFCF, reflecting investment in fixed assets such as infrastructure, machinery and buildings, increased by 27.5% in nominal terms in 2021. Adjusting for inflation, this indicates a robust increase in real investment activity.

On the supply side, sectoral performance varied. Services – particularly accommodation and food services – grew in value-added terms, while manufacturing and industry showed a modest rebound after 2020. The most pronounced growth was observed in agriculture, forestry and fishing. Overall, these shifts led to a 0.6pp decrease in the share of services. Consequently, the impact of changes in Ukraine's sectoral structure appears likely to have **decreased the VAT compliance gap** in 2021, as the risk of non-compliance tends to be higher in the services sector.

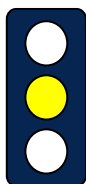
Table 105. UA – Factors affecting VAT compliance gap (2020-2021)

Variable	2021	Difference (2021 vs 2020)	Expected impact on 2021 VAT compliance gap
GDP growth, real	3.4%	7.2pp	Decrease
Final consumption expenditure growth, nominal	5.5%	4.3pp	Decrease
Household final consumption of food and non-alcoholic beverages growth, nominal	20.9%	4.4pp	Decrease
Services susceptible to non-compliance growth, nominal	41.4%	58.1pp	Increase
Services share in GDP	60.4%	-0.6pp	Decrease
Tourism (nights spent), growth	n/a	n/a	n/a
Bankruptcy declarations, growth	n/a	n/a	n/a
Digital payments growth, nominal	n/a	n/a	n/a

Sources: Eurostat data, State Statistics Service of Ukraine.

Note: for a discussion of the expected effects of these indicators, please see pages 18 and 19 in section II.a.

UA: VAT compliance gap (2019-2021)



- In Ukraine, the VAT compliance gap decreased to 17.5% in 2021, down from 28.5% in 2019⁴⁸.
- Overall, despite the pandemic, the VAT compliance gap declined by around 11pp between 2019 and 2021.
- Estimates for 2022 and 2023 are not available due to Russia's full-scale invasion of Ukraine.

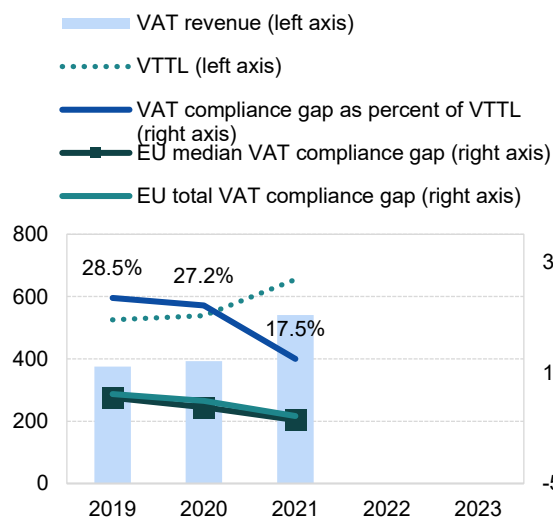
Table 106. UA – VTTL, VAT revenue, and VAT compliance gap

	2019	2020	2021	2022	2023
VTTL (UAH m)	525 460	538 678	654 949	-	-
<i>o/w liability on household final consumption</i>	409 682	429 066	525 165	-	-
<i>o/w liability on gov. and NPISH final consumption</i>	10 831	7 856	8 788	-	-
<i>o/w liability on intermediate consumption</i>	54 478	57 743	67 873	-	-
<i>o/w liability on GFCF</i>	49 369	43 403	52 084	-	-
<i>o/w net adjustments</i>	1 100	610	1 038	-	-
VAT revenue (UAH m)	375 663	392 288	540 313	-	-
VAT compliance gap (UAH m)	149 797	146 390	114 636	-	-
VAT compliance gap (percent of VTTL)	28.5%	27.2%	17.5%	-	-
<i>EU average VAT compliance gap (percent of VTTL)</i>	11.1%	9.9%	7.2%	7.9%	9.5%
VAT compliance gap change since 2019			-11.0pp		

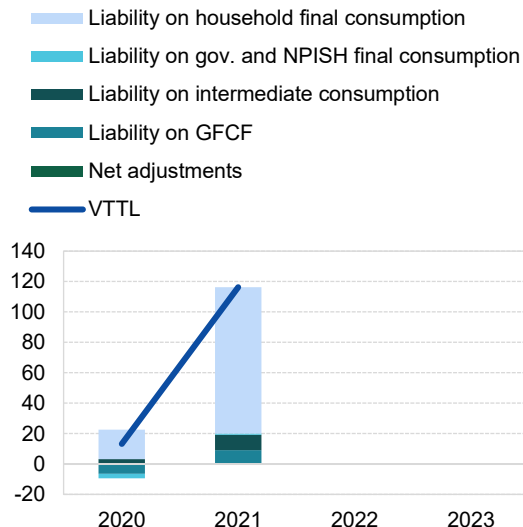
Source: own elaboration. Download underlying data [here](#). Note: Rounded changes may not equal the change between rounded values.

Figure 128. UA – VTTL, VAT revenue, and VAT compliance gap

VTTL, VAT revenue, and VAT compliance gap (bn Ukraine hryvnia, %)



Decomposition of VTTL annual change (bn Ukraine hryvnia)



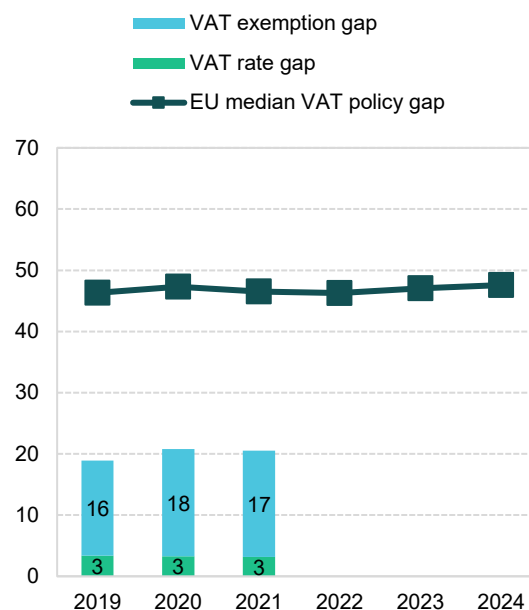
Source: own elaboration. Download underlying data [here](#).

⁴⁸ **Yellow traffic light:** estimates based on somewhat outdated information or showing elevated unexplained volatility. This applies to both VAT compliance gap and VAT policy gap estimates. The estimates are based on the latest data available at the cut-off date for data collection (15/07/2025). As datasets are regularly revised, future editions will reassess and update the estimates accordingly.

UA: VAT policy gap (2019-2021)

Figure 129. UA – VAT policy gap (%)

- The average VAT policy gap in Ukraine between 2019 and 2021 was 20.1% of the notional ideal revenue.
- The main source of potential revenue loss were exemptions.
- The VAT policy gap in Ukraine slightly declined between 2020 and 2021, from 20.8% to 20.5%. However, compared to 2019, it increased by 1.9pp, primarily driven by the VAT exemption gap.



Source: own elaboration. Download underlying data [here](#).

Table 107. UA – VAT policy gap decomposition

	2019	2020	2021	2022	2023
VAT policy gap (UAH m)	122 663	141 524	169 079	-	-
VAT exemption gap (UAH m)	100 725	119 411	142 984	-	-
VAT rate gap (UAH m)	21 939	22 113	26 095	-	-
C-efficiency (%)	56.4	55.8	64.4	-	-
VAT policy gap (%)	18.9	20.8	20.5	-	-
EU median policy gap (%)	46.1	47.1	46.1	46.0	46.4

Source: own elaboration. Download underlying data [here](#).

VII. Changes in VAT revenue components (EU and EU Member States)

The decomposition of the contribution of main revenue components for 2023 presents a relatively uniform picture across all EU Member States, despite differences in revenue growth. The estimated value of the VTTL in the EU (excluding Luxembourg) increased by 5.4%. The net base grew substantially faster, by an average of 7%, with positive growth rates recorded in all EU Member States (Figure 130 and Table 108). At the same time, the effective rate declined in 23 of the 26 countries included in the analysis, leading to a 1.3% decline in the VTTL and revenue. However, in some Member States discontinuing certain inflation relief measures in 2023, such as Poland, the effective rate increased.

As shown by the prevalence of orange in the negative bars in Figure 130, the compliance effect in most Member States was negative, resulting in a slower increase in EU-wide revenue (3.5%) compared with the VTTL.

Figure 130. Change in actual VAT revenue components (in %, 2023 vs. 2022)



Source: own elaboration. Please download underlying data [here](#).

Note: EU estimates exclude Luxembourg due to recent data revisions yielding results outside plausible ranges.

Table 108. Change in VAT revenue components (2023 over 2022)

MS	Change in revenue (%)	Change in the VTTL (%)				Change in compliance (%)
			Change in base (%)		Change in effective rate (%)	
BE	3.8	4.5	5.9	-1.4	-0.6	
BG	6.9	9.6	9.5	0.1	-2.5	
CZ	6.7	6.5	7.8	-1.2	0.2	
DK	-3.0	-2.0	0.1	-2.1	-1.0	
DE	0.1	3.6	5.3	-1.6	-3.3	

MS	Change in revenue (%)	Change in the VTTL (%)				Change in compliance (%)
			Change in base (%)		Change in effective rate (%)	
EE	5.1	11.0	11.6	-0.5	-5.3	
IE	7.6	14.6	13.4	0.1	-6.1	
EL	6.1	4.8	8.2	-3.1	1.2	
ES	1.7	5.6	10.4	-4.3	-3.7	
FR	3.4	3.9	4.8	-0.9	-0.5	
HR	17.9	13.3	15.5	-2.0	4.1	
IT	6.0	6.7	8.2	-1.4	-0.6	
CY	10.1	6.7	9.2	-2.4	3.2	
LV	4.4	8.2	10.4	-2.0	-3.5	
LT	4.7	8.3	10.7	-2.2	-3.3	
HU	5.4	11.1	12.3	-1.0	-5.1	
MT	6.7	7.4	16.7	-7.9	-0.7	
NL	7.8	4.8	5.7	-0.9	2.8	
AT	6.7	4.6	6.5	-1.8	2.0	
PL	11.8	18.2	10.8	6.6	-5.4	
PT	5.1	4.6	9.0	-4.0	0.5	
RO	11.8	17.2	15.9	1.1	-4.6	
SI	9.3	5.2	7.9	-2.4	3.8	
SK	8.4	7.1	7.7	-0.6	1.2	
FI	0.1	1.0	3.1	-2.0	-0.9	
SE	0.0	2.0	4.2	-2.2	-1.9	
EU (average)*	3.5	5.4	7.0	-1.3	-1.7	
EU (median)*	6.0	6.6	8.6	-1.7	-0.8	

Source: own elaboration. Download underlying data [here](#).

Note: "EU (average)" refers to the weighted average, calculated using each country's share in the EU VTTL as its weight. "EU (median)" represents a robust central estimate: half of the Member States score above it, and half below.

* EU estimates exclude Luxembourg due to recent data revisions yielding results outside plausible ranges.

VIII. Methodology

VIII.a. Preliminaries

The calculation of the VAT compliance and policy gaps follows a methodology well established in earlier VAT gap studies – the **top-down consumption-side** approach. This method is widely used to estimate the theoretical VAT liability due to its combination of a simple calculation formula and relatively low data requirements. It can be applied in many countries, provided that up-to-date and accurate national accounts figures are available. In addition, the approach requires supplementary information to model VAT rules, with the amount and level of detail depending on the complexity of the VAT systems in question.

The main strength of the method lies in its simplicity, which enabled the study team to standardise the approach across EU Member States, as well as candidate countries and potential candidates. Another key advantage is its accuracy in determining the overall size of the gap in countries with reliable national accounts. In many jurisdictions, the consumption-side approach is considered the most reliable source for assessing the total scale of the VAT compliance gap, while its components are often derived using other methods. Nonetheless, the approach also presents certain challenges, which are outlined and discussed in Annex C.

The top-down consumption-side approach is used to derive the VTTL – i.e., the theoretical VAT revenue in a hypothetical scenario of full tax compliance – for the core period covered by the study (2019-2023). Estimates for the earlier period (2000-2018), presented in Annex I, and for 2024 are based on the VAT compliance gap estimates for the core period, but do not involve a full recalculation of model parameters or tax base components. The methodological details for backcasting and producing rapid estimates are discussed in Annex C.

The **VAT compliance gap** measures overall non-compliance with VAT obligations. It reflects not only fraud and evasion but also losses arising from insolvencies, bankruptcies, administrative errors and legal tax optimisation. It is defined as the difference between the tax revenue that would be collected under full compliance (assuming an unchanged tax base) – the VTTL – and the actual VAT revenue. The VAT compliance gap is most often expressed either (1) in absolute terms; or (2) as a percentage of the benchmark (the VTTL):

$$VAT\ compliance\ gap = VTTL - VAT\ revenue \quad (1)$$

$$VAT\ compliance\ gap\ (\%) = \frac{VTTL - VAT\ revenue}{VTTL} \quad (2)$$

To avoid potential inaccuracies, the VTTL and VAT revenue figures must be aligned in terms of timing. For this reason, an additional, largely country-specific, component of the study involves adjusting revenue data to approximate accrual rather than cash accounting. This process includes correcting for factors such as late payments and changes in the stock of VAT credits, in line with the conventions allowed under ESA 2010 (the European System of National and Regional Accounts).

The **VAT policy gap** measures the additional VAT revenue that could, in theory (under perfect tax compliance), be raised if a uniform VAT rate were applied to the final domestic use of all goods and services by households, government and NPISH. To estimate the impact of reduced rates and exemptions on revenue losses, the VAT liability under current tax law is compared with the potential revenue from a system applying a uniform rate to the broadest possible base. This benchmark – referred to as notional ideal revenue – assumes that the VAT is applied to the entirety of final consumption, as

well as household, government and NPISH investment, at the current standard VAT rate. The difference between the notional ideal revenue and the VTTL is the VAT policy gap; this captures the effects of applying multiple rates and exemptions on the theoretical revenue that could be levied in a given VAT system. The VAT policy gap can also be expressed in absolute (3) or in relative terms (4):

$$VAT\ policy\ gap = notional\ ideal\ revenue - VTTL \quad (3)$$

$$VAT\ policy\ gap\ (\%) = \frac{notional\ ideal\ revenue - VTTL}{notional\ ideal\ revenue} \quad (4)$$

The VAT policy gap covers a wide range of exemptions, exclusions from the tax base and preferential treatments. Many of these can be classified as tax expenditures. Both the nature of these tax expenditures and their legal basis vary considerably. Others apply to goods and services that are difficult to tax because they are not provided at market prices (e.g., public services), have a tax base that is hard to define (e.g., financial and insurance services), or involve complicated place-of-supply rules (e.g., international transport).

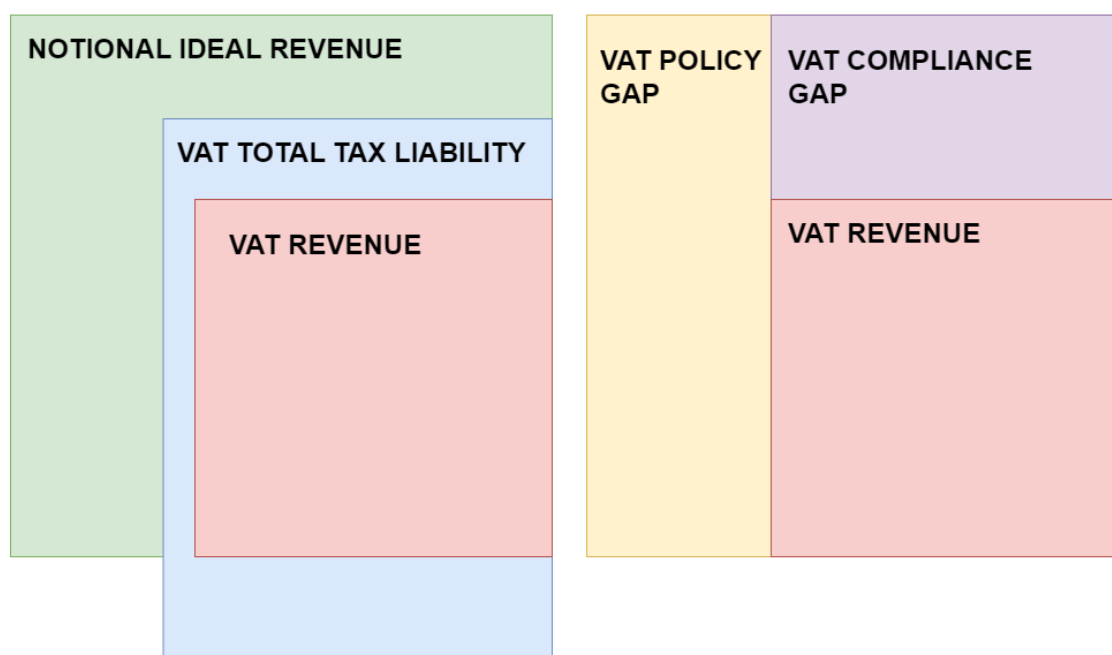
Unlike the VAT compliance gap, which – when estimated using the consumption-side approach – cannot easily be broken down by component, the VAT policy gap can be decomposed to assess the impact of specific types of preferential treatment or to analyse their effects on different parts of the tax base. To reflect its heterogeneous nature, the VAT policy gap is analysed in three dimensions. First, it is divided into the **VAT rate gap** and the **VAT exemption gap**. For EU Member States, where more detailed and standardised information is available, the VAT exemption gap is then further split into:

1. **National policy-driven VAT exemption gap;**
2. **EU policy-mandated VAT exemption gap;** and
3. **Non-actionable VAT policy gap.**

The non-actionable VAT policy gap is singled out because the idealised assumption of perfect tax compliance and a very broad base – covering all final consumption and GFCF by households, government and NPISH – is not practical. Some components of the notional ideal revenue are, in practice, very difficult or impossible to tax, meaning that the VAT policy gap often exceeds the estimated VAT expenditures. Nevertheless, the simplicity of the VAT policy gap measure makes it possible to compare VAT systems across countries, something that is more challenging for other tax expenditure measures, which often rely on varying benchmark definitions.

A direct relationship exists between the VAT gaps and their respective benchmarks, i.e., the VTTL and the notional ideal revenue. The difference between the notional ideal revenue and actual VAT receipts equals the sum of the VAT policy and compliance gaps, representing all revenue losses in a given VAT system (see Figure 131). As shown in Figure 131, the VTTL – although always smaller in practice – extends partially beyond the notional ideal revenue. This results from shifts in the actual tax base caused by exemptions without the right to deduct.

Figure 131. Components of the notional ideal revenue



Source: own elaboration.

The study also reports the overall indicator known as **C-efficiency**, which measures the deviation of a VAT system from a perfectly enforced tax applied at a uniform rate to all consumption. This indicator – broadly equivalent to one minus the sum of the VAT compliance and policy gaps – is widely used in the literature and serves as a useful point of reference for other research.

VIII.b. Estimation of the VTTL

The VTTL is estimated as the sum of the liability from six main components: final consumption by households (HHC), by government (GOV) and by NPISH (NPISH); intermediate consumption (IC); gross fixed capital formation (GFCF); and other, largely country-specific, adjustments, such as limited right to deduct VAT on fuel (net adjustments). To estimate the VTTL, around ten thousand parameters are estimated for each year. Estimated parameters include weighted average rates⁴⁹ for each 2-digit CPA group of products and services, and *propexes* (aka *pro-ratas*), which stand for the share of the sector's exempt and not taxable output. Under the employed approach, the VTTL is estimated using the following formula (5):

⁴⁹ Weighted average rate is understood as the ratio of tax liability to net tax base, i.e., the value of the respective types of use in national accounts.

$$\begin{aligned}
VTTL = & \sum_{i=1}^N (HHC \text{ VAT rate}_i \times HHC \text{ value}_i) \\
& + \sum_{i=1}^N (GOV \text{ VAT rate}_i \times GOV \text{ value}_i) + \sum_{i=1}^N (NPISH \text{ VAT rate}_i \times NPISH \text{ value}_i) \\
& + \sum_{i=1}^N \sum_{j=1}^M (IC \text{ VAT rate}_i \times Propex_j \times IC \text{ value}_{i,j}) \\
& + \sum_{i=1}^N \sum_{j=1}^M (GFCF \text{ VAT rate}_i \times Propex_j \times GFCF \text{ value}_{i,j}) + \text{net adjustments}
\end{aligned}
\tag{5}$$

where:

i denotes groups of products (goods and services),

j denotes industries and sectors of economic activity⁵⁰,

N denotes number of groups of products and services,

M denotes numbers of industries and number of sectors,

(*HHC*, *GOV*, *NPISH*, *IC*, *GFCF*) *Value* are the respective components of the final use – household, government and NPISH final consumption, intermediate consumption and gross fixed capital formation (denoted in net [of VAT] terms),

(*HHC*, *GOV*, *NPISH*, *IC*, *GFCF*) *VAT rate* are the effective VAT rates for the respective sub-aggregates of the economy, and groups of products and services,

Propex represents the percentage of output exempt from VAT in a given sector.

Household consumption liability

The core component of the VTTL, and the first component of Equation (5), is household final consumption liability⁵¹. This is a product of the effective VAT rates and household consumption values of each of the groups of products and activities. Households' consumption values, similar to other components of the use tables, are recorded in purchaser prices, thus requiring correction for the included VAT component. Moreover, adjustment is needed also for non-taxable consumption, in particular self-supply and imputed rents.

Government and NPISH consumption liability

The government and NPISH consumption liabilities are estimated as a product of their respective VAT rates, and the government and NPISH consumption values. Contrary to household consumption, most government and NPISH transactions do not constitute a taxable event. One exception are transfers in kind and, more specifically, *transfers in kind via market producers*.

⁵⁰ i and j depend on the granularity of SUTs. For EU Member States $i = 65$ and $j = 65$.

⁵¹ See e.g. EC/CASE (2013) for a comparison of the VTTL components in EU Member States.

Intermediate consumption liability

The liability from intermediate consumption is computed for each industry as a product of the intermediate use of each of the inputs, the average VAT rate for these groups of inputs and the industry average proportion of non-deductible VAT in intermediate consumption. Importantly, intermediate consumption is reported in purchaser prices and thus includes non-deductible VAT, which needs to be excluded from the use tables to reflect the net tax base.

Gross fixed capital formation liability

Similar to intermediate consumption liability, non-deductible investment could be estimated as a product of the tax rate, the *propex* and the base, i.e., the industry's GFCF. Its main components include housing and public investment. In practice, for most EU Member States, the study team has direct data on the value of non-deductible GFCF, eliminating the need to calculate *propex* coefficients. For EU candidate countries and potential candidates, such information is not available. Instead, GFCF was mostly available for five institutional sectors⁵². In this case, it was assumed that all investments made by financial corporations, general government, households and NPISHs were non-deductible, while the *propex* for non-financial corporations was derived using sectoral output shares.

Net adjustments

In addition to the core components of the base, the estimation method involves corrections that are accounted for outside of the main formula of the VAT compliance gap model. More specifically, these adjustments are: (1) the limited right to deduct VAT on accommodation and restaurant services (e.g., representation expenses); (2) the correction for small businesses under the VAT threshold; (3) non-deductible expenditures on business cars and fuel expenses; (4) the special VAT regime on selected territories (such as the Greek islands and Corsica island); and (5) netting out non-VAT taxes from the reported VAT revenue (e.g. revenue from Canary Islands Tax that is included in Eurostat-reported VAT revenue).

The liability on hospitality services (1) is estimated by multiplying the intermediate use of these services by the applicable rates. The small business correction (2) is estimated by multiplying the share of small companies' output in the overall output of economic operators by the gross VTTL before the adjustment. The business cars and fuel adjustments (3) are calculated by multiplying the VAT base by the applicable rate. The calculation most often uses data sourced from national administrations. If unavailable, this correction is calculated as a product of the GFCF expenditure on cars and fuel, applicable rates and *pro-rata* coefficients. Adjustments for selected territories (4) are calculated by adjusting the national VTTL by the estimated share of the VTTL generated by those territories.

As sources of information to estimate the VTTL, figures from national accounts (for the tax base) as well as data from fiscal registers and various surveys (for estimating the parameters of the model) are used. In contrast to the *production-side* approach, estimating the VTTL payments for all sectors, the *consumption-side* approach looks at the final liability in a product breakdown and corrects the liability estimates for the non-deductible VAT hidden at the intermediate stage.

The main sources of information on the tax base are the national accounts' SUTs and household final consumption, denoted in COICOP classification. The data for estimating model parameters for 2021,

⁵² S.11 – Non-financial corporations, S.12 – Financial corporations, S.13 – General government, S.14 – Households and S.15 – NPISHs.

2022 and 2023 comes from the dedicated survey for tax administrations and national statistical agencies (see Table 109). For other years, the primary source of information on the tax rules and the structure of the tax base were the own resource submissions (ORS)⁵³. Due to the simplification of procedures implemented by DG BUDG, comprehensive information for estimating effective VAT rates is no longer available on a yearly basis.

Table 109. Data sources for VTTL calculation

VTTL COMPONENT/ VAT REVENUE	PARAMETER/ TAX BASE	DATA SOURCE AND CALCULATION FORMULA	
		EU MS	CANDIDATE COUNTRIES
Household final consumption	Tax base (household final consumption in purchaser prices)	For years covered by SUT – <u>use tables from Eurostat or NSI</u> (if more up-to-date, granular and accurate) For years not covered by SUTs – values for earlier years from SUTs are rescaled using Eurostat's series <i>nama_10_cp18</i> or <i>nama_10_co3_p3</i> or single growth rate depending on data availability	For years covered by SUTs – <u>use tables from Eurostat or NSI</u> For years not covered by SUTs – values for earlier years from SUTs are rescaled using most granular and up-to-date official consumption data
	Weighted average rates	Granular breakdowns of household final consumption with the applicable rates provided in direct submissions and from ORS (for 2020 and 2019). The detailed structure of consumption is usually for the earlier year (<i>t-2</i>) but current VAT rules (<i>t</i>). The granularity of data varies by Member State	Granular breakdowns of household final consumption with own-assigned rates. If not available, the consumption structure from peer countries was used
Government and NPISH final consumption	Tax base (government and NPISH final consumption in purchaser prices)	For years covered by SUTs – <u>use tables from Eurostat or NSI</u> (if more up-to-date, granular and accurate). For years not covered by SUTs – values for earlier years from SUTs are rescaled using aggregate growth of government and NPISH (single growth rate) For selected countries with available information on the value and breakdown of social transfers in kind, this information is used instead	
	Weighted average rates	Household final consumption rates calibrated to reflect categories of consumption out-of-scope for VAT (as public education and healthcare)	

⁵³ ORS were files submitted by Member States' administrations containing calculations of VAT own resources which were later used as a base for estimating Member States' contributions to the EU budget. These files contained a standardised summary statement with ca. 40 components of the VAT final base and its adjustments in accordance with Directive 2006/112/EC. For each of the components and adjustments, detailed country-specific calculations were included. The fact that since 2022 ORS have no longer been available is due to the amendments introduced by Council Regulation (EU, Euratom) 2021/769 of 30 April 2021 amending Regulation (EEC, Euratom) No 1553/89 on the definitive uniform arrangements for the collection of own resources accruing from Value Added Tax.

VTTL COMPONENT/ VAT REVENUE	PARAMETER/ TAX BASE	DATA SOURCE AND CALCULATION FORMULA	
		EU MS	CANDIDATE COUNTRIES
	Tax base (intermediate consumption in purchaser prices)	For years covered by SUTs – <u>use tables from Eurostat or NSI</u> (if more up-to-date, granular and accurate). For other years, SUTs are rescaled using available supply data (assumed linear growth of input to supply ratio)	For years covered by SUTs – <u>use tables from Eurostat or NSI</u> (if more up-to-date, granular and accurate). For other years, SUTs are rescaled using available supply data (assumed linear growth of input to supply ratio)
Intermediate consumption	Weighted average rates	Household final consumption rates adjusted for sectors with substantially different treatment, products and services used (as for real estate and transport services)	
	Propex	Date provided in direct submissions or ORS, sourced primarily from tax returns	Data is only partially provided in direct submissions and sourced from tax returns. Primarily calibrated using general assumptions and more detailed information for peer EU Member States
	Tax base (intermediate consumption in purchaser prices)	Data provided in direct submissions (non-deductible investment) until <i>t</i> -2 rescaled in <i>t</i> -1 and <i>t</i> using GFCF broken down by institutional sector	GFCF broken down by institutional sector (<u>Eurostat and NSIs</u>)
GFCF liability	Weighted average rates	Household final consumption rates adjusted for sectors with substantially different treatment	
	Propex	Not required	It was assumed that all investments made by financial corporations, general government, households and NPISHs were non-deductible, while the <i>propex</i> for non-financial corporations was derived using sectoral output shares
Net adjustments	All (corrections of tax base, multipliers, corrections to liability)	Country-specific data provided in direct submissions and ORS	
VAT revenue	-	Eurostat [<i>gov_10a_taxag</i>] corrected for late payments, change in the stock of credits and other necessary adjustments based on direct submissions	Direct submission of headline VAT receipts, most often in cash terms. Whenever available, monthly data were used with a lag corresponding to local rules to better reflect the accrual tax base

Source: own elaboration.

VIII.c. VAT compliance gap backward update: 2000-2018

With the exception of the 2013 VAT gap study, each of the subsequent updates covered estimates for five-year periods. Overall, the full-fledged VAT compliance gap estimates have thus far covered 2000-

2023. However, due to revisions triggered by new information available, the estimates from the different studies cannot be directly compared. Publishing the exact values obtained in various studies in one table, without applying the necessary corrections, could lead to a misinterpretation of the year-over-year changes in the VAT compliance gap resulting from structural breaks.

Backward revisions of the VTTL estimates applied every year are due to three reasons:

- 1) updates in the underlying national accounts data published by Eurostat: updates in VAT revenues, new supply and use tables, and revised industry-specific growth rates, among others;
- 2) updates in the estimated GFCF liability, based on new information from the submissions on taxable shares of GFCF by five sectors: households, government, NPISH, and exempt financial and non-financial enterprises;
- 3) revision of the parameters of the VTTL model – effective rates, *propex* coefficients and net adjustments – either due to new information from ORS or to correcting errors in the previous computation.

As visualised by Figure 19 for the total EU-wide VAT compliance gap, despite some revisions in the magnitude of the most recent year, the dynamics of the series were largely unaffected by revisions, especially for older editions covered by each study. Bearing in mind that the updates in the calculation of the VTTL have a smaller impact on year-over-year changes than on the magnitude of the VAT compliance gap, the study team implements a so-called backcasting procedure for deriving past estimates of the VAT compliance gap for every Member State. The backcasting procedure relies on the magnitude of values for the five years covered by the most recent estimates. At the same time, the dynamics of year-over-year changes for the years not covered by the full estimates would be based on previous studies (the most recent study available including the specific years). Overall, the estimates for 2000-2018 included in this study rely on the ten studies published between 2013 and 2024 but are adjusted to the magnitude of the full estimates for 2019-2023.

VIII.d. Notional ideal revenue, VAT policy gap and its decomposition

As described in Section VIII.a, estimating the VAT policy gap requires, in addition to the VTTL, another benchmark called *notional ideal revenue*. The notional ideal revenue assumes that all final consumption and investment by households, government and NPISHs are taxable. This can be expressed as (6):

$$\text{notional ideal revenue} = \text{VAT standard rate} \times \sum_{i=1}^N \text{FC value}_i + \text{VAT standard rate} \times (\text{GFCF value}_{HH} + \text{GFCF value}_{GOV} + \text{GFCF value}_{NPISH}) \quad (6)$$

where:

$i \in (1; 65)$ denotes groups of products and services,

FC value denotes final consumption (including HHC, GOV and NPISH),

$\text{GFCF value}_{HH/GOV/NPISH}$ denotes GFCF of households, government and NPISH, respectively.

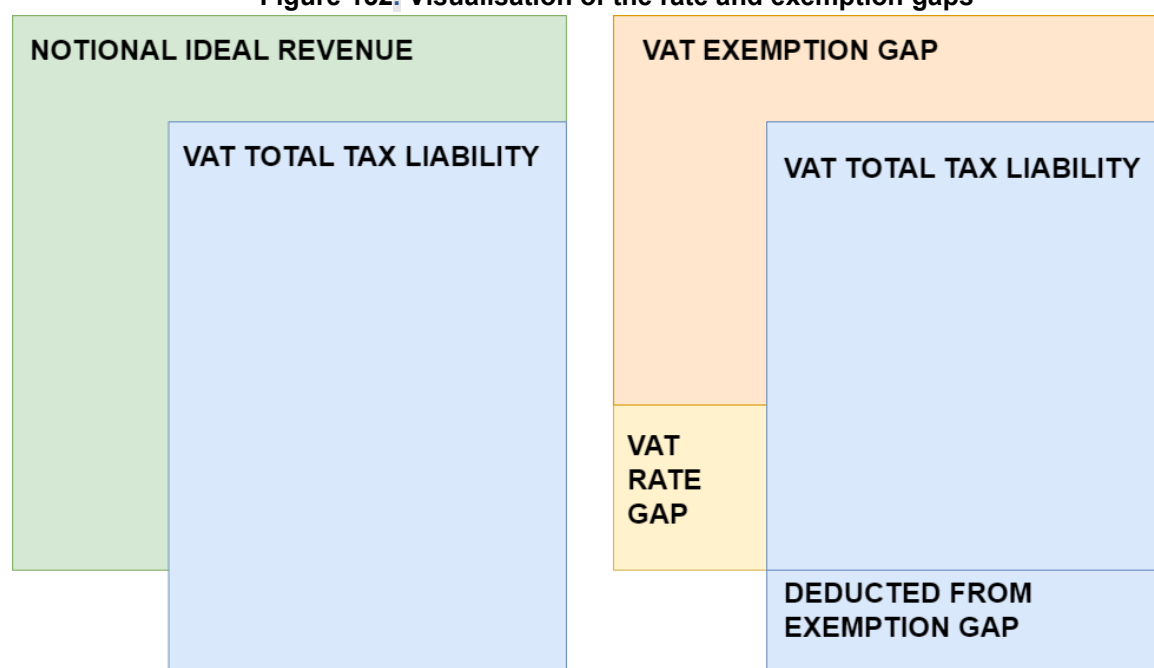
The policy gap can be decomposed to further understand how different elements of the tax system contribute to the loss of VAT revenue. In this study, the VAT policy gap is decomposed into ‘additive’

components (summing up to the total VAT policy gap)⁵⁴. The basic components of this decomposition are the VAT rate gap and the VAT exemption gap, which capture the forgone VAT liability due to the application of reduced rates and the implementation of exemptions or the exclusion of part of household final consumption from the tax base.

The VAT rate gap is defined as the difference between what would have been obtained in a counterfactual situation in which the standard rate is applied to the total final consumption and the VTTL. The VAT exemption gap is defined as the difference between two amounts: what would have been obtained in a counterfactual situation – where the standard rate is applied to exempt products and services at the final stage, and no restriction of the right to deduct is applicable, and the actual VTTL.

The nature of the VAT rate gap and VAT exemption gap differs, as visualised by Figure 132. Due to exemptions without the right to deduct, part of the revenue could be considered as distinct from the notional ideal revenue. This is because the actual revenue is partially collected at the intermediate stage, due to the inability to deduct VAT accrued at the intermediate stage. In an ideal system, this revenue would not be collected. However, the revenue collected instead at the final stage would be higher. As shown previously in Figure 131, the VAT policy gap, meaning the sum of the VAT rate and VAT exemption gaps, equals the difference between the notional ideal revenue and the VTTL.

Figure 132. Visualisation of the rate and exemption gaps



Source: own elaboration.

As shown in Equation (6), the counterfactual liability used for estimating the VAT policy gap (i.e., notional ideal revenue) assumes that final consumption and GFCF by households, government and NPISH are subject to the standard rate and that there is no non-deductible input VAT. The estimation of the VAT rate gap requires estimating the counterfactual VAT liability ($VTTL^R$) for the situation when no reduced rates are applied to all final consumption categories and non-private sector GFCF (see Equation (7)). In this counterfactual case, the liability on intermediate inputs and companies' GFCF does not change

⁵⁴ In contrast to the decomposition proposed by Keen (2013).

compared to the actual liability (i.e., the VTTL). This has two implications. First, the VAT rate gap does not account for the fact that the withdrawal of reduced rates could increase the non-deductible VAT of companies that do not have the right to deduct. Second, thanks to this assumption, the VAT rate and VAT exemption gaps are additive. As a result, there is no residual effect, which would be conceptually problematic for attributing to either exemptions or reduced rates.

The counterfactual VTTL^R assuming the discontinuation of reduced rates can be calculated as follows:

$$\begin{aligned}
 VTTL^R = & \sum_{i=1}^N (HHC \text{ VAT rate}_i^R \times HHC \text{ value}_i) \\
 & + \sum_{i=1}^N (GOV \text{ VAT rate}_i^R \times GOV \text{ value}_i) + \sum_{i=1}^N (NPISH \text{ VAT rate}_i^R \times NPISH \text{ value}_i) \\
 & + \sum_{i=1}^N \sum_{j=1}^M (IC \text{ VAT rate}_i \times Propex_j \times IC \text{ value}_{i,j}) \\
 & + \sum_{i=1}^N \sum_{j=1}^M (GFCF \text{ VAT rate}_i^R \times Propex_j \times GFCF \text{ value}_{i,j})
 \end{aligned} \tag{7}$$

where:

$i \in (1; 65)$ denotes groups of products and services,

$j \in (1; 65)$ denotes sectors of economic activity,

$HHC/GOV/NPISH/GFCF \text{ VAT rate}_i^R$ denotes average VAT rates for product group i for household, government, NPISH and GFCF, respectively, in the situation where reduced rates are discontinued. It is assumed that all products and services subject to reduced rates (including the exemption with the right to deduct) become taxed at the standard rate at the final stage⁵⁵.

Similarly, the counterfactual VTTL^E assuming the discontinuation of exemptions and the introduction of VAT to all components of the notional ideal revenue can be calculated as follows:

$$\begin{aligned}
 VTTL^E = & \sum_{i=1}^N (HHC \text{ VAT rate}_i^E \times HHC \text{ value}_i) \\
 & + \sum_{i=1}^N (GOV \text{ VAT rate}_i^E \times GOV \text{ value}_i) + \sum_{i=1}^N (NPISH \text{ VAT rate}_i^E \times NPISH \text{ value}_i) \\
 & + \sum_{i=1}^N \sum_{j=1}^M (GFCF \text{ VAT rate}_i^E \times GFCF \text{ value}_{i,j})
 \end{aligned} \tag{8}$$

⁵⁵ For other notation see Equation (5).

where:

$i \in (1; 65)$ denotes groups of products and services,

$j \in (1; 65)$ denotes sectors of economic activity,

$HHC/GOV/NPISH/GFCF \text{ VAT rate}_i^E$ denotes average VAT rates for product group i for household, government, NPISH and GFCF, respectively, in the situation where exemptions without the right to deduct are terminated and VAT registration thresholds are abandoned. It is assumed that $GFCF \text{ value}_{i,j}$ contains only household, government and NPISH GFCF, which are not deductible per se. Importantly, there is no liability component attributed to intermediate consumption (as all companies could deduct input VAT)⁵⁶.

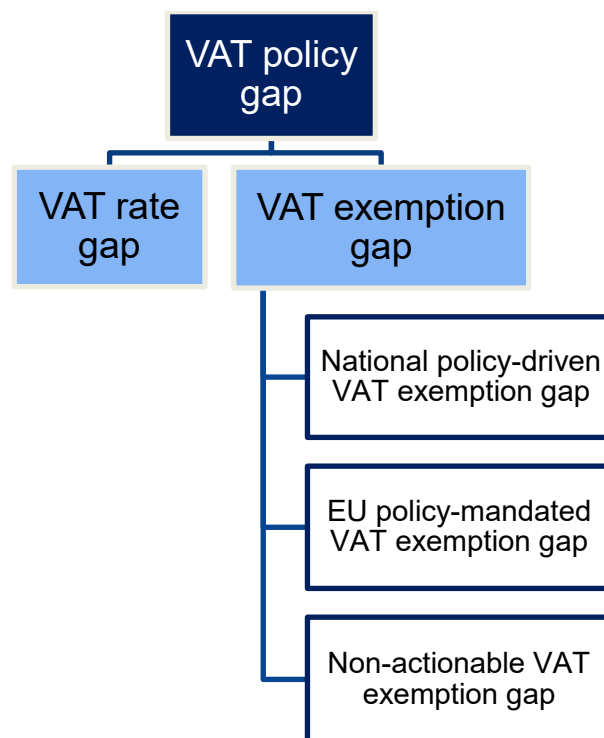
Using the above convention, the VAT rate gap and the VAT exemption gap can be decomposed into components that indicate the loss of notional ideal revenue resulting from the application of reduced rates and exemptions to specific goods and services. To calculate these components, the alteration of Equation (7) and (8) are used, including counterfactuals ($VTTL^*$) adjusted to the component of the VAT policy gap in question. As an example, to measure the impact of the reduced rate for utilities, the counterfactual compared with the actual VTTL assumes that all final consumption of utilities is subject to the standard rate.

In studies carried out up to 2024, the VAT policy gap was further broken down into the **actionable VAT policy gap** – comprising the VAT rate gap and actionable VAT exemption gap – and the **non-actionable VAT policy gap**. The purpose of this distinction was to isolate the elements of the VAT policy gap that are inherently non-actionable, such as imputed rents and public services.

The classification presented in this report develops this approach further. It distinguishes not only between actionable and non-actionable components but also between **elements under the discretion of national administrations and those mandated by EU policy**. In this context, the national policy-driven VAT exemption gap refers to the portion of forgone revenue determined by national decisions, while the EU policy-mandated VAT exemption gap refers to the portion arising from exemptions required by the VAT Directive. The latter category assumes that goods and services exempt or out of scope under the current provisions of the VAT Directive⁵⁷ are ‘EU policy-mandated’, unless Member States have substantial flexibility in defining the scope of these provisions. The basic breakdown of the VAT policy gap is summarised in Figure 133.

⁵⁶ For other notation see Equation (5).

⁵⁷ Council Directive 2006/112/EC of 28 November 2006 on the common system of value added tax, OJ L 347, 11.12.2006, p. 1.

Figure 133. Composition of the VAT policy gap

Source: own elaboration.

The national policy-driven VAT exemption gap, as defined in this report, consists of revenue forgone from services falling under Article 137 (such as real estate and certain financial services), from the SME scheme and from national exemptions applied under standstill clauses or derogations. In contrast, the EU policy-mandated VAT exemption gap includes exemptions required under EU law where Member States have limited discretion. These include insurance services, and gambling and betting under Article 135, as well as services and activities in the public interest under Article 132, such as private education, private healthcare, postal services, welfare, cultural activities and sport.

The non-actionable VAT policy gap covers components inherently outside the scope of VAT. These include government final consumption and other non-market transactions, such as public education and healthcare services, as well as imputed values in national accounts, such as imputed rents. Importantly, the non-actionable VAT policy gap no longer includes financial and insurance services. As discussed in the 2024 study, the practical limitations to taxing interest-based financial services can be overcome, as demonstrated by other countries' experience⁵⁸.

The final basic component of the VAT policy gap, the VAT rate gap, can be considered predominantly national policy-driven. Although Member States cannot impose VAT on zero-rated international passenger air and water transport services – where zero-rating refers to exemption with the right to deduct and is included within the rate gap – they are not required to apply zero or reduced rates that would otherwise reduce the VTTL.

⁵⁸ As an example, in recent years China has gradually extended VAT to various financial and insurance services, and the current regime covers direct financial services, insurance services and financial product trading, all taxed at a rate of 6%.

In addition to this basic breakdown, the analysis in this report further decomposes the elements of the VAT policy gap to attribute forgone revenue to specific types of goods and services, sectors of economic activity and categories of taxpayers. The degree of detail achievable in the decomposition summarised in Figure 134 was constrained by the granularity of the SUTs and by the parameters of the VTTL model. Importantly, due to the unavailability of information on exempt GFCF in such granular detail, the value of exempt GFCF available at the institutional sector level had to be further broken down. For this purpose, the exempt GFCF was proportionally allocated using information on GFCF by sector of economic activity from Eurostat⁵⁹.

Similarly to the breakdown of the VAT policy gap into the VAT rate gap and the VAT exemption gap – and the further subdivision of the VAT exemption gap into three basic components – the granular decomposition of VAT policy gap components is carried out by imposing the additivity condition. In this framework, the withdrawal of different concessions is assumed to affect the effective VAT rate at the final stage and the right to deduct input VAT, but not the rates applicable to intermediate use and GFCF of economic operators. As a result, the figures should be interpreted as the contributions of specific components to the VAT policy gap, rather than as precise estimates of revenue forgone from the withdrawal of individual concessions. Also, given the above and the number of assumptions required for the decomposition, the figures should be treated with caution.

⁵⁹ See assumptions underlying each simulation and policy gap decomposition in Annex C.

Figure 134. Underlying components of the VAT policy gap

	VAT exemption gap	VAT rate gap
National policy-driven	Real estate services	Agricultural products, foodstuffs and beverages
	Banking services and asset management	Pharmaceuticals
	SME scheme	Accommodation and restaurant services
	National exemptions under standstill clauses or derogations; other	Utilities
		Other
EU-mandated	Insurance services	Passenger transport
	Education (private)	Other modes
	Healthcare (private)	International air and water
	Social services	
	Postal services	
	Creative arts, gambling and betting; recreation	
Non-actionable	Imputed rents	
	Public services	
	Education Healthcare Other	

Source: own elaboration.

VIII.e. VAT compliance and policy gap fast estimates for 2024

The methodology for producing fast estimates – applied for 2024 when fully-fledged estimates could not be derived due to data unavailability – has been refined compared with the previous study. The refinements account, as far as possible, for changes in the structure of the tax base and in effective rates. Nevertheless, the approach remains different for most Member States from the one used to produce the fully-fledged estimates for the 2019-2023 period.

Two main components can be distinguished in the calculation. The first concerns the derivation of the VAT base and its structure. The algorithm used varies by component as follows.

- **Household final consumption liability:** when detailed information on household final consumption is available (Eurostat datasets *nama_10_cp18* or *nama_10_co3_p3*), the derivation of the consumption structure and value follows the full-estimates methodology (the

so-called COICOP-based approach). This was possible for seven Member States, although some data was flagged as provisional. For the remaining Member States, a single-growth-rate approach is applied, using the change in total household final consumption between 2023 and 2024. In other words, for most Member States the 2023 household consumption structure – an important driver of the VAT policy gap – is retained.

- **Government and NPISH final consumption liability:** a single-growth-rate approach is applied, based on changes in total government and NPISH consumption (Eurostat dataset *nama_10_gdp*).
- **Intermediate consumption liability:** for Member States with available data, intermediate consumption is rescaled by industry, using growth in total intermediate consumption by NACE sector (Eurostat dataset *nama_10_a64*; applied for six Member States). For the remaining Member States, a single-growth-rate approach based on gross value added (Eurostat dataset *nama_10_gdp*) is used.
- **GFCF liability:** for Member States with available data, GFCF is rescaled by institutional sector (Eurostat dataset *nama_10_nf_tr*; applied for ten Member States). For the others, a single-growth-rate approach using total GFCF (*nama_10_gdp*) is applied.
- **Net adjustments:** net adjustments are extrapolated using household final consumption growth rates.

The second component of the methodology concerns the impact of major statutory changes introduced during 2023 and 2024, which affect effective VAT rates between the two years. These changes are estimated primarily on a country-specific basis, using templates and information provided by national authorities. The estimates draw largely on the 2021 tax base structure and the VAT rules amended between 2023 and 2024.

VIII.f. Actionable standard VAT rate

To better depict the impact of exemptions and reduced rates, this study includes the **actionable standard VAT rate**. This rate equalises the current VTTL in a counterfactual situation where the exemptions and reduced rates behind the VAT rate gap and the actionable portion of the VAT exemption gap (national-policy driven and EU policy-mandated) are repealed:

$$\begin{aligned}
 \text{Actionable standard VAT rate} &\times \sum_{i=1}^N FC \text{ value}_i \\
 &= \sum_{i=1}^N (HHC \text{ VAT rate}_i \times HHC \text{ value}_i) \\
 &+ \sum_{i=1}^N (GOV \text{ VAT rate}_i \times GOV \text{ value}_i) + \sum_{i=1}^N (NPISH \text{ VAT rate}_i \times NPISH \text{ value}_i) \\
 &+ \sum_{i=1}^N \sum_{j=1}^M (IC \text{ VAT rate}_i \times Propex_j \times IC \text{ value}_{i,j}) \\
 &+ \sum_{i=1}^N \sum_{j=1}^M (GFCF \text{ VAT rate}_i \times Propex_j \times GFCF \text{ value}_{i,j})
 \end{aligned}
 \tag{9}$$

where:

i denotes groups of products (goods and services),

j denotes industries and sectors of economic activity,

N denotes number of groups of products and services,

M denotes numbers of industries and number of sectors,

FC Value stands for total final consumption value,

(*HHC, GOV, NPISH, IC, GFCF*) *Value* are the respective components of the final use – household, government and NPISH final consumption, intermediate consumption and GFCF (denoted in net [of VAT] terms),

(*HHC, GOV, NPISH, IC, GFCF*) *VAT rate* are the effective VAT rates for the respective sub-aggregates of the economy, and groups of products and services. These rates are calculated assuming that all actionable subcomponents of the tax base are taxed at standard rate, where the non-actionable components are not taxable,

Propex represents the percentage of output exempt from VAT in a given sector.

VIII.g. C-efficiency

C-efficiency is an indicator of the departure of VAT from a perfectly enforced tax levied at a uniform rate on all consumption. It is expressed as:

$$E^C = \frac{VAT\ revenue}{tC} \quad (10)$$

where:

VAT revenue stands for VAT revenue (ESA 2010 standard),

t stands for the statutory standard rate,

C stands for the tax base.

The literature usually considers the entire final consumption (household, government and NPISH, net of VAT) as the base, despite the fact that only a fraction of government and NPISH consumption is taxed. Also important to note is that to estimate net consumption values, actual VAT revenue is deducted from gross consumption values. An alternative, deducting the VTTL to net out gross values, could also have its merits, under the assumption that the reduction of the VAT burden due to non-compliance is not fully passed on to consumers and goods' final prices. However, to maintain compatibility with other studies, VAT revenue was used instead of the VTTL.

The values of the measure can range from zero to one. However, values larger than 65% are rarely observed (Keen, 2013). Even in a utopian situation of full compliance and a flat rate system, C-efficiency should be considerably lower than one, as domestic final consumption in the denominator of C-efficiency

is broader than the actionable VAT base⁶⁰. In other words, if C-efficiency equalled one, revenue would be higher than the notional ideal revenue.

VIII.h. VAT revenue decomposition

As VAT revenue is the difference between the VTTL and the VAT compliance gap ($VR = VTTL - VAT\ compliance\ gap$), and the VTTL is a product of the effective VAT rate and the base ($VTTL = effective\ rate \times base$), VAT revenue could be decomposed using the following formula:

$$VAT\ revenue = VTTL \times VAT\ compliance = effective\ rate \times base \times \left(1 - \frac{VAT\ compliance\ gap}{VTTL}\right)$$

Thus, the year-over-year relative change in revenue is denoted as:

$$\begin{aligned} \left(1 + \frac{\Delta VAT\ revenue}{VR}\right) &= \left(1 + \frac{\Delta(effective\ rate)}{effective\ rate}\right) \times \left(1 + \frac{\Delta base}{base}\right) \times \left(1 + \frac{\Delta\left(1 - \frac{VAT\ gap}{VTTL}\right)}{\left(1 - \frac{VAT\ gap}{VTTL}\right)}\right) \end{aligned}$$

where:

$\frac{\Delta(effective\ rate)}{effective\ rate}$ denotes change in effective rate,

$\frac{\Delta base}{base}$ denotes change in base,

$\frac{\Delta\left(1 - \frac{VAT\ gap}{VTTL}\right)}{\left(1 - \frac{VAT\ gap}{VTTL}\right)}$ denotes change in VAT compliance (EC/CASE, 2021).

VIII.i. Road-signalling criteria and their justification

The availability of data, and their timeliness and granularity vary by country, which contributes to variation in the accuracy of the obtained estimates. To inform the readers about the credibility of estimates for particular countries, the *2022 VAT gap in the EU* study has introduced the categorisation of the credibility of estimates using three categories, marked visually in green, yellow and red.

Since then, three criteria have been used for the categorisation of countries by credibility of estimates: (1) timeliness/relevance of SUTs; (2) timeliness/relevance of data used for the calculation of model parameters; and (3) unexplained patterns in data observed. The first two criteria use the results of the simulation carried out by the study team. As shown by EC/CASE (2022), the unavailability of information on specific parameters with a one-year or two-year lag appeared to have a relatively modest impact on the accuracy of estimates. If the data were unavailable for two years and the parameters remained unchanged for two years in row, the average inaccuracy would increase quite substantially. The unavailability of SUTs also appeared to be an important factor affecting the accuracy of estimates. The average error of the estimates using one-year lagged SUTs was 0.4pp, whereas two-year lagged estimates had an average impact of 0.6pp.

⁶⁰ Total domestic final consumption includes government and NPISH consumption, which to a large extent cannot be taxed.

In contrast to other basic characteristics of data, such as availability, timeliness and granularity, the quality of the aggregate information received by the study team cannot be fully controlled. The reason is that the underlying calculation process and data are not available to the study team. Moreover, most often, no other similar series or sources of information exist that could be used for cross-validation. As a consequence, the main tool at the study team's disposal is the observation of patterns in the data that are not in line with economic theory or expectations.

The basic theoretical assumption underlying this assessment is that during periods that are stable in terms of policies and economic situation, taxpayer compliance largely caused by systemic factors remains stable. Large shifts in estimates therefore require special attention. In case no justification is found for the shifts, the credibility of such estimates could be questioned.

The relative scarcity of large shifts could be summarised by looking at the tails of the distribution of year-over-year changes in the VAT compliance gap.

- **Large increase in the gap.** An increase in the gap of over 5.5pp year-over-year was observed in only 5% of instances and an increase of over 10.9pp in only 1% of instances.
- **Large decline in the gap.** A decrease in the gap of over 6.3pp year-over-year was observed in only 5% of instances and a decrease of over 10.9pp in only 1% of instances.
- **One-off hike.** The VAT compliance gap was higher by 4.6pp than the average of the values in the preceding and succeeding years in only 5% of instances. The VAT compliance gap was higher by more than 8.4pp than the average of the values in the preceding and succeeding years in only 1% of instances.
- **One-off drop.** The VAT compliance gap was lower by 4.8pp than the average of the values in the preceding and succeeding years in only 5% of instances. The VAT compliance gap was lower by more than 6.9pp than the average of the values in the preceding and succeeding years in only 1% of instances.

Estimates beyond a reasonable magnitude and substantially different from those derived by national administrations are marked in yellow or red (regardless of other criteria). Estimates below 0% or deviating by more than 5pp from the estimates of tax administrations, are treated as follows.

1. As large shifts in the gap are rarely observed, all such instances are scrutinised. If these changes cannot be explained, they are flagged using the relevant traffic lights – yellow for fluctuations below the 5th and above the 95th percentile, and red for fluctuations below the 1st and above the 99th percentile.
2. In the case of multiple issues, an overall assessment is made, taking into account all the criteria affecting the estimate.

To supplement the assessment of the reliability of the underlying information based on the estimated results, a new qualitative criterion was introduced under this study, titled '**data reliability**'. This criterion considers the impact of potential unexplained patterns in the underlying data or partial estimates (including the VAT policy gap) rather than assessing the final VAT compliance gap estimate by its value or volatility. Such patterns may include non-comparable parameter values, unexplained fluctuations in VAT policy gap components or other inconsistencies. If such issues can affect the size of the gap by more than 1pp, the country is classified as yellow. If the potential impact exceeds 3pp, the country is classified as red.

In the **2025 VAT gap in the EU study**, the inclusion of new countries increased the breadth of issues related to data availability, granularity and quality. For these reasons, the road-signalling criteria were extended to also provide a minimum requirement for including countries' results in the explorative analysis. Countries presenting at least one of the following criteria are disqualified from the exploratory analysis.

1. The SUTs are not available or are older than 10 years (in relation to the last year covered) and no other reliable and more recent information is available from other datasets on final consumption, non-deductible VAT in intermediate consumption and GFCF.
2. Underlying data for the calculation of key model parameters are not available or are older than five years for at least one year covered.
3. Negative estimates arise from persistent problems with the quality of national accounts data, where estimates are negative for more than one consecutive year.

The results for countries meeting at least one of the criteria above are considered not credible. Nevertheless, they are included in Annex F for transparency and to ensure comparability of reporting across all countries covered by the study, despite their limited reliability.

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LIST OF ACRONYMS AND ABBREVIATIONS

CASE	Center for Social and Economic Research (Warsaw)
CPA	Statistical classification of products by activity in accordance with Regulation No 451/2008 of the European Parliament and of the Council of 23 April 2008
COICOP	Classification of individual consumption according to purpose
CPI	Consumer price index
ESA	European system of accounts
ESTAT	Eurostat
EU	European Union
EU27	Current Member States of the European Union, UK exclusive
EU28	Member States of the European Union until the date of BREXIT, i.e., including UK
GDP	Gross domestic product
GFCF	Gross fixed capital formation
HH	Household
HICP	Harmonised index of consumer price
IMF	International Monetary Fund
JRC	Joint Research Centre
NACE	Statistical classification of economic activities in the European Community
NIF	<i>pt. Número de Identificação Fiscal</i> (taxpayer number)
NPISH	Non-profit institutions serving households
NSI	National Statistical Institute
OECD	Organisation for Economic Co-operation and Development
ORS	Own resources submissions
OSS	One Stop Shop
pp	percentage points
SAF-T	Standard Audit File for Tax
SDSN	UN Sustainable Development Solutions Network
SME	Small and medium-sized enterprises
SUTs	Supply and use tables
VAT	Value added tax
VTTL	VAT Total Tax Liability

GLOSSARY

Actionable VAT policy gap – theoretical VAT revenue loss due to the application of reduced rates and exemptions that are theoretically possible to discontinue. Usually denoted as a percentage of the notional ideal revenue or in nominal terms. The actionable VAT policy gap consists of the sum of (i) the VAT rate gap, (ii) the national policy-driven VAT exemption gap, and (iii) the EU policy-mandated VAT exemption gap.

EU policy-mandated VAT exemption gap – includes exemptions required under EU law where Member States have limited discretion. These include services and activities in the public interest under Article 132, such as education, healthcare, postal services, welfare, cultural activities, and sport, as well as insurance services and gambling and betting under Article 135. For more details, please see Table 155.

Missing trader intra-Community (MTIC) fraud – a specific type of VAT fraud that exploits the fact that the intra-Community movement of goods and services is VAT-free, making the VAT fraud even more profitable.

National policy-driven VAT exemption gap – includes exemptions under the discretion of Member State administrations. It consists of revenue forgone from services falling under Article 137 (such as real estate and certain financial services), from the SME scheme, and from national exemptions applied under standstill clauses or derogations. For more details, please see Table 155.

Non-actionable VAT policy gap – difference between the VAT policy gap and actionable VAT policy gap; theoretical VAT revenue loss due to the application of exemptions and the non-taxability of components of the tax base that are difficult or impossible to tax. It consists of imputed components of consumption and non-market transactions. The non-actionable VAT policy gap can also be referred to as the non-actionable VAT exemption gap: they refer to the same estimate. For more details, please see Table 155.

Notional ideal revenue – benchmark VAT revenue that assumes perfect taxpayer compliance and a uniform application of the current standard VAT rate. Unlike the VTTL, which reflects the potential revenue of actual VAT system with its reduced VAT rates and VAT exemptions, the notional ideal revenue assumes that all final consumption and household, government, and NPISH investment are taxed at the current standard VAT rate in the respective country.

VAT compliance gap – revenue loss due to taxpayer non-compliance. This represents the difference between the VAT revenue that would be collected if all taxpayers were compliant and the actual VAT revenue. This difference includes a wide range of forgone receipts, from legal exploitation of tax system loopholes to evasion and organized large-scale tax fraud. Non-compliance can also be unintentional, resulting from administrative errors, omissions, non-fraudulent bankruptcies, and other factors.

VAT exemption gap – theoretical VAT revenue loss due to the application of VAT exemptions and the non-taxability of some components of the notional ideal revenue. Consists of the EU policy-mandated VAT exemption gap, national policy-driven VAT exemption gap and non-actionable VAT policy gap. Usually denoted as a percentage of the notional ideal revenue or in nominal terms.

VAT policy gap – an indicator of the additional VAT revenue that could theoretically (i.e., under the assumption of perfect tax compliance) be generated if a uniform VAT rate were applied to the final

domestic use of all goods and services by households, government, and non-profit institutions serving households (NPISH). Usually denoted as a percentage of the notional ideal revenue or in nominal terms.

VAT rate gap – theoretical VAT revenue loss due to the application of a reduced VAT rate. Usually denoted as a percentage of the notional ideal revenue or in nominal terms.

VAT Total Tax Liability (VTTL) – the tax revenue that would be collected in the case of perfect taxpayer compliance with the current VAT structure in place in the respective country, i.e. with respective reduced VAT rates and exemptions in place, assuming an unchanged net VAT base. Furthermore, the estimated VTTL assumes absence of any unintentional non-compliance, i.e. absence of administrative errors and other factors.

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ANNEX A: Changes in VAT rules and compliance measures in EU member States in 2023 and 2024

Table 110. Changes in VAT regimes and compliance measures in 2023

MS	Changes in rates/right to deduct	Changes to registration thresholds	Changes to compliance measures
BE	VAT exemption for COVID-19-related supplies expired.	N/A	Reverse Charge Mechanism for construction: it applies to Belgian-established companies performing construction supplies on immovable property, with specific conditions. Statute of Limitation: Extended to four years if VAT return is filed late or not at all, seven years for incorrect VAT exemptions or deductions, and ten years in cases of fraud. Retention period: documents must be kept for ten years (previously seven), with special periods for immovable goods (15 or 25 years). VAT late payment interest rates: Set at 8% per annum; for refundable amounts, the rate is 6% per annum. E-invoicing: Mandatory for taxpayers with government contracts over EUR 3,000.
BG	Permanent reduced 9% VAT for baby foods, hygiene products, books, periodicals; extended 0% VAT for bread and flour. New 0% rate for exports by non-EU businesses; VAT exemption for certain financial services.	Mandatory increase of the VAT registration threshold for taxpayers supplying VAT chargeable goods from BGN 50 000 to BGN 100 000.	Rules for recovery of charged VAT on bad debts: introduced specific definitions and procedural steps for recovering VAT on bad debts, with adjustments required if repayment occurs.
CZ	End of VAT waiver on electricity and gas; standard VAT rate of 21% from Jan 1, 2023 applies.	VAT registration limit increased to CZK 2 million from CZK 1 million.	N/A

MS	Changes in rates/right to deduct	Changes to registration thresholds	Changes to compliance measures
CY	New 3% VAT for certain goods and services; zero-rating for items like Braille typewriters; the end of zero rating on basic products after Oct 31, 2023. Reduced VAT rate for buildable residential areas. Based on the Law Amendment 42(I)/2023 (dated 16/6/2023), a reduced VAT rate of 5% is imposed in cases of purchase or construction of a house/apartment up to 130 sq. m. of buildable area and value up to EUR 350 000. Based on the Orders of the Council of Ministers (dated 13/1/2023 and 31/3/2023), from 13/01/2023 until 31/5/2023 the deliveries of in vitro diagnostic medical devices and vaccines for COVID-19 disease are subject to the 0% VAT rate. Based on the Order of the Council of Ministers (dated 13/9/2023), a 0% VAT is imposed on supplies of certain basic goods from 1 November 2023 until 30 April 2024. Based on the Order of the Council of Ministers (dated 17/11/2023), from 1 December 2023 until 31 May 2024, a 0% rate of VAT is imposed on deliveries of meat and vegetables classified under certain codes of the customs tariff. Based on the Law Amendment 75(I)/2023, the VAT rate was reduced to 0% and 3% from 21st July 2023, for certain products /services which were subject to 5% VAT. 5% VAT on supplies of vaccines related to COVID-19 disease from January 2023. 0% VAT is applied on certain essential commodities: bread. Milk, Eggs, Baby food, Baby diapers, Products for feminine hygiene protection, Adult diapers from May 2023 to September 2024.	N/A	N/A
DK	N/A	N/A	Interest on corrections to past VAT returns: Implemented interest charges on corrections, with a specific interest rate formula.
DE	Zero VAT for solar modules and certain components; extended 7% reduced VAT for restaurant and catering services (excluding drinks); reduction in agricultural flat rate from 9.5% to 9.0%.	N/A	Input VAT deduction changes: abolished input VAT flat rate and adjusted the threshold for non-profit corporations. Reverse Charge Mechanism: Expansion to include the transfer of emission allowances.
EE	N/A	N/A	N/A

MS	Changes in rates/right to deduct	Changes to registration thresholds	Changes to compliance measures
IE	Zero VAT for newspapers, periodicals, and health products; 9% reduced VAT for gas and electricity extended until Oct 31, 2024. VAT rates for tourism, hospitality, and hairdressing to revert to 13.5% from 9%. Decrease in the farmers' flat-rate addition from 5.5% to 5%. Based on 18/10/2023 Finance Act, the 0% VAT is applied to the supply and installation of solar panels for recognised schools. automated external defibrillators, newspapers and electronically supplied newspapers, menstrual cups, menstrual pants and menstrual sponges, human and human non-oral medicines for hormone replacement therapy and nicotine replacement therapy.	N/A	N/A
EL	Extended 13% reduced VAT for non-alcoholic drinks, art and cultural activities, dance schools, gyms, passenger transport, and zoo tickets. 6% reduced VAT for personal hygiene and protection products, and entertainment services. Suspended VAT on new properties.	N/A	E-invoicing: Mandatory for taxpayers with contracts with government agencies.
ES	Electricity (for contracts under 10 KW,) and gas: extension of 5% rate for the whole year. Bread, flour, milk, cheese, eggs, fruits, vegetables, legumes, grains and cereals: reduction of their VAT rates from 4% to 0% for the whole year. Olive and seed oils and alimentary dough and pasta: reduction of their VAT rates from 10% to 5% for the whole year.	N/A	Reverse Charge Mechanism: Changes to align with EU rules, extending to certain waste supplies, with exclusions. VAT Recovery on bad debts: Revised rules to ease recovery process and requirements, with adjustments for insolvency. Extension of VAT deferrals: requirement to provide guarantees is waived when the deferred amount does not exceed 50 000 euros (30 000 before), and the time lapse granting or repayment periods are increased.
FR	Extended 5.5% VAT rate for certain food and COVID-19 protection materials until Dec 31, 2023.	Businesses with VAT exemption are exempt from recapitulative statements for goods.	N/A

MS	Changes in rates/right to deduct	Changes to registration thresholds	Changes to compliance measures
HR	Rate for basic food products reduced from 25% and 13% to 5%; sanitary napkins and tampons from 25% to 13%; event tickets VAT from 25% to 13%. Reduced VAT for the supply of natural gas, district heating services, fuel wood, pellets, briquettes and chipped wood gas, and wood materials from 25% to 5% until March 31, 2023. This provision has been then extended until March 31, 2024, after which the VAT rate is increased to 13%.	N/A	N/A
IT	Reduced 5% VAT on feminine hygiene, baby products, face masks; 5% VAT on natural gas extended until Sep 30, 2023; reduced 10% VAT on pellet sales. The reduced VAT rate of 5% on district heating services was extended during the first quarter of 2023. This reduced VAT rate applies for the months of January, February and March 2023.	VAT registration threshold increased from EUR 65,000 to EUR 85,000.	Enhanced compliance measures: Stricter penalties and monitoring for accurate VAT reporting and payment. Enhanced checks for new VAT number registration and measures to hold online platforms accountable for VAT on transactions. Increased the turnover thresholds determining the VAT payment periods. The changes increased turnover to EUR 500 000 for supplies of services instead of EUR 400 000 and for supplies of goods to EUR 800 000 instead of EUR 700 000.
LV	0% rate for COVID-19 vaccines and related medical devices expired. 5% VAT rate for specified fresh fruits, berries and vegetables is extended until Dec, 31 2023.	N/A	Raised the bad debt threshold and improved conditions regarding adjustment of input tax for bad debt.
LT	Reduced 9% VAT on e-books, accommodation, catering, performance services, sports events; 5% VAT for special medical food; reduced VAT for heating to 5%; ended 0% VAT for COVID-19 vaccines.	N/A	i.EKA was launched. The obligation for taxpayers to provide data from accounting documents (cash receipts) of economic transactions has been established in stages (starting from big taxpayers). From Jan 1, 2025 mandatory for all businesses.
LU	Reduced all VAT rates by 1% for 2023, leading to a standard VAT rate of 16%, and reduced rates of 13% and 7%.	N/A	E-Invoicing mandatory for small and new taxpayers engaging in B2G transactions.
HU	Reduced rate of 5% on new residential property extended.	N/A	Reverse Charge Mechanism extension: Available for specific products (e.g., greenhouse gas emission allowances) until Dec, 31 2026. Bad debt: VAT on bad debts whose due date has not yet expired can be reclaimed as part of a self-audit. Simplifications to the VAT system, including special rules for cessation of economic activity and extension of VAT succession cases.

MS	Changes in rates/right to deduct	Changes to registration thresholds	Changes to compliance measures
MT	Extended reduced tax rate on transfer of immovable property until Jun 31, 2023.	N/A	Increased penalties for recapitulative statements: Penalty raised from EUR 10 to EUR 50 per month, with a maximum of EUR 600 per statement. New requirements for information retention and submission to combat VAT fraud. Online submission of VAT returns mandated for VAT-registered persons.
NL	Reduction in VAT on supply and installation of solar panels to 0%. Change to 21% VAT rate for nitrous oxide (not for medical use).	N/A	Waiver of default penalties: For non-compliant taxpayers with OSS mechanisms until Jun, 1 2024, including reversal of previously imposed penalties. Codified in a Decree dated Nov, 13 2023.
AT	Exemption to cross-border passenger transportation by rail for the Austrian section of the route.	For flat-rate farmers, who carry out transactions as part of an agricultural and forestry business, the turnover limit for the application of the agricultural and forestry flat-rate scheme was raised to EUR 600 000.	Due to the ruling of the ECJ of 8.12.2022, Case C-378/21, P-GmbH, from Jul 22, 2023 the regulations on the incurrence of VAT liability by virtue of invoice were adjusted. From Jan 1, 2023, the EU VAT triangulation simplification is also within supply chain transactions with more than three persons. The requirements for a fiscal representative when using the OSS are based on the regulations of the Member State of identification and only subsidiarily on those of the Member State of destination. No reverse charge for the letting of properties where the owner does not constitute a fixed establishment in Austria, meaning that the supplier is liable for tax and must declare its transactions in the assessment procedure.
PL	VAT on gas, fuel, electricity, and system heat increased from reduced rates to 23%. Basic food products at 0% VAT rate. Fertilizers at 8% VAT.	N/A	VAT groups and compliance changes: Introduction of VAT groups, adjustments to small taxpayer sales limit, clarification on exchange rates for correcting invoices, and various procedural enhancements for VAT returns and refunds. Simplifications and new options for avoiding liability and invoice printing requirements.
PT	0% rate on essential food products. Reduced VAT rate extended for canned fish, vegetable butter, drinks, yogurts, bicycle services, and certain energy-efficient products.	New VAT registration threshold of EUR 13 500.	Additional requirements for foreign VAT-registered businesses: they must use certified invoicing software, include a QR Code on paper or PDF invoices, and comply with monthly invoice reporting via SAF-T.
RO	Increased VAT rate for non-alcoholic drinks to 19%; hotel accommodation, restaurant and catering services increased to 9%. Extended 5% VAT rate for firewood.	New threshold of RON 600 000 for 5% rate for housing supply.	SAF-T and E-Transport mandates: Mandatory for medium taxpayers and for high tax risk goods, aiming to improve VAT compliance and monitor transportation of goods.

MS	Changes in rates/right to deduct	Changes to registration thresholds	Changes to compliance measures
SI	Introduced a special lower VAT rate of 5% for the supply of standardised fire-fighting vehicles, special protection and life-saving equipment and tools for performing fire-fighting tasks usually intended for interventions, which are supplied to public fire-fighting services or voluntary fire-fighting units in fire-fighting brigades.	N/A	New rules provide for taxable persons to always hand the issued invoice over to final consumers (not only upon their request), notwithstanding the manner of payment.
SK	Temporary reduction for restaurant and catering services; permanent 10% VAT rate for accommodation, cable car transportation, sports facilities, and swimming pools. From 2023, 5% VAT applied to the delivery of a building, including building land, which meets the conditions for the construction of state-supported rental housing policy, as well as restoration or reconstruction of such building.	Annual VAT registration threshold increased from EUR 49 750 to EUR 75 000. The amendment No. 516/2022 to the VAT Act abolishes the mandatory VAT registration for taxable persons whose turnover consists exclusively of the supply of goods and services exempt from VAT under Sections 37 to 39 of the Value Added Tax Act.	VAT bad debt relief changes: Expansion and simplification of conditions for VAT correction on bad debts, including cancellation of correction for debts under EUR 300 unpaid for more than 12 months. Simplifications for VAT-exempt activities and adjustments for VAT on stolen property.
FI	Electric power VAT reduced from 24% to 10% from Dec 1, 2022, to Apr 30, 2023. VAT exemption for passenger transport; reduced VAT rate on electricity sales from 24% to 10%.	N/A	N/A
SE	N/A	N/A	N/A

Source: own elaboration.

Table 111. Changes in VAT regimes and compliance measures in 2024

	Changes in rates/right to MS deduct	Changes to registration thresholds	Changes to compliance measures
BE	N/A	N/A	N/A
BG	Restaurant and Catering Services: The VAT rate for supplies in the restaurant and catering sector will remain at a reduced rate of 9% until 31 December 2024, instead of the previously planned 31 December 2023. Tourist Services and Sports Facilities: the reduced 9% VAT rate on tourist services and services related to the use of sports facilities will be extended until 30 June 2024, rather than ending on 31 December 2023.	N/A	N/A
CZ	The previous reduced rates (10% and 15%) have been consolidated into a new reduced rate of 12%.	N/A	N/A
CY	0% VAT rate is applied on Children's milk (liquid and powder), Baby and adult diapers, Products for feminine hygiene protection (tampons, sanitary pads and sanitary napkins), Fresh or chilled vegetables and Fresh fruit from November 2024.	N/A	N/A
DK	N/A	N/A	N/A
DE	N/A	Germany increased the turnover limit for using the cash accounting regime	N/A

	Changes in rates/right to MS deduct	Changes to registration thresholds	Changes to compliance measures
		from EUR 600 000 to EUR 800 000 in 2024.	
EE	Standard VAT rate has been increased from 20% to 22%. The two reduced rates of 5% and 9% continue to apply.	N/A	N/A
IE	Decrease in the farmers' flat-rate addition from 5% to 4.8%. Added 0% rate for audiobooks supplied on a physical means of support and the electronic supply of books.	The Deposit Return Scheme (DRS) is an initiative introduced in February 2024 under the Environment legislation to reduce waste and encourage recycling. The DRS requires that a refundable deposit is placed on single-use drinks containers – plastic bottles and aluminium/steel drinks cans – and the deposit is refunded when the empty containers are returned for recycling or reuse. This section inserts a new section 92A into Part 10 of the Value-Added Tax Consolidation Act 2010 to provide for the taxation (Standard Rate of VAT) of in-scope bottles and containers, on which a deposit has been charged, when they have not been returned to a collection point.	N/A
EL	The following changes apply from July 2024: Permanent implementation of the 13% reduced VAT rate for the supply of coffee, cocoa, tea, chamomile, and similar beverages when provided as takeaway or through delivery services. The standard 24% VAT rate will continue to apply to coffee, cocoa, tea, chamomile, and other infusions when served as part of restaurant and catering services. Permanent application of the 13% reduced VAT rate on taxi passenger transport services.	N/A	VAT returns are to be pre-filled on a mandatory basis regarding tax periods from 01.01.2024, but with an acceptable deviation, using the transmitted income/expense transaction data to the myDATA digital platform.
ES	Electricity was raised from 5% (temporarily reduced rate during 2023) to 10% VAT rate. From the 1 st of January to the 31 st of March, natural gas and wood for energy are subject to a 10% VAT rate, instead of the former 5%. The following provisions were in place from the 1 st of October to the 31 st of December 2024: End of temporary 0% VAT rate for certain basic foodstuffs and rise to 2% for: common bread, including frozen bread, flour for bread, animal milk, cheese, eggs, fruits, vegetables, legumes, and cereals. The supplies of seed oils and pasta, previously subject to a temporary 5%, are subject to 7.5% VAT rate. VAT rate for olive oil from 5% to 2%	N/A	N/A
FR	N/A	N/A	N/A

	Changes in rates/right to MS deduct	Changes to registration thresholds	Changes to compliance measures
HR	The application of the reduced VAT rate of 5% for the supply of natural gas, district heating services, fuel wood, pellets, briquettes and chipped wood has been extended until March 31, 2025.	Due to the change in the national currency, the amount of the registration threshold was rounded from EUR 39 816 to EUR 40 000. The amount of the threshold for application of taxation period from the first to the last day of a quarter was rounded from EUR 106 178 to EUR 110 000.	The condition for reducing the taxable amount in the case of non-collection of all or part of the due claims which have not been collected for more than one year is relaxed. Taxable person registered for VAT purposes is obliged to submit electronically the notice regarding the adjustment of the taxable base. A reporting obligation is prescribed for payment service providers on payment services performed in connection with cross-border payments. It is prescribed the obligation to adjust in the respective amount the input tax deduction applied for the received supply of goods or services if the supplier subsequently adjusted the taxable amount and VAT for such a supply in case of revocation or various discounts or in the case of non-collection of all or part of the due claims which have not been collected for more than one year.
IT	The VAT rate for some of feminine hygiene products, baby products, and face masks (reduced to 5% in 2023) is raised to 10%.	N/A	N/A
LV	A reduced rate of VAT has been established from the previous 5 to 12% for fresh fruit, berries and vegetables, including washed, peeled, shelled, cut and prepackaged, but which have not undergone heat treatment or other treatment (e.g., frozen, salted, dried). Participation fees and the fee for the sports training paid to the association or foundation registered in the Register of Associations and Foundations for participation in sports competitions are not taxable.	The threshold has been changed from EUR 40 000 to EUR 50 000 for the right of a domestic VAT payer not to register in the VAT register of the State Revenue Service (special scheme for small enterprises).	The procedure for adjusting input tax for lost debts has been changed: 1) the amount of lost debt per debtor has been changed from EUR 430 to EUR 1,000 excluding VAT; 2) the delivery of goods or services to the debtor has been interrupted at least three months ago (until the amendments - six) months and has not been renewed; 3) the principles for indicating the amount of VAT on the lost debt in the VAT return have been changed. Input tax deduction rules for the costs associated with the maintenance of representative cars (including the cost of repairing such cars and purchasing fuel) were changed introducing a limitation for a period when these costs arise (previously, no period limitations were in place). Thus, input tax is not fully deductible if the costs associated with the maintenance of representative cars arise over a period of 60 months from the moment the car is registered in the ownership or possession of a person. No input tax deduction

	Changes in rates/right to MS deduct	Changes to registration thresholds	Changes to compliance measures
			limitations are in place for the maintenance costs of representative car registered in the ownership or possession of a person for more than 60 months. Obligation for payment service providers to keep records, store and provide information on payees and cross-border payments in order to prevent VAT evasion in cross-border transactions.
LT	N/A	N/A	N/A
LU	Standard rate: 17% (restored up from 16%). Intermediate rate: 14% (restored up from 13%). Reduced rate: 8% (restored from 7%).	N/A	N/A
HU	N/A	N/A	N/A
MT	Implemented a 12% reduced VAT rate (besides the existing 5 % and 7 %). It applies to the hiring of pleasure boats, certain health care services, securities custody services and certain credit and credit guarantee management services.	N/A	N/A
NL	N/A	N/A	N/A
AT	The 0% tax rate applies to donations of food and non-alcoholic beverages to charitable organisations for the fulfilment of charitable purposes. The 0% tax rate applies to the supply, intra-Community acquisition, import and installation of photovoltaic modules, if certain conditions are met.	N/A	The transposition of the EU legislation to monitor certain cross-border payments made by payment service providers to combat VAT fraud (CESOP) into national law entered into force on Jan 1, 2024.
PL	N/A	N/A	N/A
PT	N/A	Increased VAT registration threshold of EUR 14,500.	N/A
RO	Some items previously taxed at a 5 % rate are now taxed at 9% VAT rate. The VAT rate increases from 9% to 19% for: alcohol-free beer, foodstuffs with added sugar of more than 10gr per 100gr of product. The only exception are cookies and biscuits. VAT rate increases from 5% to 19% for: use of sports facilities unless they are exempt; transport of passengers by train. The government has withdrawn the VAT exemptions with the right to deduct connected to supplies to public hospitals: construction, rehabilitation, and modernisation services; supplies of medical equipment; adaptation, repair, rental, and leasing of medical equipment.	N/A	N/A
SI	N/A	N/A	Introduced the amendment No. 516/2022 to VAT Act introducing a special recording (via electronic form) and notification obligation for payment service providers on payments made to suppliers of

	Changes in rates/right to MS deduct	Changes to registration thresholds	Changes to compliance measures
			cross-border supplies of goods and services.
SK	Adjustment of the conditions for applying the VAT exemption if all members of a legal entity carry out exclusively transactions exempt from tax.	N/A	Expanded the list of persons who become value added taxpayers to include taxable persons to whom tangible or intangible assets of a payer who has been divided by a spin-off or cross-border spin-off are transferred in the country.
FI	New Standard VAT rate of 25.5% (raised from 24%).	N/A	N/A
SE	N/A	N/A	N/A

Source: own elaboration.

ANNEX B: VAT legal mapping for EU candidate countries and potential candidates

Table 112. SME thresholds

Country	Threshold for mandatory registration	Threshold for voluntary registration	Taxable persons concerned
AL	ALL 10 000 000 (EUR 99 500)	ALL 5 000 000 (EUR 49.750)	Exemption from registration does not apply to exporters, importers, non-established businesses
BA	BAM 100 000 (EUR 51 130)		
GE	GEL 100 000 (EUR 34 020)		Suppliers of excisable goods must register below the thresholds
MK	MKD 2 000 000 (EUR 32 200)		
MD	MDL 1 200 000 (EUR 61 680)		
ME	EUR 30 000		
RS	RSD 8 000 000 (EUR 68 000)		
UA	UAH 1 000 000 (EUR 22 800)		
XK	EUR 30 000		

Source: own elaboration.

Table 113. Scope of VAT

Country	Local supplies of goods	Local supplies of services	Importation of goods	Importation of services
AL	Yes	Yes	Yes	Only to taxable persons (Yes for digital services)
BA	Yes	Yes	Yes	Only to taxable persons
GE	Yes	Yes	Yes	Only to taxable persons
MK	Yes	Yes	Yes	Only to taxable persons
MD	Yes	Yes	Yes	Only to taxable persons
ME	Yes	Yes	Yes	Only to taxable persons
RS	Yes	Yes	Yes	Only to taxable persons
UA	Yes	Yes	Yes	Only to taxable persons
XK	Yes	Yes	Yes	Only to taxable persons (Yes for digital services)

Source: own elaboration.

Table 114. Right of deduction

Right of deduction
AL A taxable person may recover input tax, which is the VAT that the taxable person paid on the purchase of goods and services that were used to provide taxable goods and services in Albania. A taxable person may also recover VAT related to the overseas supply of services (outside the scope of Albanian VAT) that would have been taxable if made in Albania. For supplies of both exempt and taxable supplies, the deduction is calculated via pro rata (VAT turnover / Total turnover). Input tax on capital goods is deductible; the adjustment period is 10 years for immovable assets, 5 years for movable assets.
BA A taxable person may recover input tax in Bosnia and Herzegovina, which is VAT charged on goods and services supplied to it for business purposes. Additional conditions are as follows: • The invoices for the goods received or services performed indicate the VAT amount and are in line with the form prescribed by the VAT law • The supply of goods or services was received from another taxable person (B2B) • The VAT law does not exclude the right to deduct input tax for received goods or services. The time limit for a taxable person to reclaim input tax in Bosnia and Herzegovina is 5 years. For supplies of both exempt and taxable supplies, the deduction is determined by applying the calculated percentage to the amount of input tax, reduced by the amount that the taxable person is not entitled to deduct. (If taxable use is less than 5%, the supply is treated as fully non-taxable, while use of 95% or more is treated as fully taxable.)

Right of deduction

Input tax on capital goods is deductible; the adjustment period is 10 years for real estate, 5 years for fixed assets.

GE

VAT-registered taxable persons can recover input tax charged on goods and services acquired in Georgia, VAT paid on imports into Georgia's customs territory, VAT self-assessed for reverse-charge services received from outside Georgia, and VAT on goods and services supplied outside Georgia, provided these are intended for use in taxable operations.

The time limit for reclaiming input tax is three years from the end of the calendar year in which the taxable transaction occurred.

Input tax cannot be recovered if the goods or services are used for exempt supplies without the right to deduct VAT, if the tax invoices do not allow for identification of the seller or do not comply with legal requirements, or if the tax invoices are related to fictitious agreements or transactions.

For supplies of both exempt and taxable supplies, the deduction is calculated via pro rata (value of reclaimable input/total turnover).

Input tax on capital goods is deductible; the adjustment period is 10 years for immovable assets, 5 years for movable assets.

MK

A taxable person may recover input tax, which is VAT charged on goods and services supplied to it for business purposes.

The time limit for a taxable person to reclaim input tax in North Macedonia is 30 days.

For supplies of both exempt and taxable supplies, the deduction is calculated via pro rata.

There are no special input tax recovery rules for capital goods. As such, normal input tax recovery rules apply.

MD

Taxable persons may recover input tax incurred on goods and services supplied in Moldova, VAT paid on imports, and VAT self-assessed on reverse-charge services.

There is no set time limit for input tax recovery, but a six-year limit applies for certain VAT refunds.

Input tax is not recoverable on goods and services used for non-business purposes, such as private use by an entrepreneur.

For supplies of both exempt and taxable supplies, the deduction is calculated via pro rata (value of reclaimable input/total turnover).

Input tax on capital goods is deductible.

ME

A taxable person may recover input tax in Montenegro, which is VAT charged on goods and services supplied to it for business purposes.

The time limit for a taxable person to reclaim input tax in Montenegro is 5 years.

For supplies of both exempt and taxable supplies, the deduction is calculated via pro rata (Annual taxable turnover/Total annual turnover including exempt supplies and subsidies).

Input tax on capital goods is deductible; the adjustment period is 10 years for real estate, 5 years for fixed assets.

RS

Taxable persons may recover input tax incurred on goods and services supplied in Serbia, VAT paid on imports, and VAT self-assessed on reverse-charge services.

The time limit for a taxable person to reclaim input tax in Serbia is five years.

Input tax is not recoverable on goods and services used for non-business purposes, such as private use by an entrepreneur.

For supplies of both exempt and taxable supplies, the deduction is calculated via pro rata $[\text{Amount of deductible input tax} \times \text{taxable turnover} + \text{exports}] / (\text{Total turnover})$.

Input tax on capital goods is deductible; adjustment period is 10 years for immovable assets, 5 years for movable assets.

UA

VAT credit is available only for VAT-registered taxpayers with respect to input tax paid in connection with the acquisition or production of goods, fixed assets, or services.

A VAT taxpayer may claim VAT credit for purchases or the production of goods and services:

- Purchases (building and construction) of fixed assets
- Import of goods and/or fixed assets into Ukraine
- Receipts of services supplied by non-residents in the customs territory of Ukraine
- Imports of noncurrent assets into the customs territory of Ukraine under lease agreements.

The time limit for a taxable person to reclaim input tax in Ukraine is 1,095 calendar days.

For supplies of both exempt and taxable supplies, the deduction is calculated via pro rata (The coefficient is based on the percentage of taxable supplies to total supplies in the preceding calendar year).

Input tax on capital goods is deductible.

XK

Right of deduction

A taxable person may recover input tax in Kosovo, which is VAT charged on goods and services supplied to it for business purposes.

The time limit for a taxable person to reclaim input tax in Kosovo is 6 years.

For supplies of both exempt and taxable supplies, the deduction is calculated via pro rata (Amount of relevant input tax x Turnover enabling VAT credit/Total annual turnover).

Input tax on capital goods is deductible; the adjustment period is 10 years for immovable assets, 5 years for movable assets.

Source: own elaboration.

Table 115. Main categories of inputs with limited right of deduction

	Transport Services	Comments	Passenger cars	Comments	Accommodation services	Comments	Restaurants and other food services	Comments
AL	Deductible		Not deductible at all	Only for transport companies, car trading, and car rental	Not deductible at all		Not deductible at all	
BA	Deductible		Deductible		Not deductible at all		Partly deductible	Business entertainment and representation expenses are excluded
GE	Deductible	Transport services are exempt	Deductible		Deductible		Partly deductible	Restaurant and catering in relation to an event are not deductible at all
MK	Not deductible at all		Not deductible at all		Not deductible at all		Not deductible at all	
MD	Deductible		Partly deductible	Deduction allowed for cars used by company management, subject to specific limits Car hire is deductible, VAT is deductible	Deductible		Deductible	
ME	Deductible		Not deductible at all	for car dealers, rentals, transport companies	Deductible		Not deductible at all	
RS	Not deductible at all	Transport companies are allowed to deduct transport services	Not deductible at all	Car dealers are allowed to deduct passenger cars	Deductible		Not deductible at all	
UA	Deductible		Deductible		Partly deductible	Business entertainment excluded	Partly deductible	Business entertainment excluded
XK	Partly deductible (50%)	Input tax is deductible up to 50% for cars used for mixed	Deductible		Deductible		Deductible	

Transport Services	Comments	Passenger cars	Comments	Accommodation services	Comments	Restaurants and other food services	Comments
	purposes, but if only for business purposes it is deductible						

Source: own elaboration.

Table 116. Other categories of inputs with limited right of deduction or exceptions to the above rules

AL
Fuel is deductible up to a certain governmental limit, unless the company trades fuel
BA
Representative expenses are not deductible
Entertainment expenses are not deductible
Yachts, boats, private aircraft, cars, and motorcycles (non-business use) are not deductible
Immovable properties are not deductible
Expenditures for employees on goods are not deductible
GE
Representative expenses are not deductible
Entertainment expenses are not deductible
Excursions, cultural services, souvenirs, and guest services are not deductible
MK
Representative expenses are not deductible
Supplies or import of audio and video devices, refrigerators, carpets, and artistic items are not deductible
MD
Representative expenses are not deductible
Entertainment expenses are not deductible
Cost of goods lost, stolen, or destroyed is not deductible
Expenditure disallowed for income tax purposes is not deductible
Bad debts are not deductible
ME
Entertainment expenses are not deductible
Yachts, boats, private aircraft, cars, and motorcycles (non-business use) are not deductible
Employee expenses are not deductible
RS
Representative expenses are not deductible
Entertainment expenses are not deductible
UA
Entertainment expenses are not deductible
Corporate business mobile phones are deductible
Hotel accommodation for employees is deductible
Business purchases up to UAH200 are deductible
Purchases used for supplies outside Ukraine are not deductible
XK
Representative expenses are not deductible
Entertainment expenses are not deductible
Yachts, boats, private aircraft, cars, and motorcycles (non-business use) are not deductible

Immovable properties are partly deductible

Source: own elaboration.

Table 117. VAT refund

Country	VAT refund for non-established businesses?	Comments	VAT refund for local taxable persons	Comments
AL	No		Yes	In the following quarter, if credit > 400 000 ALL (EUR 3 980)
BA	Yes	Under some conditions	Yes	
GE	Yes	Only for EU taxable persons, not for third countries	Yes	Available in cases where VAT input credit exceeds VAT output liability during the reporting period
MK	No	However, on the condition of reciprocity, North Macedonia refunds VAT incurred by businesses that do not have a headquarters or a branch office in the country and that satisfy the following additional conditions: • It does not make any supplies in the country • It does not owe any outstanding VAT.	Yes	
MD	No		Yes	
ME	Yes	Not allowed for input tax incurred on services related to imports, and for those services for which the reverse-charge mechanism applies	Yes	
RS	Yes (if they do not perform taxable supplies in Serbia)	Except for international transportation and under reciprocity	Yes	The tax administration is liable to pay interest on delayed tax reimbursements at the same rate of penalty interest that applies to taxable persons for late payments of VAT
UA	No		Yes	
XK	No		Yes	Under specific conditions

Source: own elaboration.

Table 118. Rates - Albania

Rates	Value	Scope/description
Standard rate	20%	
Reduced rate 1	6%	Accommodation Advertising Electric buses Books

Rates	Value	Scope/description
		Construction of sports facilities
Reduced rate 2	10%	Agricultural inputs (including seeds, fertilisers)

Source: own elaboration.

Table 119. Exemptions with no right of deduction - Albania

Exemptions with no right of deduction	Comments
Health services	Prevention, diagnosis, treatment, and cure of diseases or health disorders, as well as rehabilitation services, are provided by public or private healthcare institutions, medical or paramedical professionals. This also includes the supply of organs, blood, and human milk, along with health services delivered by dentists and dental laboratory technicians.
Insurance	
Supply and rent of land	Option to tax
Supply and rent of buildings	Option to tax
Financial services (credit, deposits, current accounts, payments, currency transactions, transactions of shares, bonds and other titles, management of investment funds)	Option to tax
Postal services	
Education services	
Hydrocarbon exploration	
Printing and sale of publications	
Gambling	
Imports of machinery	For small businesses or inward processing
Raw materials for medicines	
Veterinary services	Exempt only for non-domestic animals
Supply of certain cultural services provided by public institutions or non-profit organisations	
Construction works in the case of natural disaster	Includes also the supply of construction products to construction businesses
E-vehicles	Only new vehicles are exempt

Source: own elaboration.

Table 120. Exemptions with right of deduction - Albania

Zero-rating (exemption with right of deduction)	Comments
Exports	
International transport	
Supply of gold for the national bank	
Maritime services	
Intermediary services for zero-rated supplies / international services	
Supply to international organisations	
Supply of goods to non-profit organisations	

Source: own elaboration.

Table 121. Changes in legislation - Albania

Years	Changes in legislation
2020	
2021	Voluntary registration threshold ALL 2M → ALL 10M (Thresholds) Mandatory electronic invoicing for digital services (Digital Economy)
2022	6% for sports facilities (Rates)
2023	Disaster-related construction supplies exemption (Exemptions)

Years	Changes in legislation
2024	Zero-rating for renewable energy equipment exports (Zero-Rating) VAT compliance for digital marketplaces (Digital Economy)

Source: own elaboration.

Table 122. Rates - Georgia

Rates	Value	Scope/description
Standard rate	18%	

Source: own elaboration.

Table 123. Exemptions with no right of deduction - Georgia

Exemptions with no right of deduction	Comments
Financial transactions and services	Covers financial services such as loans, credits, and intermediation
Health, education, sport, and social security	Article 170 provides a list of 'public interest services' exempt without right to deduction, in addition to Art. 171
Betting, gambling, and games of chance provided by private enterprises	
Land plots	
Supply of land and apartments to natural persons	Applies when the property is supplied to a natural person or their first-line heir, under specific conditions such as auctions or debt recovery
Postal services	
Restoration services	
State-owned property transactions	
Printing and sales of books and magazines	
Partnership interest without attached property	Includes rights of preliminary registration, except where property is transferred into ownership in return for the interest
Leasing of exempt goods	Applicable when the leased goods are VAT-exempt without deduction
Passenger transport services with regulated tariffs	Limited to urban and intraregional routes; excludes taxis
Cleaning and waste management services to a municipality	Taxable otherwise
Mandatory stamping/marketing services for excisable goods	
Hotel assets supplied by natural persons	Applies to hotel assets owned by natural persons and transferred to other natural persons
Distribution by partnership of a property to its members	Applicable when partnerships consist only of natural persons and have not changed since their foundation
Supplies of goods, services among enterprises in Free Industrial Zone	
Supplies of goods originating from occupied territories	
Construction and rehabilitation services	
Humanitarian aid services	Includes services funded by foreign organisations for disaster relief, provided the Georgian government is a party to the agreement
Supplies of goods for oil and gas sector operations	Covers goods and services related to oil and gas equipment, machinery, and operations under the Georgian Oil and Gas Law
Supply of goods specified under the NCNFEA code 4820 20 000 00	

Source: own elaboration.

Table 124. Exemptions with right of deduction - Georgia

Zero-rating (exemption with right of deduction)	Comments
Supply of goods and services for vessels, aircrafts	
International transportation of goods	

Zero-rating (exemption with right of deduction)	Comments
Intermediary services	Applies to intermediaries participating in VAT-exempt transactions or transactions outside Georgia.
Diplomatic use	
Natural gas	Supply of natural gas to thermal power stations.
Transfer of assets from state-owned property at privatisation	
Exports and re-exports	
Customs transit services	
Aviation-related goods within Georgia	
Empty vehicle logistics	
Railway container services	
Goods to occupied territories	
Duty-free goods and services	
Gold for National Bank of Georgia	
Incoming organised tourism services	
Harbour services for goods entry	
Lottery and gambling by state-controlled operators	
Supply of medicines/health products produced in Georgia	
Agricultural products produced in Georgia (except for eggs and cocks)	NCNFEA Codes 0407 11 000 00 and 0407 21 000 00 and the goods specified under the subheading 0207 11 (gallus domesticus – uncut, fresh or refrigerated) before their industrial processing (change of the commodity code) Products under the NCNFEA Codes 0201, 0203 11–0203 19, 0204 10 000 00–0204 23 000 00, 0204 50 110 00–0204 50 390 00, 0802 22 000 00;
Supply of products obtained from goods fully produced in Georgia	
Supply of hotel assets	
International call termination services	
Inward processing services	Includes VAT-exempt services for inward processing, except where processed goods are imported.
Electricity and energy services	
Domestic air carriage	Includes supply of electricity, guaranteed capacity, and dispatching services (excludes direct consumer sales).
Scrap metal supply	
Supply of goods (a book) provided for under the NCNFEA Codes 4901 and 4903 00 000 00, or of an electronic book, and provision of sales and printing services for the goods	
Supplies of buses	

Under the NCNFEA Code 8702 40 000 00

Source: own elaboration.

Table 125. Changes in legislation - Georgia

Years	Changes in legislation
2020	Added supply/import of e-books to the exemptions
2021	Removed reduced rates (0,54%) to temporary imports for each full or partial calendar month in which the goods are located in the customs territory of Georgia
2022	
2023	Added VAT recovery for EU taxable persons
2024	

Source: own elaboration.

Table 126. Rates - Moldova

Rates	Value	Scope/description
Standard rate	20%	
Reduced rate 1	8%	Bakery products

Rates	Value	Scope/description
		Dairy products
		Agricultural products
		Drugs
		Natural and liquefied gas (produced/imported in Moldova)
		Biofuel and biofuel production products for electric and thermal energy (solid biofuel intended for the production of electric energy, thermal energy, hot water, supplied on the territory of the Republic of Moldova, including raw materials for the production of solid biofuel in the form of agricultural and forestry products and vegetal waste)
		Zootechnical products (natural form, live and slaughtered, produced/delivered within Moldova)
		Beet sugar (produced, imported, or delivered in Moldova)
		HORECA industry supplies (hotel, hotel-apartment, motel, tourist villa, bungalow, tourist boarding house, agritourist boarding house, camping, recreation centre, or summer camp, classified in section I of the Classifier of Economic Activities of Moldova)
		HORECA industry supplies (for food and/or beverages, except for alcoholic beverages, prepared or not prepared for human consumption, together with accompanying services that allow their immediate consumption, performed within the framework of activities classified in section I of the Classifier of Economic Activities of Moldova)
		Specific goods imported and/or supplied on the territory of the Republic of Moldova, indicated in the commodity items 300215000, 3005, 300610, 300630000, 300640000, 300660000, 300670000, 370790, 380894, 382100000, 3822, 4014, 401512000, 481890100, 900110900, 900130000, 900140, 900150, 901831, 901832, 901839000

Source: own elaboration.

Table 127. Exemptions with no right of deduction - Moldova

Exemptions with no right of deduction	Comments
Dwelling, land, including renting	
Goods for children	Commodity items 040229110, 190110000, 160210001, 200510001, 200710101, 200710911, 200710991
State property transactions	
Public infrastructure and social facilities	
Educational materials and services	
State-authorized services	
Seized and inherited property	
Medical services and supplies	
School and hospital canteens	
Financial services	
Postal services	
Gambling services	
Funeral and burial services	
Dormitory accommodations	Accommodation in dormitories; public utilities provided to the population: hiring of housing, maintenance of residential buildings, sanitary cleaning, use of elevators
Passenger transportation	
Passenger cars and other motor vehicles	Commodity items 870321, 870322, 870323, 870324, 870331, 870332, 870333, 870340, 870350000, 870360, 870370000, 870380, 9705
Electricity supply	Electricity imported and supplied to the transmission system operator, distribution grid operators, and electricity suppliers — including balancing electricity imports — excluding electricity transportation and distribution services and electricity suppliers' import of balancing electricity other than electricity, transportation and distribution services
Book production and publishing	
Excise stamps and special paper	
Donations for sports organizations	Includes machinery, equipment, and attributes donated to the national Olympic and sports committee for performance training
Agricultural machinery and equipment	

Exemptions with no right of deduction	Comments
Anti-hail systems	
Renewable energy equipment	Construction and installation of plants generating electricity from renewable energy sources, hydraulic turbines with a capacity not exceeding 1000 kW, electric generators with a capacity exceeding 75 kW but not exceeding 375 kW and their parts
Customs exemptions	
Humanitarian aid	
Duty-free shop goods	
Goods for disabled persons	
Waste and recyclable materials	Paper and cardboard, rubber, plastic, glass (glass sludge)

Source: own elaboration.

Table 128. Exemptions with right of deduction - Moldova

Zero-rating (exemption with right of deduction)	Comments
Goods and services for export	
Supplies of water to the public	
Electricity, heating, and hot water	Provided for residential real estate, irrespective of the managing entity
Supplies from free economic zones	
Goods processed in free economic zones	
Light industry services	
Duty-free shops, bars, and restaurants	

Source: own elaboration.

Table 129. Changes in legislation - Moldova

Years	Changes in legislation
2020	
2021	New reduced rate in January 2021: 20% → 12% (HORECA industry supplies)
	New reduced rate in October 2021: 12% → 6% (HORECA industry supplies), as a consequence of the pandemic emergency state
2022	
2023	
2024	Reduced rate: 12% → 8% (HORECA industry supplies) after the end of the emergency, with the option of reducing to 6% if a new emergency is declared

Source: own elaboration.

Table 130. Rates - Serbia

Rates	Value	Scope/description
Standard rate	20%	
Reduced rate	10%	Medicines and medical care devices Bread and other baked products, milk and dairy products, flour, sugar, edible sunflower seeds, oil, maize, rapeseed, soybean, and olive oils, and edible fats of animal and vegetable origin, and honey Fresh, chilled, and frozen fruits, vegetables, meats, including giblets and other slaughterhouse products, fish and eggs, cereals, sunflower seeds, soybeans, sugar beet, and rapeseed Fertilizers, pesticides, seed stock, nursery stock, compost with mycelia, complete fodder mixtures for cattle and livestock Textbooks Newspapers, magazines Firewood (including briquettes, pellets, and other similar goods made of wooden biomass) Hotel accommodation

Rates	Value	Scope/description
		Entertainment services (cinema and theatre shows, fairs, circuses, amusement parks, concerts, exhibitions, sporting events, museums and galleries, botanical gardens and zoos, if the sale of such services is not exempt from VAT)
		Natural gas, heat
		New buildings
		Water supplies, wastewater treatment
		Waste treatment
		Passenger transport
		Cemeteries and funerals

Source: own elaboration.

Table 131. Exemptions with no right of deduction - Serbia

Exemptions with no right of deduction	Comments
Buildings (other than new buildings)	Exemption applies to properties except when ownership is transferred for the first time.
Land	
Cultural, scientific services by non-profit institutions	
Apartment lease services	Exempt only if used for housing purposes
Financial services	Operation and mediation in transactions, credit, deposit, current and transfer accounts, payments, operation of optional pension fund management, and fund management
Insurance services, pension funds	
Postal services	
Health services	Services rendered by physicians, dentists, or other persons providing services in accordance with public health service regulations; services and delivery of dental prosthetics in the dental technician domain; human organs, tissues, body liquids and cells, blood and mother's milk, care, board, and lodging for patients in health institutions
Education services	Preschool, elementary, secondary, college and university, and vocational retraining, as well as directly related sale of goods and services by persons duly registered for the conduct of such business; accommodation and meals for pupils and students in their hostels or similar institutions, as well as directly related sales of goods and services
Religious services	
Betting, lotteries	
Sport and physical training	
Printing and sale of publications	
Public broadcasting services	Exempt unless the services have a commercial character

Source: own elaboration.

Table 132. Exemptions with right of deduction - Serbia

Zero-rating (exemption with right of deduction)	Comments
International transportation services and related supplies	
Exported goods	
Supplied to aircraft and ships	Limited to international traffic
Import into free zones, sale of goods in customs warehouses	
Duty-free shops	
International air, maritime services	

Source: own elaboration.

Table 133. Changes in legislation - Serbia

Years	Changes in legislation
2020	
2021	
2022	
2023	Changed the valuation method of transactions between related parties
2024	

Source: own elaboration.

Table 134. Rates - Ukraine

Rates	Value	Scope/description
Standard rate	20%	
Reduced rate 1	7%	Medicines and medical care devices Supplies of services related to the entertainment sector Supply of hotel accommodation services
Reduced rate 2	14%	Domestic supplies and imports of agricultural products

Source: own elaboration.

Table 135. Exemptions with no right of deduction - Ukraine

Exemptions with no right of deduction	Comments
Rehabilitation services	
Health care	Provision of medical services to the population by healthcare institutions licensed to provide such services
Supplies of baby nutrition	
Educational services	Higher, secondary, vocational and pre-school education provided by educational institutions, including training of postgraduate and doctoral students, the provision of distance learning services on the internet, as well as services for raising and teaching children in cultural centres, children's music, art, sports schools and clubs, art schools and services for accommodation of pupils or students in dormitories
Charity and humanitarian aid	
Supply of land plots	Excludes plots under real estate objects included in their value under legislation
Supplies of housing	Exempt from all supplies except the first supply (new buildings are taxed)
Periodical printed mass media, books, etc.	Supply (subscription) and delivery of periodicals of printed media (except erotic publications) of domestic production, preparation (literary, scientific and technical editing, correction, design and layout), production (printing on paper or recording on an electronic medium), distribution of books, including electronic content (except erotic publications) and children's book publications, domestic production, student notebooks, textbooks and teaching aids, Ukrainian-foreign or foreign-Ukrainian language dictionaries of domestic production on the customs territory of Ukraine
Religious and funeral services	
Imports of cultural items	
Disposals of pledged property by banks and financial institutions	
Sales or purchases by banks of liabilities and deposits	
Renewable energy	Equipment powered by renewable energy sources, energy-efficient equipment and materials, devices for measuring, controlling, and managing fuel and energy consumption, as well as equipment and materials used for producing alternative fuels or generating energy from renewable sources

Exemptions with no right of deduction	Comments
Supplies of IT-related distance learning services	
Urban transport services	Free transfer of tram cars, trolleybuses, and buses to state or municipal ownership of the relevant territorial communities, in accordance with the life-support needs of the settlements
Railway rolling stocks	
Gambling	
Insurance	

Source: own elaboration.

Table 136. Exemptions with right of deduction - Ukraine

Zero-rating (exemption with right of deduction)	Comments
International transportation of passengers, luggage, and shipments of cargo	
Services for servicing aircraft operating international flights	
Exported goods	
Processing and repairs of imported movable property that is subsequently exported from Ukraine	
Supply of goods for refuelling or provisioning seagoing vessels, aircraft, ground military transport, spaceships, and satellites	
Duty-free shops	

Source: own elaboration.

Table 137. Changes in legislation - Ukraine

Years	Changes in legislation
2020	
2021	Added supplies of certain services related to admission to shows, theatres, concerts, museums, zoos, exhibitions, and similar cultural events, as well as hotel accommodation services to the zero-rate Removed export of soya beans, rape and colza seeds from exemptions with no right of deduction
2022	Added new VAT rules for the supply of electronic services Introduced reduced rates 14% for some domestic supplies and imports of agricultural products Added provision for taxpayers to retain input tax credit in respect of the following goods: – Destroyed/lost due to force majeure circumstances during martial law – Goods donated to the state/local authorities (including voluntary military units), as well as donated to any third parties for the purposes of securing Ukraine's defence Added free-of-charge supplies of goods and services to the military units, civil state authorities, as well as to health care institutions, do not represent a VAT-able supply.
2023	Added supplies of certain IT-related distance learning services from exemptions with no right of deduction Added new tax administration rules under martial law

Source: own elaboration.

Table 138. Rates - North Macedonia

Rates	Value	Scope/description
Standard rate	18%	
Reduced rate 1	10%	Other food products for human consumption, different from basic products, from September 2023 Restaurant services Supply and import of electricity for households from January 2022 to June 2023
Reduced rate 2	5%	Potable water from public water supply entities Basic products for human nutrition from September 2023 Computers Pharmaceuticals and medical devices Raw oil for the production of food for human consumption First sale of new residential buildings (within the first five years) Services provided by commercial tourist facilities Publications from September 2023

Rates	Value	Scope/description
		Pellets, pellet stoves, and pellet boilers from September 2023
		Thermal energy for heating from September 2023
		School equipment
		Baby products
		Transport of passengers and accompanying baggage
		Cleaning and removal services
		Medical equipment and medicines for human and veterinary use
		Agricultural machinery
		Seed and plant material for agricultural plant production
		Means for protection for COVID-19
		Livestock and livestock-related products
		New buildings

Source: own elaboration.

Table 139. Exemptions with no right of deduction - North Macedonia

Exemptions with no right of deduction	Comments
Rental of residential buildings and apartments	Limited to housing
Postal services by the Macedonian Post	
Activities in the field of culture with a non-profit purpose for cultural services and goods directly related to these services	
Services of radio and television stations	
Health services	
Services and good practices of social care and protection institutions	
Services of care and supervision of children and young people	
Banking and financial services	
Insurance and reinsurance	
Betting	
Educational services	
Transport services for sick and injured persons	
Services of funeral institutions and crematoriums	

Source: own elaboration.

Table 140. Exemptions with right of deduction - North Macedonia

Zero-rating (exemption with right of deduction)	Comments
Supply of goods and services related to aircraft used in international commerce	
International air transport of passengers	
Supply of goods to free zones, customs zones, or warehouses	
International transportation of goods for import and export, and related services	
Supply of precious metals for the central bank	
Supply, repair and maintenance, chartering, and leasing of aircraft	

Source: own elaboration.

Table 141. Changes in legislation - North Macedonia

Years	Changes in legislation
2020	Registration threshold MKD1 million → MKD2 million
2021	Added a reduced rate of 10% for restaurant services
2022	Added supply and import of electricity for households to a 10% reduced rate (from July to June 2023)
2023	Added to the scope supplies by foreign legal entities to North Macedonian legal entities (i.e., business-to-business [B2B] supplies) subject to the reverse-charge mechanism

Years	Changes in legislation
	Added basic products for human consumption to 5% reduced rate
	Added publications to 5% reduced rate
	Added pellets, pellet stoves, and pellet boilers to 5% reduced rate
	Added Thermal energy for heating to 5% reduced rate
	Electricity is taxed at 10% from Jan to Jun
	Added other products for human consumption, different from the basic products for human consumption to a 10% reduced rate
2024	Added transfer of movable and immovable property in a procedure of enforced collection to reverse-charge applications

Source: own elaboration.

Table 142. Rates - Kosovo

Rates	Value	Scope/description
Standard rate	18%	
Reduced rate	8%	Water (except bottled water) Electricity, central heating, waste collection, and other waste treatment Grains such as barley, corn, maize varieties, oats, rye, rice, and wheat Products made from grain for human consumption Oils from grains or oilseeds for cooking (flour, pasta, bread, and similar products) Dairy and dairy products for human consumption Salt for human consumption Eggs for consumption Lending of books, brochures, leaflets, picture books, drawing books, and maps Textbooks and serial publications Information technology equipment Medicines, pharmaceutical products, instruments, and medical devices Medical equipment, ambulances, aids, and other medical devices to facilitate or treat the inability for exclusive use by the disabled, including the repair of such goods and supply with children's vehicle seats

Source: own elaboration.

Table 143. Exemptions with no right of deduction - Kosovo

Exemptions with no right of deduction	Comments
Hospital services and medical care	Hospital services, medical care, and closely related activities undertaken by bodies governed by applicable Kosovo laws, by hospitals, centres for medical treatment, or diagnosis and other duly recognised establishments of a similar nature, the provision of medical care in the exercise of medical and paramedical professions as defined by applicable Kosovo laws, the supply of human organs, blood, and breast milk, the supply of services by dental technicians in their professional capacity, and the supply of dental prostheses by dentists and dental technicians
Education	Education to children or young people, school or university education, tuition given privately by teachers and covering school or university education within the context of schools or universities, tuition given privately by teachers and covering school or university education within the context of schools or universities vocational training or retraining, including the supply of services and goods closely related thereto
Health insurance, Life insurance, and related services	
Financial services	Loans, transactions (not debt collection) concerning deposits, current accounts, payments, transfers, debts, transactions of legal tender, management of special investment funds
Welfare services	The supply of services and goods closely linked to the protection of children and young people, the supply of services and goods closely linked to welfare and social security work, including those supplied to retirement homes
Betting, lotteries, and gambling	
Supply of land or land with buildings	

Exemptions with no right of deduction	Comments
Residential accommodations	For residential purposes
Leasing of immovable property	
Sports services	
Cultural events by public bodies	
Electronic media, radio, and television	
Stamps	Those with prices fixed by a competent state authority
Public transport services for travellers and their baggage	

Source: own elaboration.

Table 144. Exemptions with right of deduction - Kosovo

Zero-rating (exemption with right of deduction)	Comments
Export of goods	
International transport	
Supplies under diplomatic and consular arrangements	
Supply of goods or services to international and intergovernmental bodies	
Supply of gold to the Central Bank of Kosovo	

Source: own elaboration.

Table 145. Changes in legislation - Kosovo

Years	Changes in legislation
2020	Removed public transport services for passengers and their luggage to 8% reduced rates Added textbooks and serial publications to 8% reduced rates Added the supply of houses, apartments or other accommodations used for residential purposes to 8% reduced rates
2021	Added hotel and accommodation services to 8% from December 2020 to December 2021
2022	
2023	
2024	

Source: own elaboration.

Table 146. Rates - Bosnia and Herzegovina

Rates	Value	Scope/description
Standard rate	17%	

Source: own elaboration.

Table 147. Exemptions with no right of deduction - Bosnia and Herzegovina

Exemptions with no right of deduction	Comments
Leasing and subletting of residential premises	Exempt when the period exceeds 60 days and is used for residential purposes
Supply of immovable property	Exempt except for the first transfer of ownership or rights to dispose of newly built units
Financial and monetary services	Credit, deposits, payments, transactions of securities, investment fund management
Insurance and reinsurance services	
Educational services	Pre-school, elementary school, secondary school education, education in schools of further education and universities, as well as the supply of goods and services directly linked to these activities
Delivery of gold to the Central Bank	
Postal services	
Lottery games	
Medical and healthcare services	

Exemptions with no right of deduction	Comments
Social security services	
Services in sport and sports education	
Supply of goods and services directly linked to religious services performed by recognised religious organisations	
Supply of services and goods directly linked to the services provided by the political, trade-union, humanitarian, charitable, disabled, and similar organisations to their members, in return for membership fees	
Cultural services	
Services of public radio and television bodies	Other than those of a commercial nature

Source: own elaboration.

Table 148. Exemptions with right of deduction - Bosnia and Herzegovina

Zero-rating (exemption with right of deduction)	Comments
Export of goods and supply of services linked to export or import	
Supply/use of goods in the free zones and warehouses	
Imported goods to the free zones and warehouses	Except for customs warehouses
Transport and other services to users of free zones	
The supply of vessels with fuel and other goods and services, and their maintenance	In case of sea rescue, and those meant for navigation on the high sea for commercial or transport purposes
The purchase, repair, and lease of aircraft used by airlines for international flights and related supply of goods and services	

Source: own elaboration.

Table 149. Changes in legislation - Bosnia and Herzegovina

Years	Changes in legislation
2020	
2021	
2022	
2023	
2024	Increased registration threshold from BAM 50000 to BAM 100000

Source: own elaboration.

Table 150. Rates - Montenegro

Rates	Value	Scope/description
Standard rate	21%	
Reduced rate	7%	Supply of medicines and medical care devices (except for medical devices and medicines with zero rates) Textbooks Drinking water Newspapers Public transport services Funeral services Heating pellets Plant and animal-related products Books, monographic and serial publications

Rates	Value	Scope/description
		Accommodation services
		Copyrights and services in education, literature, science, arts, and artistic items
		Ticket-based services (concerts, museums, zoos, etc.)
		Use of sports facilities for non-profit purposes
		Supply of baby diapers and hygiene products, and public services
		Supply of a wide range of food products
		Solar panels

Source: own elaboration.

Table 151. Exemptions with no right of deduction - Montenegro

Exemptions with no right of deduction	Comments
Real estate transactions	Except for the first transfer of ownership rights, or the right to dispose of a newly constructed facility
Leasing of agricultural land or forests	
Services of leasing or subleasing residential houses, apartments, or residential premises for permanent residence for more than 60 days	
Health services and care, and delivery of products	Including the disposal of human body organs, blood, and breast milk, which are carried out in accordance with health insurance regulations
Cultural services by non-profit institutions	
Financial services	Loans, deposits, accounts, payments, transfers, currency, trading of securities, management of investment funds
Postal services	
Education services	Preschool education, training, and training services for children, youth, and adults, including the sale of products and services directly related to these activities, services and deliveries of products to preschool, primary, secondary, and higher education institutions, as well as to institutions of pupil and student standards
Religious services	
Printing and sale of publications	
Insurance and reinsurance	
Betting and lotteries	
Public broadcasting services	

Source: own elaboration.

Table 152. Exemptions with right of deduction - Montenegro

Zero-rating (exemption with right of deduction)	Comments
Export of goods	
International transport and related supplies	
Supplies of goods and services relating to aircraft and ships used in international traffic	
Services of enabling access and use of the system performed by an intermediary for the account of the operator of the system for the transmission of natural gas, electricity and energy for heating or cooling	
Medicines and medical devices prescribed and issued at the expense of the Health Insurance Fund	
Products and services used for offshore oil exploration	
Trade in basic products for human consumption	Bread, flour and sunflower oil

Source: own elaboration.

Table 153. Changes in legislation - Montenegro

Years	Changes in legislation
2020	Accommodation in tourist apartments added to reduced 7% VAT rates Added donations of medical devices and protective equipment to 0% VAT rate Added products and services based on a donation contracts to 0% VAT rate
2021	Increased the registration threshold from EUR 18000 to EUR 30000 Added 7% reduced VAT rates for egg supplies Preparation and serving of food and beverages in catering and hospitality services added to the reduced 7% VAT rates
2022	
2023	
2024	Added a reduced VAT rate of 7% for the turnover of food and specific non-alcoholic drinks in restaurants and catering establishments

Source: own elaboration.

ANNEX C: Methodological appendix

Limitations and challenges of the top-down approach

Table 154. Limitations and challenges of the top-down VAT compliance gap calculation

Limitations and challenges	Impact on the accuracy of estimates and means to address the challenge
Dependence of the accuracy of estimates on the inclusion of the unobserved economy and accounting for fraud	The top-down method hinges on underlying national income accounts, respective conventions, and quality. The unavoidable inaccuracies related to the underlying data impact the accuracy of estimates. However, the methodological approach taken by the statistical authorities, meaning the strict rule of the ESA 10, as well as parallel use and triangulation of at least two out of the three approaches – production, expenditure, income-side – to the compilation of national accounts, reduce this error. Nevertheless, insufficient correction for the activities that are unobserved by statistical agencies could lead to underestimation of the VAT compliance gap.
Decomposition of the VAT compliance gap	Since VAT liability is modelled both for groups of products (for the liability pertaining to final use categories) and for sectors of economic activity (correction for the liability at the intermediate stage), it is not possible to decompose the VAT compliance gap. The consumption-side approach allows only for estimating the overall value of the VAT compliance gap. To decompose the VAT compliance gap by economic sectors would require a different methodological approach, for instance a production-side approach, or a bottom-up approach based on random audits – and in addition, sectoral revenue data needs to be available. Since it is impossible to align VAT liability components with the respective VAT revenue elements, the consumption-side approach also does not provide any information about types of irregularities of the respective components, or the scale of such irregularities.
Misalignment of VTTL estimates with revenue figures	The issue of the misalignment of the timing of recording transactions in national accounts and VAT receipts has been resolved to a large extent by the introduction of the ESA 10 standard by Eurostat. Under this standard, the revenue shall be presented in accrual form and account for the change in the stock of refunds and late payments. However, due to limitations in observing these flows, revenue published by Eurostat is imperfect accrual, meaning it does not accurately reflect the timing of the underlying economic activity.
Misalignment of the place of supply rules with national accounts conventions	Specific services (e.g. transport and tourism) can be taxed not at the place of residence of the taxpayer (as transactions are recorded in national accounts) but at the origin of the provider or where services are physically performed. To reduce the impact of this misalignment, particular components of consumption are removed or added to tax base to meet the place of supply rules in place.

Source: own elaboration.

Methodological details of the VAT policy gap decomposition

Table 155. Methodological details of the VAT policy gap decomposition simulations

		Total	Subcomponents
Actionable VAT policy gap	VAT rate gap	Reduced rates (including zero-rate) applicable to (net) final consumption and GFCF of households, government, and NPISH become standard rates.	Reduced rates (including zero-rate) applicable to (net) final consumption of each decomposed groups of products and services (CPA: (1) A01, A03, C10-12; (2) C21; (3) D35-E39, (4) H49-51, (5) I) become standard rates. The residual grasps all the remaining increase in the liability on final consumption and GFCF of households, government, and NPISH, where reduced rates are currently applicable.
	National policy-driven VAT exemption gap	The elements of the exempt household final consumption of all other categories than those included in the EU policy-mandated VAT exemption gap and other than imputed rents become standard rated. Propex and GFCF liability of the corresponding sectors becomes nil. SME correction in the form of the multiplier also becomes nil.	Separate simulation for three components: financials (K64 and 66), real estate services (L68A) and SME adjustment.
	EU policy-mandated VAT exemption gap	The part of the exempt household final consumption of postal services (H53), insurance services (K65), education (P85), healthcare services (Q86), social services (Q87-88), recreation and entertainment (R90-93) becomes standard-rated. Propex and GFCF liability of the corresponding sectors becomes nil.	As for total but separate simulation for each subcomponent (H53, K65, P85, Q86, Q87-88, R90-93. No residual effect.
Non-actionable VAT policy gap		Residual component of the exemption gap covering government and NPISH final consumption of all services and household final consumption of imputed rents	Separate simulation for three components: imputed rents (L68B), education (P85), and healthcare (Q86). For imputed rents, we assume that its household final consumption becomes taxable, for education and healthcare – we assume that government and NPISH consumption become taxable while the relevant part of intermediate consumption and GFCF liability becomes nil.

Source: own elaboration.

ANNEX D: Review, assessment and refinement of the methodological approach

Overview

This section outlines six methodological improvements developed in the course of this study. Some of these have been implemented, while others have not. The aim of five of these improvements is to enhance the accuracy of the VTTL estimates (see Table 156). These improvements impact primarily household final consumption and intermediate consumption liabilities, as well as the alignment between VTTL and revenue figures. The last one concerns deriving more accurate figures for VAT revenue.

Table 156. Summary of improvements to the VTTL and VAT compliance gap estimation

Name	VAT revenue/VTTL components directly affected	Potential scope
Elimination of redundant correspondence COICOP-CPA-COICOP	Household final consumption liability	Belgium, Ireland, Hungary, Latvia, Lithuania, Malta and Slovenia.
Improvement of SUTs rescaling by using FIGARO tables (ESTAT/JRC)	Intermediate and household final consumption liability	All Member States
Leveraging NSI SUTs	Intermediate and household final consumption liability	Czechia, France, Hungary, Ireland, Italy, the Netherlands, Poland, Portugal and Slovenia
Alignment of Eurostat's SUTs with other household final consumption series	Household final consumption liability	Member States where COICOP 2018 data is published
Alignment of Eurostat's SUTs with other national accounts data	All liability components	All Member States, except for the cases when NSI SUTs is used (Ireland, Croatia and Slovakia)
Decreasing information gap around the revenue data	VAT revenue	All Member States

Source: own elaboration.

COICOP classification-based rates

Background and scope

To calculate household final consumption VAT liability, the sum of the products of tax base values (i.e., household final consumption net of VAT) and the corresponding weighted average VAT rates is calculated:

$$HH \text{ Final Consumption Liability} = \sum_{i=1}^N (HHC \text{ VAT rate}_i \times HHC \text{ value}_i) \quad (11)$$

where:

i denotes groups of products (goods and services).

The study team applied a standardised approach. For each Member State, the calculation relied on a 2-digit breakdown in the CPA, containing 65 'i' codes.⁶¹ In other words, consumption values and VAT rates were derived for each CPA category. This approach was independent of the classifications used in the submissions shared by different administrations.

For the periods covered by the SUTs published by Eurostat, i.e., mostly the 2019-2021 period (see Table 157), this approach was relatively straightforward to implement to consumption values, as consumption volumes are already available in the required 2-digit CPA breakdown. In contrast, the derivation of VAT rates for each 2-digit CPA category followed a country-specific approach, based on individual national submissions, which use various classifications, most often CPA or COICOP. In all cases where a classification other than CPA was used, a tailor-made 'ad hoc' correspondence was created to derive the weighted rates.

Table 157. Availability of SUTs

	2019	2020	2021	2022	2023
BE	yes	yes	yes	no	no
BG	no	no	no	no	no
CZ	yes	yes	yes	yes	yes
CY	yes	yes	yes	no	no
DK	yes	yes	no	no	no
DE	yes	yes	yes	no	no
EE	yes	yes	yes	no	no
IE	yes	yes	yes	no	no
EL	yes	yes	yes	no	no
ES	yes	yes	yes	yes	no
FR	yes	yes	yes	no	no
HR	yes	yes	yes	no	no
IT	yes	yes	yes	no	no
LV	yes	yes	yes	yes	no
LT	yes	yes	yes	no	no
LU	yes	yes	no	no	no
HU	yes	yes	yes	yes	no
MT	yes	no	no	no	no
NL	yes	yes	yes	no	no
AT	yes	yes	yes	no	no

⁶¹ Except for Ireland, where rates for 60 products were calculated according to the classification used in the SUTs published by the NSI. Similarly, for the candidate countries and potential candidates the granularity of the SUTs varies by country.

	2019	2020	2021	2022	2023
PL	yes	yes	yes	no	no
PT	yes	yes	yes	yes	no
RO	yes	yes	yes	no	no
SI	yes	yes	yes	yes	no
SK	yes	yes	yes	no	no
FI	yes	yes	yes	yes	no
SE	yes	yes	yes	yes	no

Source: own elaboration based on Eurostat. Note: Situation on May 6, 2025.

For recent years, not covered by the SUTs, and for countries where the input data is available in COICOP classification, the team had carried out two parallel COICOP to CPA transformations (Case I), one for the weighted average rates and one for tax base-consumption values. This step, for the observation illustrated in the first row of Table 158, may be seen as redundant. Moreover, redundant correspondences may affect the accuracy of the estimates due to some loss of information in transforming CPA-classified data into COICOP and vice versa.

Table 158. Correspondence currently used

Case no.	Tax base Classification	Operation	Rates Classification	Operation	Scope Year	Countries
I	COICOP	COICOP→CPA	COICOP	COICOP→CPA	For years when SUTs unavailable – mostly 2022 and 2023, see Table 157.	BE, IE, HU, LT, LV, MT and SI Other
II	COICOP	COICOP→CPA	CPA or other	Aggregated to 2-digit CPA or ad hoc correspondence created if other than CPA		
III	CPA	-	COICOP	COICOP→CPA	For years when SUTs available – mostly 2019, 2020 and 2021, see Table 157.	BE, IE, HU, LT, LV, MT and SI Other
IV	CPA	-	CPA or other	Aggregated to 2-digit CPA or ad hoc correspondence created if other than CPA		

Source: own elaboration.

Objective and pros

The objective was to eliminate imprecisions stemming from redundant transformations when creating correspondences between the CPA and COICOP classifications. The main feature of the COICOP classification is that it groups products and services based on their function or purpose of use, whereas the CPA classification provides a direct link to the economic activity that produces the goods or services. Due to the imperfect matching between these classifications, resulting from the above-mentioned different design principles, such transformations always involve some loss of information, even under the assumption of perfectly accurate breakdowns in the transformed data. A different approach could also reduce the workload required to calculate the VTTL in respective countries.

Cons

The use of the COICOP format in the underlying consumption data and VAT rates' mapping stems from the fact that this classification is specifically designed for household expenditure surveys, consumer price indices and consumption analysis. At the same time, VAT rate matrices embedded in the VAT laws of EU Member States most often use the CPA classification, and more rarely the CN, COICOP or descriptive legal categories. This means that the mapping of VAT rates to COICOP classifications, as gathered from the received submissions, may already be inaccurate (as it relies on a transformation carried out by national administrations). Consequently, remapping the COICOP-based data to CPA, which is better aligned with the legal VAT rate matrices, may equally help reduce error in the weighted average rates' calculation.

Another problem may be some loss of accuracy due to the level aggregation. The COICOP rates have to be calculated and applied to available data, which are aggregated at 3-digit level, and COICOP 3-digit level is less granular than corresponding CPA data. In particular, 3-digit COICOP-1999 has 47 codes and COICOP-2018 has 52 codes, while CPA has 65 separate codes. For example, while CPA records consumption of fish and aquaculture products (CPA_A03), and agricultural products (CPA_A01) in two separate codes, in COICOP they are all aggregated to one code (CP011 – food). On the other hand, while COICOP data is split for hotels (CP111) and restaurants (CP112), both are aggregated into once CPA code (CPA_I). Therefore, in practice, gains or losses in accuracy will depend on each country's structure of rates.

Impacts and state of play

The study team derived an alternative set of VAT rates using the COICOP classification for all eight Member States under consideration. Corresponding alternative estimates of the VTTL and the VAT compliance gap were also calculated. These estimates indicate a non-negligible impact from the change in approach. Table 159 shows the difference between the VAT compliance gap calculated with COICOP-based rates and that calculated with CPA-based rates.

In absolute terms, the differences are relatively small – mostly below 1-2pp – which suggests that the VTTL and VAT compliance gap estimates are quite robust to the method of VAT rate calculation. On average, the COICOP-based VAT compliance gap is 0.5pp lower than the CPA-based estimate; however, this varies considerably by Member State and by year. In principle, if a perfect correspondence existed between the CPA and COICOP classifications, the effective rates and, consequently, the results would be similar in years with actual data and only slightly different in forecasted (shaded) years. This pattern is observed for Lithuania and, to some extent, Ireland. For other Member States, however, substantial differences appear even in non-forecasted years. This suggests potential problems in the CPA-COICOP mapping and signals that the effective rates may be either under- or overestimated. A more detailed investigation of the differences between CPA- and COICOP-based rates is therefore needed to identify the source of these discrepancies.

Overall, the study team chose to continue publishing results based on the CPA classification, thereby maintaining a uniform approach across Member States. At the same time, the comparison of CPA- and COICOP-based results serves as both a robustness check and an indication of areas where accuracy can be further improved. The analysis also indicated that, in future updates of the study, administrations should be asked to provide country-specific correspondence tables.

**Table 159. Difference in the VTTL between alternative VAT compliance gap estimates
(COICOP-based rates vs. CPA-based rates)**

MS	2019	2020	2021	2022	2023	Average
BE	-1%	-1%	-2%	-1%	-2%	-1.5%
ES	-3%	-1%	-2%	-1%	-1%	-1.6%
HU	-1%	-1%	-1%	-1%	-1%	-0.8%
LT	0%	0%	0%	1%	1%	0.5%
LV	1%	-1%	-2%	1%	2%	0.1%
MT	-1%	-2%	-1%	-1%	-1%	-1.3%
SI	0%	-2%	-2%	1%	1%	-0.6%
IE	0%	1%	0%	2%	3%	1.3%
Average	-0.5%	-1.0%	-1.1%	0.1%	0.2%	-0.5%

Source: own elaboration.

FIGARO use tables

Background

To calculate the VTTL for the years when SUT data is not available, the use tables need to be forecasted. The team's approach to this problem in previous studies was as follows.

- 1) Household consumption by CPA codes for year $t+1$ was forecasted from household consumption in year t , taking into account:
 - observed changes in total household consumption;
 - observed changes in the structure of household consumption, by applying an 'ad-hoc' matching of COICOP to CPA codes, developed by the team.

This method, along with forecast error evaluation and comparison with alternative approaches, was described in detail in the 2023 and 2024 interim reports.

- 2) Intermediate consumption by each industry, as well as government and NPISH final consumption, for year $t+1$ were forecasted based on observed changes in aggregate totals. The level of industry granularity varied by Member State, depending on the data published in national accounts.

For example, in some Member States growth rates are available for each of the 65 industries, while in others only for 18 aggregated industries. In some cases, only a single growth rate for total intermediate consumption is available.

Importantly, the structure of intermediate inputs by industry was assumed to remain the same as in the previous year. The same assumption applied to the structure of government and NPISH consumption.

The assumption of a constant production structure in forecasted years is restrictive, as it does not account for potential changes in technology or relative input prices, which can influence intermediate consumption demand. However, empirical data shows that observed changes in input structures are relatively small. For example, between 2018 and 2019 the average change in input shares was just

0.2pp and 99% of changes were below 3pp. To illustrate a larger change, the share of the input 'Printing and recording services (C18)' in the production of 'Publishing services' in Austria changed from 40.2% to 43.3% between 2018 and 2019.

This brief analysis suggests that the assumption of a constant production structure is unlikely to introduce significant bias. Moreover, the degree of bias can be empirically estimated by comparing VAT gap calculations for past years using both observed and forecasted data. Results of the simulations in the previous reports indicated that the mean error from using forecasted data (for both household and intermediate consumption) for two years in row was approximately 1.5% of the VTTL. The mean error for forecasting only intermediate consumption is expected to be substantially smaller⁶².

As an alternative source of SUT data, the FIGARO SUTs, produced by the Joint Research Centre (JRC) and Eurostat, could be used. While the officially published FIGARO tables are in basic prices (and therefore not directly suitable for the VTTL calculations), in February 2025, the study team obtained unpublished FIGARO tables in purchaser prices, thanks to the kind cooperation of the JRC and Eurostat.

The study team evaluated the impact of the potential use of these FIGARO SUTs in purchaser prices on the calculation.

Objective and pros

The objective of this testing is to improve the accuracy and timeliness of tax base data used in the estimation of the VTTL. While the accuracy of Eurostat data cannot be directly tested – since there is no benchmark – the SUTs published by Eurostat for year t are assumed to be more accurate than any forecast based on previous years' tables. The purpose of the tests described in this chapter is not to evaluate the accuracy of FIGARO forecasts against a simpler in-house method, but rather to provide evidence on whether it is preferable to use more accurate forecasts based on outdated reference data (without benchmark revisions, etc.) or to rely on simpler forecasts based on the most up-to-date reference data.

FIGARO tables are forecasted using more sophisticated techniques, which incorporate additional data sources, such as trade and energy statistics, tax data and supply-use balancing procedures. As a result, changes are observed in the structure of intermediate consumption inputs and household consumption in the FIGARO data between actual and forecasted years.

However, the observed average change in the share of intermediate consumption inputs in FIGARO data is 2 to 4 times smaller than in actual ESTAT data. In other words, structural changes in production may be underestimated in the FIGARO data, for both actual and forecasted years (Table 160).

⁶² See European Commission (2022).

Table 160. Average changes in intermediate consumption shares

	2019 vs 2018 (actual data)	2022 vs 2021 (forecasted data)
Base Eurostat SUTs	0.2pp	0 (by construction)
FIGARO	0.08pp	0.05pp

Source: own elaboration. For 2022 only forecasted ESTAT data is used.

Cons

Several problematic aspects were identified related to the use of FIGARO tables within the 2025 VAT gap study.

- 1) **Timeliness of FIGARO releases.** FIGARO tables are produced annually and the release of the 2023 data was expected in mid-July 2025. This timeline did not align with the study schedule, which required preliminary estimates to be produced by April. The final estimates had to be included in the final report submitted by the end of August. Before that, the estimates had to be validated, shared in advance with Member State administrations and included in additional analytical components, such as case studies.
- 2) **Delay in accounting for revisions.** The currently available FIGARO release does not incorporate new data published by Eurostat since May 2024 and does not reflect the benchmark revisions applied by National Statistical Institutes (NSIs). In particular, household consumption in FIGARO remains⁷ aligned with the largely outdated CO3 data, which has been replaced by CP18 data in most Member States (see Table 161 below). In contrast, the study team was able to integrate near real-time updates from Eurostat when using the original SUTs, including benchmark revisions, thus ensuring closer alignment with the most recent underlying data.

Table 161. Household final consumption totals according to different sources (million national currencies)

	Year	SUTs	COICOP	COICOP	FIGARO tables
		nama_10_cp16	nama_10_cp18	nama_10_co3_p3	
BE	2021	239 885	239 885	236 502	236 502
CZ	2022	3 399 382	3 399 382	3 159 097	3 159 097
DK	2020	1 066 567	1 066 567	1 044 357	1 044 358
DE	2021	1 766 794	1 766 794	1 709 722	1 709 722
EE	2021	15 283	15 253	14 991	15 015
IE	2021	88 191	104 200	104 200	104 194
EL	2021	133 088	N/A	133 088	130332.4
ES	2022	800 307	800 307	793 600	793 600
FR	2021	1 271 245	1 271 245	1 272 360	1 272 360
HR	2021	41 395	N/A	41 347	41 429
IT	2021	1 040 581	1 040 581	1 035 959	1 036 189
CY	2021	15 356	15 356	15 094	15 093
LV	2022	21 152	21 152	22 963	23 192
LT	2021	31 730	31 730	31 730	32 395
LU	2020	20 263	N/A	20 263	20 263
HU*	2022	32 694	32 694	32 675	32 853

	Year	SUTs	COICOP	COICOP	FIGARO tables
		nama_10_cp16	nama_10_cp18	nama_10_co3_p3	
MT	2019	7 792	7 792	7 470	7 469
NL	2021	376 093	376 093	355 383	355 383
AT	2021	195 390	195 409	194 236	193 937
PL	2021	1 444 184	N/A	1 482 808	1 458 502
PT	2022	167 259	167 259	166 851	166 851
RO	2021	716 193	N/A	723 479	713 435
SI	2022	31 810	31 775	31 689	31 689
SK	2021	55 076	N/A	55 076	55 564
FI	2022	129 372	N/A	129 372	132 028
SE	2022	2 599 980	2 599 980	2 528 924	2 543 463

Source: Eurostat and JRC, data as of April 2025. Note: for Hungary, data in bln NAC.

- 3) **Substantial deviations from Eurostat SUTs.** FIGARO tables differed significantly from the official Eurostat SUTs, even for previous years where no benchmark revisions were applied. Table 162 and Table 163 present the median and average absolute relative differences in values between FIGARO and Eurostat. While the values are similar, or even identical, for some countries (e.g., Germany for 2015-2018), notable discrepancies exist for others. For example, the median difference for Spain in 2019 is 16%. This cannot be attributed to Eurostat's benchmark revision (which occurred in late 2024) and likely reflects methodological features specific to the FIGARO data generation process. As shown in Table 163, average differences are even larger than the medians, indicating that some deviations are substantial⁶³.

Table 162. Median absolute relative differences between FIGARO tables and base Eurostat tables

	2015	2016	2017	2018	2019
BE	0%	0%	4%	5%	0%
CZ	0%	0%	0%	0%	0%
CY	0%	0%	0%	0%	0%
DK	0%	0%	0%	0%	0%
DE	0%	0%	0%	0%	1%
EE	0%	0%	0%	0%	4%
EL	0%	8%	14%	17%	16%
ES	9%	23%	22%	16%	16%
FR	0%	0%	0%	0%	0%
HR	2%	8%	8%	2%	2%
HU	0%	0%	0%	0%	0%
IE	8%	7%	9%	8%	80%
IT	0%	0%	0%	0%	0%
LT	0%	8%	12%	36%	39%

⁶³ The absolute relative difference is shown. For example, if the FIGARO value is EUR 900 and the Eurostat value is EUR 1 000, the difference for that cell is calculated as $|900 - 1\,000| / 1\,000 = 10\%$.

	2015	2016	2017	2018	2019
LU	1%	2%	2%	7%	9%
LV	1%	30%	34%	38%	40%
MT	2%	24%	34%	-	-
NL	0%	0%	0%	0%	0%
AT	0%	0%	0%	0%	0%
PL	3%	6%	8%	9%	11%
PT	0%	5%	0%	4%	6%
RO	0%	7%	12%	16%	15%
SI	2%	4%	6%	7%	8%
SK	2%	32%	39%	0%	0%
FI	0%	0%	0%	0%	0%
SE	1%	7%	16%	12%	10%

Source: own elaboration. Note: for Bulgaria SUTs were not available for all the years covered; for Malta SUTs were not available for 2018 and 2019. Only cells where values are greater than EUR 1 m are compared.

Table 163. Average differences between FIGARO tables and base Eurostat tables

	2015	2016	2017	2018	2019
BE	0%	0%	7%	11%	0%
CZ	0%	0%	0%	0%	0%
CY	0%	0%	0%	0%	0%
DE	1%	1%	1%	1%	1%
DK	1%	0%	0%	0%	4%
EE	1%	1%	1%	0%	7%
EL	0%	13%	22%	25%	30%
ES	19%	41%	39%	29%	29%
FR	0%	0%	0%	0%	0%
HR	4%	19%	13%	3%	2%
HU	1%	0%	0%	0%	0%
IE	12%	11%	14%	25%	325%
IT	0%	0%	0%	0%	0%
LT	1%	18%	23%	52%	56%
LU	4%	5%	5%	15%	20%
LV	2%	46%	57%	60%	67%
MT	4%	39%	50%	.	.
NL	1%	0%	0%	0%	0%
AT	0%	0%	0%	0%	0%
PL	5%	10%	11%	14%	16%
PT	0%	12%	0%	8%	13%
RO	0%	18%	28%	32%	30%
SI	3%	8%	9%	12%	14%
SK	5%	68%	84%	0%	2%
FI	0%	0%	0%	0%	0%
SE	2%	15%	30%	25%	22%

Source: own elaboration. Note: for Bulgaria SUTs were not available for all the years covered; for Malta SUTs were not available for 2018 and 2019. Only cells where values are greater than EUR 1 million were compared.

The differences reported in Table 162 and Table 163 may give rise to a break-in-series issue.

1. If FIGARO tables are used only for years when NSI/ESTAT data is not yet published and must be forecasted, a break can be expected in the series, leading to non-comparability of estimates across time, i.e., between years with actual vs. forecasted values.
2. If FIGARO tables are used consistently, even for years when official NSI/ESTAT data is available, time-series comparability would be preserved – but at the cost of not using officially published data for years where it exists.

Another issue related to the potential use of the FIGARO tables is the presence of negative values. In theory, intermediate and final consumption values should be either zero or positive. However, in FIGARO tables, approximately 1% of such values were negative, likely due to interpolation or balancing errors. The prevalence of negative values varies by Member State. For example, in the 2019 FIGARO use table for Romania, around 4% of values were negative, including implausible entries such as household consumption of retail trade services at EUR -1 753 million. In contrast, in the official ESTAT use tables, only 0.01% of values are negative, roughly 100 times fewer than in FIGARO, indicating much greater adherence to accounting principles.

Impacts and state of play

The team calculated alternative VAT compliance gap estimates using FIGARO SUT data. The mean difference between the estimates based on FIGARO tables and those derived from Eurostat tables, or forecasted by the team when unavailable, was 0.8pp of the compliance gap. In 18 out of 27 cases, the estimates using FIGARO tables are higher. In line with this, changing the source of the use tables would lead to an upward revision of the VAT compliance gap. The mean absolute error is naturally higher and amounts to a non-negligible 1.9pp. This means that switching to FIGARO tables would, on average, lead to a revision of 1.9pp in the VAT compliance gap estimates (for 2022, see Table 164). The dispersion of the alternative estimates between own-estimates based on Eurostat and FIGARO tables resulted predominantly from benchmark revisions. Thus, to maintain consistency with national accounts data, the alternative FIGARO-based estimates were not published in this study.

Table 164. Alternative estimates of the VAT compliance gap for 2022

	Base Eurostat tables	FIGARO 2024 release	Difference
BE	11.7%	13.6%	1.9pp
BG	6.4%	10.0%	3.6pp
CZ	9.2%	7.1%	-2.1pp
CY	4.9%	4.3%	-0.6pp
DE	6.7%	5.2%	-1.5pp
DK	10.8%	8.8%	-2.0pp
EE	5.2%	4.1%	-1.1pp
EL	12.8%	14.7%	1.9pp
ES	4.1%	3.4%	-0.7pp
FR	4.4%	6.5%	2.0pp

	Base Eurostat tables	FIGARO 2024 release	Difference
HR	9.5%	10.2%	0.7pp
HU	2.6%	5.4%	2.8pp
IE	-8.6%	-3.0%	5.6pp
IT	14.5%	15.1%	0.6pp
LT	12.2%	16.4%	4.2pp
LU	0.5%	-0.5%	-1.1pp
LV	2.8%	6.5%	3.7pp
MT	24.3%	25.0%	0.7pp
NL	5.1%	2.1%	-3.1pp
AT	3.0%	3.4%	0.4pp
PL	11.2%	13.9%	2.7pp
PT	4.1%	5.3%	1.2pp
RO	30.4%	31.0%	0.5pp
SI	8.5%	8.6%	0.2pp
SK	13.8%	13.8%	0.0pp
FI	2.1%	5.6%	3.5pp
SE	5.1%	2.6%	-2.5pp

Source: own elaboration.

Leveraging SUTs from NSIs

Background

One of the overarching objectives of this and previous VAT gap studies was to ensure comparability of the estimates, and, in turn, to use harmonised data sources and methods. For this reason, the main sources of information on tax base values throughout the period covered by the estimates, as discussed in the subsection above, have been the standardised SUTs published by Eurostat.

However, as the methodology developed and country-specific issues with data and their availability emerged, the study team continued to develop tailored solutions to address these challenges. As one such example, in the 2024 report, for two Member States, Croatia⁶⁴ and Ireland, the study team switched to using more granular and/or more up-to-date SUTs published/provided by the respective NSIs. In the course of this work, the team further explored the availability of SUTs and found that in six cases the SUTs published by NSIs could add value in the form of greater granularity, more recent vintages or values better aligned with the latest national accounts revisions.

Pros

Switching to more granular and/or more up-to-date SUTs by NSIs increases the accuracy of estimates through greater granularity, more recent vintages or values better aligned with the latest national accounts revisions of the main source of information on VAT base.

⁶⁴ Unpublished tables shared directly by the Croatian NSI.

Cons

The drawbacks of this approach include potential discontinuity of the data in the future, and resulting structural breaks and revisions.

Scope

Refined modelling of liability for six EU Member States is shown in Table 165.

Table 165. Most recent SUTs published by NSIs vs. Eurostat

MS	NSI tables: year	NSI tables: granularity	NSI vs. Eurostat		
			Timeliness	Values	Granularity
Czechia	2023	88x88	Same	Different	Higher
Hungary	2022	90x90	Same	Same	Higher
Ireland	2020	68x68	Same	Same	Higher
Netherlands	2023	65x65	Fresher	Different	Same
Poland	2020	77x77	Same	Same	Higher
Portugal	2022	82x82	Same	Same	Higher

Source: own elaboration.

Impact and state of play

A full inventory check of available tables in (27) NSIs repositories was carried out, with tables for six Member States being identified as potentially improving the accuracy of estimations.

At the final stage, publicly available tables published by NSIs were used for deriving the estimates for Ireland, while for Croatia the unpublished SUTs were provided directly by the NSI. Using NSI-based SUTs with higher granularity remains possible for Czechia, Hungary, Poland and Portugal in the further editions of the VAT gap study, and for more recent years for the Netherlands.

Alignment of Eurostat's SUTs with other household final consumption series

Background

Benchmark revisions are major, comprehensive updates to national accounts data undertaken periodically by statistical agencies to incorporate improved methodologies, new data sources and updated international standards (such as ESA). Unlike routine or annual revisions, which typically involve minor updates or corrections to recent periods, benchmark revisions affect a longer historical time series and may result in significant changes to both taxable and non-taxable components of GDP. Importantly, the length of the period covered by revisions is not harmonised. As a consequence, in some cases national accounts' data used by the study team might only be revised partially in terms of the years covered. These benchmark revisions often follow methodological enhancements. Benchmark revisions can lead to a better reflection of structural economic changes, the inclusion of previously missing sectors (e.g., digital or informal activities) or improved measurement of cross-border transactions and prices.

The consultation conducted by the study team as part of the study *VAT Gap in the EU – report 2024* highlighted that many EU Member States, including the largest economies, were undergoing benchmark revisions of their national accounts at the time. In response, the study team closely examined the

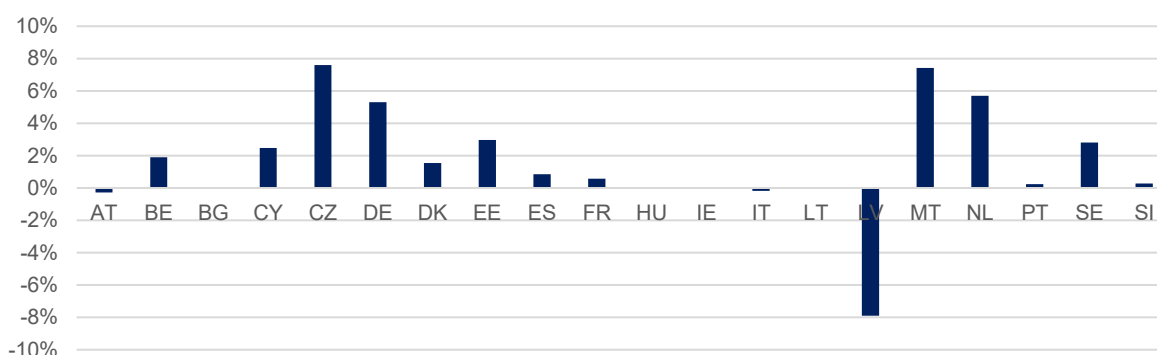
observed changes in national accounts data, and compared values across datasets maintained and already discontinued by Eurostat. This analysis aimed to identify which series have been revised and are aligned with the most recent benchmark revisions, and which remain outdated or inconsistent with the latest national accounts updates.

More specifically, the study team compared total values of household final consumption as published by Eurostat in:

- *nama_10_co3_p3*: an old, mostly discontinued dataset with household final consumption values in COICOP-99 classification, but still maintained by several Member States;
- *nama_10_cp18*: a new dataset with household final consumption values in COICOP-18 classification, not available for all Member States yet;
- *naio_10_cp16* (SUTs); and
- data published by NSIs.

The comparison revealed significant discrepancies in total values, likely resulting from both routine and benchmark revisions, some of which are reflected in certain datasets but not in others. A comparison of total household final consumption values between the datasets *nama_10_co3_p3* and *nama_10_cp18* showed that nine countries experienced a revision impact exceeding 2% and in five of these the difference was greater than 5%. As shown in Figure 135, the revisions were predominantly upward in most of these countries, potentially leading to an increase in the taxable VAT base and liability.

Figure 135. *nama_10_cp18* vs. *nama_10_co3_p3* household final consumption values (for 2022)



Source: own elaboration. Note: situation as of 24 April 2025.

The complexity of alignment and misalignment of household final consumption in SUTs with respect to other sources is depicted in Table 166. The table shows whether the value of household consumption total in the SUTs matches data from the *nama_10_CO3* series (CO3, marked in blue), the *nama_10_CP18* series (CP18, marked in green), both CO3 and CP18 (orange) or neither of them (red).

Altogether, the following six different cases emerge.

Case 1: CZ, DK, MT and PT. SUT values are aligned with CP18 data for all years covered, indicating that the SUTs used reflect the recent revisions.

Case 2: AT, BE, CY, DE, EE, ES, FR, HU, IT, LV, NL and SE. SUT values are aligned with CP18 in the most recent years, but with CO3 in earlier years – suggesting a break-in-series problem, as earlier SUT data was not revised.

Case 3: LU. SUT values match CO3 data. CP18 data is not available.

Case 4: SI, IE and LT. SUT values are misaligned with both CO3 and CP18. (Note: in Ireland and Lithuania, the CO3 and CP18 values are the same.)

Case 5: HR, EL, FI, SK, PL and RO. SUT values are misaligned with available CO3 data, while CP18 data is not available.

Case 6: BG. SUT data is not available.

Table 166. Alignment of SUT household final consumption values with household consumption by purpose data

	2019	2020	2021	2022	2023
BE	CO3	CP18	CP18	-	-
BG	-	-	-	-	-
CY	CO3	CP18	CP18	-	-
CZ	CP18	CP18	CP18	CP18	CP18
DE	CO3	CO3	CP18	-	-
DK	CP18	CP18	-	-	-
EE	CO3	CP18	CP18	-	-
ES	CO3	CO3	CP18	CP18	-
FR	CO3	CP18	CP18	-	-
EL*	other	other	CO3	-	-
HR*	other	CO3	other	-	-
HU	CO3	CP18	CP18	CP18	-
IE	other	CO3/CP18	CO3/CP18	-	-
IT	CO3	CP18	CP18	-	-
LT	other	CO3/CP18	CO3/CP18	-	-
LU*	CO3	CO3	CO3	CO3	-
LV	CO3	CO3	CP18	CP18	-
MT	CP18	-	-	-	-
NL	CO3	CO3	CP18	-	-
AT	CO3	CO3	CP18	-	-
PL*	other	other	other	-	-
PT	CP18	CP18	CP18	CP18	-
RO*	other	other	other	-	-
SI	other	other	other	other	-
SK*	other	CO3	CO3	-	-
FI*	other	other	CO3	CO3	-
SE	CO3	CO3	CP18	CP18	-

Source: own elaboration. * - denotes that no CP18 data is available yet (in those cases, the respective Member State had received derogation from Eurostat).

The treatment of consumption data depends on the specific case.

Case 1: the SUT and CP18 data are already consistent – no adjustment is needed.

Case 3: the SUT and CO3 data are consistent and CP18 data is not available – no adjustment is needed.

Case 4: SUT totals are misaligned with available CP18 data. In this case, the SUT values are adjusted to match the total value of household consumption in CP18, while retaining the structure of consumption in the SUTs. This is done by applying a fixed scaling coefficient to all CPA items.

Case 5: SUT totals are misaligned with available CO3 data and CP18 data is not available. While a fixed coefficient could theoretically be applied (as in Case 4), the reason for the discrepancy between the SUTs and CO3 is unclear – SUT data may actually be more up to date than CO3. Therefore, no adjustment was made in this case.

Case 6: SUT data is not available – no adjustment is applicable.

The most complex situation is **Case 2**, where a clear break in series exists within the SUT data, caused by a shift from CO3 to CP18 classification. In this case, a method is developed to model the effect of the CP18 revision on the CPA-level data and adjust the SUT values as if the CP18 revision had been applied throughout.

The method consists of the following steps.

- **Code matching:** CO3 and CP18 codes corresponding to identical household consumption items are identified and matched. This mapping is shown in Table 167 below. To verify the matching, countries like Ireland and Lithuania are examined, where both CO3 and CP18 data are available, and the totals are identical.

Table 167. COICOP nama_10_co3_p3 and nama_10_cp18 codes corresponding to identical consumption values

co3	cp18	Item
CP01_02	CP01_02	Food, beverages, tobacco
CP03_052	CP03_052	Household textiles, clothing and footwear
CP072	CP072	Operation of personal transport equipment
CP061	CP061	Medical products, appliances and equipment
CP071	CP071	Purchase of vehicles
CP051_053_054_055	CP051_053_054_055	Furniture, furnishings, and loose carpets + other goods
CP045	CP045	Electricity, gas and other fuels
CP044	CP044	Water supply and miscellaneous services relating to the dwelling
CP11	CP11	Restaurants and hotels
CP126	CP122	Financial services n.e.c.
CP125	CP121	Insurance
CP042	CP042	Imputed rentals for housing

co3	cp18	Item
CP041	CP041	Actual rentals for housing
CP096	CP098	Package holidays
CP10	CP10	Education
CP062_063	CP062_063_064	Outpatient + Hospital services
CP124	CP133	Social protection
CP121_123	CP131_132	Personal care, other personal effects

Source: own elaboration.

- **Revision coefficient calculation:** for the matched CO3-CP18 codes, a revision coefficient is computed, capturing the change in household consumption values between CO3 and CP18.
- **CPA code mapping:** the matched CO3-CP18 codes are then linked to CPA codes, using a modified version of the ad hoc matching methodology already used in the household consumption forecasting approach.
- **CPA code adjustment:** the affected CPA codes are adjusted using the calculated CO3-CP18 revision coefficients. This step accounts for approximately 80% of household consumption.
- **Residual adjustment:** the remaining 20% of CPA codes, not directly matched, are adjusted with a residual scaling factor, ensuring that the total household consumption in CPA terms matches the revised CP18 total.

To illustrate the process, a numerical example using data for Germany for 2020 is provided below.

- Code CP041 in both the old and new classifications corresponds to the same item, i.e., household consumption of *'Actual rentals for housing'* (excluding imputed rents).
- In the new CP18 data, household consumption under CP041 is higher by a factor of $K = 1.095$. This is the revision coefficient.
- The corresponding CPA code for CP041 is L68B (*Real estate services, excluding imputed rents*).
- The adjusted SUT value for L68B is calculated by multiplying the original value by the revision coefficient:

$$141\,297 = 129\,093 \times 1.095$$
- A similar adjustment is applied to other CPA items that can be matched to COICOP codes. This accounts for approximately 80% of total household consumption.
- The remaining unmatched CPA items are adjusted using a residual correction factor, such that the total household consumption in the revised SUT equals the new CP18 total, i.e., 1 681 579 (Table 168).

Table 168. Numerical example of removing structural break (Germany, 2020)

code	Household final consumption (EUR)		K = CP18/CO3	Matched CPA code	Household final consumption (EUR)	
	CO3	CP18			Original SUTs	Adjusted SUTs
CP041	122 937	134 559	1.095	L68B	129 093	141 297
TOTAL	1 639 588	1 681 579	1.026	TOTAL	1 639 588	1 681 579

Source: own elaboration.

Pros

The approach described above ensures proper alignment with revisions, eliminating structural breaks and biases in VTTL estimates. The method adjusts both the totals and the structure of household consumption, which is critical. For instance, if the revision from CO3 to CP18 were due solely to increased imputed rent values, a simple rescaling would overstate household VAT liability, as imputed rents are not liable to VAT. This adjustment avoids such distortions.

Cons

The method introduces additional complexity into the framework. It also requires retroactive revisions to past estimates, which may affect the perceived credibility or stability of the published series.

Scope:

The approach applies to the following Member States: AT, BE, CY, DE, EE, ES, FR, HU, IT, LV, NL and SE.

Impact and state of play

The framework was implemented and the estimates fully incorporate these corrections.

The impact of the adjustment was rather in the positive, leading for 2019 to a median revision of 0.1pp of the VAT compliance gap in the 12 concerned Member States. For 2020, the median impact on the six Member States from this group with available SUTs was 0.5pp. The largest impacts were observed for the Netherlands and Germany, both of which underwent large-scale benchmark revisions very recently (see Table 169).

Table 169. Impact of the CO3-to-CP18 revision (change in the VAT compliance gap in pp)

MS	2019	2020
AT	0.1	1.1
BE	0.2	.
CY	0.0	.
DE	1.8	0.8
EE	0.0	.
ES	0.1	0.1
FR	-1.3	.
HU	0.1	.
IT	-0.2	.
LV	0.2	0.2
NL	2.8	3.4
SE	-0.7	-0.6

Source: own elaboration.

Alignment of Eurostat's SUT with other national accounts data

Background

Similarly to the revisions introduced in the household final consumption series, other components of the tax base also underwent updates, which highlights the need to eliminate potential structural breaks in these series. To assess the consistency of government final consumption data, values from Eurostat's SUTs are compared with the *nama_10_gdp* series (see Table 170).

For the years 2019-2022, the differences in total values are generally small, within 0-2pp, except for Croatia and Slovakia. However, in these two Member States SUT data from the NSIs were used instead of Eurostat's version, which likely explains the discrepancy.

The case of Germany is typical for many Member States. The difference between the SUT and GDP series is zero in the most recent year but increases for earlier years. This likely reflects the fact that GDP series are revised more frequently, whereas SUT data is updated less regularly, leading to larger discrepancies in older years.

Despite these observed differences, no corrections are applied to align totals. This is because only a portion of government final consumption is VAT-liable, with most being VAT-exempt. Without knowing whether the discrepancy originates from the taxable or non-taxable portion, adjusting the total (e.g., increasing Germany's 2020 value by 3%) would introduce a bias. Although one might assume that the structure of government consumption remained unchanged and only the total shifted, such an approach could be misleading, particularly if the difference is due to changes in primarily non-taxable expenditure, such as healthcare or education services.

Table 170. Percent difference between ESTAT SUT and GDP series in total government final consumption value (P3_S13)

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
BE	0	0	0	0	0	0	0	0	0	0	0	0	.
BG	0	0	1	1	0	.	.	.	.	.	.	.	.
CY	1	2	2	2	2	2	2	2	2	1	0	0	.
CZ	1	1	0	0	0	0	0	0	0	0	0	0	0
DE	4	4	4	4	3	2	2	2	2	2	3	0	.

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
DK	0	0	0	0	0	0	0	0	0	0	0	.	.
EE	-2	-1	-1	-1	-2	-3	-3	-3	0	0	0	0	.
EL	0	0	0	0	0	0	0	0	0	0	0	0	
ES	0	0	0	0	0	0	0	0	0	0	0	0	0
FR	1	2	2	2	2	1	2	2	2	2	0	0	.
HR	13	5	5	5	6	14	14	14	13	5	0	0	.
HU	0	1	1	1	1	0	0	0	0	0	0	0	0
IE	1	7	2	1	2	2	3	0	2	0	0	0	.
IT	2	3	3	3	2	1	1	1	0	1	0	0	.
LT	1	2	1	-1	0	0	0	0	0	0	0	0	.
LU	0	0	0	0	0	0	0	0	0	0	0	.	.
LV	0	-5	-5	-4	-3	-3	-4	-3	-3	-2	0	0	0
MT	-1	-1	.	-2	-1	1	10	14	9	0	.	.	.
NL	1	1	1	1	1	1	1	1	1	1	1	0	.
AT	1	2	2	2	1	1	1	1	1	1	1	0	.
PL	0	0	0	0	0	0	0	0	0	0	0	0	.
PT	0	0	0	0	0	0	0	0	0	0	0	0	0
RO	0	0	0	0	-2	0	1	0	1	0	0	0	.
SI	1	1	1	1	1	1	0	0	0	0	0	0	0
SK	5	4	5	2	0	3	3	3	2	3	0	0	.
FI	0	0	0	0	0	0	0	0	0	1	0	0	0
SE	1	1	1	1	1	0	0	0	0	0	0	0	0

Source: own elaboration.

For the years 2019-2022, intermediate consumption totals show somewhat larger discrepancies than those observed for government consumption. The largest difference appears in Ireland; however, in this case NSI data were used rather than Eurostat, which explains the divergence.

Nevertheless, the overall pattern remains consistent: the difference is zero in the most recent year and increases for earlier years. A notable example is the Netherlands, where the total intermediate consumption in the GDP series exceeds the Eurostat SUT values by 4-5%, likely reflecting the impact of a benchmark revision (Table 171).

Table 171. Percent difference between ESTAT SUT and nama_10_GDP series in total intermediate consumption value

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
BE	1	0	1	1	2	1	2	3	3	3	0	0	.
BG	0	0	0	-1	-1	.	.	.	.	.	.	.	.
CY	0	0	0	0	0	0	0	0	0	0	0	0	.
CZ	1	1	0	0	0	0	0	0	0	0	0	0	0
DE	3	3	4	3	4	1	0	1	1	2	2	0	.
DK	0	0	1	1	2	0	0	0	0	0	0	.	.
EE	1	0	0	0	0	0	0	0	0	0	0	-1	.
EL	0	0	0	0	0	0	0	0	0	0	0	0	
ES	-6	-7	-7	-7	-8	-9	1	1	1	1	0	0	0

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
FR	2	2	1	1	1	2	2	2	3	3	0	0	.
HR	2	1	1	1	1	1	1	1	1	1	1	0	.
HU	0	0	-1	0	0	0	0	0	0	-1	0	0	0
IE	6	0	12	-4	-4	-5	-4	-5	-4	-11	1	0	.
IT	2	2	2	2	2	1	1	1	1	1	0	0	.
LT	-5	-4	-2	-1	-1	-1	-1	0	0	0	0	0	.
LU	0	0	0	0	0	0	0	0	0	0	0	.	.
LV	0	0	0	0	0	0	0	0	0	0	0	0	0
MT	-35	-32	.	-31	-29	-25	-24	-22	-19	0	.	.	.
NL	1	2	3	4	5	2	2	3	4	4	5	0	.
AT	1	2	2	2	-1	-1	-1	-1	-1	0	0	0	.
PL	0	-1	0	0	1	0	1	1	0	-1	-1	0	.
PT	0	0	0	0	0	0	0	0	0	0	0	0	0
RO	0	0	0	0	0	0	0	0	0	0	0	0	.
SI	1	1	1	1	1	1	1	1	1	0	0	0	0
SK	-8	-9	-9	-10	-9	-4	-4	-4	-1	-1	0	0	.
FI	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	0	0
SE	5	5	6	6	7	0	0	0	0	0	-1	0	0

Source: own elaboration.

While the levels of total intermediate consumption appear to be relatively similar across many Member States, a more detailed analysis at the level of 65 industries reveals a much more complex picture. Differences at the industry level can be as high as 64%. In other words, the two datasets present significantly different structures of intermediate consumption.

The SUT and *nama_10_a64* data industry-level intermediate consumption totals can be realigned by applying a single scaling coefficient to each SUT column (i.e., maintaining the input structure within each industry). However, this assumes that the structure of inputs remained constant before and after the revision. This may not always be the case, as illustrated by Malta⁶⁵. The 2019 intermediate consumption of K64 products by the K64 industry (financial services by financial services) was revised downward by 4.6 bn in national accounts, but was not revised in prior SUTs. Since financial services are VAT exempt, this revision did not affect the VTTL. Applying a single coefficient to scale down intermediate consumption of this sector would thus underestimate VAT liability.

Pros

The amended approach ensures proper alignment with revisions, eliminating structural breaks and biases in VTTL estimates.

Cons

⁶⁵ <https://ec.europa.eu/eurostat/databrowser/bookmark/746c3a43-58cf-4dac-9169-499dc8625938>

The approach increases the number of own operations and modifications. Revisions to the estimates published in earlier VAT gap reports would be expected.

Scope

All Member States with differences between the intermediate consumption series (18 Member States with non-negligible differences at least for one year covered) are concerned.

Impact and state of play

Current estimates do not apply the proposed rescaling, which is suggested to be implemented in the future updates of the study.

Summary of changes to adjusting SUTs

The three improvements discussed in the preceding subsections are closely interrelated. They address the choice of the SUT data source and the necessary operations to mitigate issues arising from partially updated data following revisions. The proposed approach involves rescaling household final consumption values from SUTs for periods suspected of not incorporating recent revisions. For this purpose, values from the *nama10_cp18* dataset are used; if these are not available, the *nama10_co3_p3* dataset serves as the benchmark instead. Transformations are based on the correspondence between 38 COICOP categories and 65 CPA categories.

Overall, the operations described in earlier sections, departing from the standard use of Eurostat SUT data and applying the rescaling transformations, were incorporated as follows (Table 172).

Table 172. Rescaling and other operations on SUTs to account for recent revisions

	2019	2020	2021	2022	2023
BE	CO3→CP18	-	-	CP18 adhoc	CP18 adhoc
BG	CP18 adhoc	CP18 adhoc	CP18 adhoc	CP18 adhoc	CP18 adhoc
CY	CO3→CP18	-	-	CP18 adhoc	CP18 adhoc
CZ	-	-	-	-	-
DE	CO3→CP18	CO3→CP18	-	CP18 adhoc	CP18 adhoc
DK	-	-	CP18 adhoc	CP18 adhoc	CP18 adhoc
EE	CO3→CP18	-	-	CP18 adhoc	CP18 adhoc
ES	CO3→CP18	CO3→CP18	-	-	CP18 adhoc
FR	CO3→CP18	CO3→CP18	-	CP18 adhoc	CP18 adhoc
EL	-	-	-	CO3 adhoc	CO3 adhoc
HR	NSI	NSI	NSI	CO3 adhoc	CO3 adhoc
HU	CO3→CP18	-	-	-	CP18 adhoc
IE	NSI	NSI	NSI	CP18 adhoc	CP18 adhoc
IT	CO3→CP18	-	-	CP18 adhoc	CP18 adhoc
LT	oth→CP18	-	-	CP18 adhoc	CP18 adhoc
LU	-	-	-	-	CO3 adhoc
LV	CO3→CP18	CO3→CP18	-	-	CP18 adhoc
MT	-	CP18 adhoc	CP18 adhoc	CP18 adhoc	CP18 adhoc

	2019	2020	2021	2022	2023
NL	CO3→CP18	CO3→CP18	-	CP18 adhoc	CP18 adhoc
AT	CO3→CP18	CO3→CP18	-	CP18 adhoc	CP18 adhoc
PL	-	-	-	CO3 adhoc	CO3 adhoc
PT	-	-	-	-	single growth
RO	-	-	-	CO3 adhoc	single growth
SI	oth→CP18	oth→CP18	oth→CP18	oth→CP18	CP18 adhoc
SK	NSI	NSI	NSI	CO3 adhoc	CO3 adhoc
FI	-	-	-	-	CO3 adhoc
SE	CO3→CP18	CO3→CP18	-	-	CP18 adhoc

Source: own elaboration. Note: '-' = no operations necessary.

where:

NSI means that tables from the NSI were used directly (no rescaling operations),

FIGARO means that FIGARO tables were used directly (no rescaling operations),

CO3→CP18 means that household final consumption values matching the *nama_10_co3_p3* dataset were rescaled to align with values in *nama_10_cp18* (updating the structure),

oth→CP18 means that household final consumption values not matching any Eurostat dataset were rescaled to align with *nama_10_cp18* values (keeping the structure constant),

CP18 adhoc means that the *nama_10_cp18* dataset is used to nowcast both consumption values and the structure,

CO3 adhoc means that the *nama_10_co3_p3* dataset is used to nowcast both consumption values and the structure.

Decreasing the information gap around the revenue data

Summary of responses to the questionnaire

The compilation of VAT revenue varies significantly across countries in terms of methodology. Among those administrations that responded to the questionnaire, most reported using a time-adjusted cash approach. A few, however, apply an accrual method aligned with ESA 2010 requirements. According to Eurostat, only 3 of 27 EU Member States use the accrual method. Yet, some discrepancies between the replies to the questionnaire and information provided by Eurostat were spotted.

In the case of the time-adjusted cash approach, simple receipts are used while accounting for the timing difference between economic activity and the actual receipt of VAT revenue. Adjustments for cash lag, i.e., the delay between the economic transaction and the actual VAT payment, are applied with the cash-based figure. Most countries estimate this lag to be between one and two months. In some instances, this adjustment reflects statutory deadlines or internal accounting guidelines. One approach uses a fixed time lag of approximately 35 days, aligned with general collection regulations. In another, the cash lag is calculated based on the actual average delays observed in the national tax system, with most VAT receipts recorded on a deferral basis.

In general, the D995 adjustment, referring to the correction required in case of using revenue data coming from tax returns, i.e., the accrual approach to revenue, is based on payment delay. For instance,

in the case of one of the countries whose authorities provided an answer, VAT is deemed unlikely to be collected if the payment deadline has passed by more than 180 days.

Deferred VAT payments are typically not included in standard calculations. An exception to this rule was noted where deferrals were introduced on a temporary basis, e.g., in response to the COVID-19 pandemic, and the correction was based on administrative data from tax authorities for the years 2020 to 2023.

More complex methodologies are also in use. For example, one country applies a time-adjusted cash-based method under the ESA 2010 framework, incorporating tax collection data (excluding sanctions), deductions applied by tax authorities, additional assessments, customs collections and sanctions over a specified period. In this case, the accrual VAT for a given year is derived from a formula combining multiple sources of information over both the current and adjacent years, ensuring compliance with ESA requirements and improving the alignment of fiscal and national accounts data.

Takeaways

Based on the available information, all countries that reported using time-adjusted cash figures, except for those that have already provided the relevant details, should be asked to supply the following: (1) annual changes in the stock of VAT credits; (2) revenue recovered through audits and additional assessments by year; and (3) in cases where large-scale deferred VAT payments are in place, information on VAT deferrals as well. In all cases, VAT deferrals and changes in the stock of VAT credit or one-off ups and downs in the revenue recovered through audit should be adjusted in the reference revenue figures.

At the same time, for Member States using accrual-based revenue reporting, the study team should monitor the values reported under the D995 category, which reflects VAT unlikely to be collected. If these values are not regularly updated, the team should request revised figures for this component, given the high degree of uncertainty associated with it. Based on these updates, revenue figures should be adjusted ex-post.

Up to now, this information has been gathered informally during interviews, primarily to limit the complexity of the data request. However, it is now proposed that this approach be revised. Specifically, these elements should be formally incorporated into the questionnaire distributed at the outset of each VAT gap study.

ANNEX E: Data availability and reliability

Data availability for EU Member States

Estimates for the VTTL and VAT compliance gap rely on a combination of data series published by Eurostat and information provided by national tax administrations. The availability, timeliness, granularity and quality of data from the latter sources play a crucial role in accurately estimating the VTTL model parameters and applying the necessary adjustments to align the VTTL with VAT receipts. The degree of reliance on national sources varies across Member States and depends on several factors, including the complexity of VAT rules and the availability of relevant Eurostat data.

This section presents the availability of information from Member State administrations, including data used directly in the estimation process, as well as responses to Parts C and D of the questionnaire, which request supplementary information on recent changes in VAT rules and the standards used for compiling VAT revenue (see Table 173).

Overall, submissions could be grouped into two rather distinct categories in terms of provided information completeness:

- 1) **Submissions with high data completeness and granularity.** The vast majority of contacted administrations (23 out of 26) shared granular and comprehensive data, with an approximate level of completeness ranging from 80% to 100% across all data categories⁶⁶. Most of these submissions contained full information on weighted average rates applicable to household final consumption, propexes and data on GFCF, but in some cases the information necessary to calculate net adjustments was incomplete.
- 2) **No submissions or only supplementary information.** Due to data availability limitations, the administrations of three Member States – Germany, Estonia and Austria – were only able to share supplementary information, rather than the main figures requested. However, the key data required for estimating weighted average rates, propex coefficients and taxable/non-deductible GFCF were not available.

Table 173. Summary of data submissions from EU Member States and their completeness

MS	Data received	Approximate level of completeness	Level of completeness by category of data				Changes in VAT regimes (Part D)	Revenue (Part C)
			Rates	Propex	Net Adjustments	GFCF		
BE	yes	100%	complete	complete	complete	complete	no	no
BG	yes	80%	complete	partially complete	no data/outdated	complete	yes	yes
CZ	yes	90%	complete	complete	no data/outdated	complete	no	no
CY	yes	90%	complete	complete	complete	complete	yes	no
DK	not requested							

⁶⁶ 100% completeness would mean that the series answering all requests in the questionnaire at minimum level of required granularity and without gaps were shared.

MS	Data received	Approximate level of completeness	Level of completeness by category of data				Changes in VAT regimes (Part D)	Revenue (Part C)
			Rates	Propex	Net Adjustments	GFCF		
DE	yes	20%	no data/outdated	no data/outdated	no data/outdated	no data/outdated	yes	no
EE	yes	20%	no data/outdated	no data/outdated	no data/outdated	no data/outdated	yes	yes
IE	yes	100%	complete	complete	complete	partially complete	yes	yes
EL	yes	80%	complete	complete	no data/outdated	no data/outdated	yes	no
ES	yes	80%	complete	complete	no data/outdated	complete	yes	yes
FR	yes	90%	complete	complete	no data/outdated	complete	yes	yes
HR	yes	80%	complete	complete	partially complete	complete	yes	no
IT	yes	90%	complete	complete	partially complete	complete	no	yes
LV	yes	100%	complete	complete	complete	complete	yes	yes
LT	yes	90%	complete	complete	no data/outdated	complete	yes	yes
LU	yes	80%	complete	complete	no data/outdated	complete	no	yes
HU	yes	90%	complete	complete	no data/outdated	complete	no	no
MT	yes	80%	complete	complete	no data/outdated	complete	yes	no
NL	yes	80%	complete	complete	no data/outdated	complete	no	no
AT	yes	20%	no data/outdated	no data/outdated	no data/outdated	no data/outdated	yes	no
PL	yes	90%	complete	complete	no data/outdated	complete	no	no
PT	yes	80%	complete	complete	partially complete	no data/outdated	no	no
RO	yes	80%	complete	complete	no data/outdated	partially complete	no	no
SI	yes	90%	complete	complete	complete	complete	yes	no
SK	yes	80%	complete	complete	no data/outdated	complete	yes	yes
FI	yes	100%	complete	complete	complete	complete	yes	no
SE	yes	80%	complete	complete	no data/outdated	complete	no	no

Source: own elaboration. Note: red stands for no/low data availability, orange for medium and green for good/complete data availability. Due to the simplicity of the VAT rate matrix in Denmark, information necessary to calculate weighted average rates was not requested.

Data availability for some EU candidate countries and potential candidates

This section provides background information on the current estimates, including their availability and credibility, for the nine EU candidate countries and potential candidates covered by the 2025 study: Albania, Bosnia and Herzegovina, Georgia, Kosovo, Moldova, Montenegro, North Macedonia, Serbia

and Ukraine. The information obtained was sufficient to derive estimates for seven of the nine countries under review.

For Albania and Georgia, the available data could be described as both highly comprehensive and granular. In both cases, SUTs were available for all years covered (2019-2023). This allowed the study team to avoid the nowcasting procedures for SUTs that must be applied in all but one EU Member State. For both countries, the study team received important data from national statistical institutes and tax registers, which enabled the estimation of model parameters and the implementation of necessary adjustments. As both administrations have experience in estimating the VTTL using a production-side approach and have developed tax expenditure analyses, the estimates produced by the study team could be cross-checked against national calculations at least partially.

For North Macedonia, Serbia, Ukraine and Kosovo, the main data sources were available, although certain elements in the calculations had to be based on workaround methods due to data unavailability. In all cases listed except Kosovo, the granularity or timeliness of data from household budget surveys did not allow for a fully accurate estimation of the weighted average rates. For Kosovo, the main issue was the timeliness of the SUT, with 2016 being the latest available year. This required a long forecasting period, similarly to the procedure implemented for Bulgaria.

Bosnia and Herzegovina is the only country covered by the study with no available SUT at all. For this reason, information on the structure of intermediate use by groups of products and services from Serbia had to be used to estimate intermediate consumption liability. Moreover, the granularity of household final consumption data was relatively low, which also likely affected the accuracy of estimates. The results are not credible, indicating that the degree of simplification made necessary by data unavailability was too great.

For Moldova and Montenegro, estimates could not be derived at this stage. In both cases, granular SUTs were not available. Consequently, the study team compiled all accessible national accounts and sectoral statistics. However, the available information in each case was insufficient to estimate at least one of the three key components of VAT liability. For Moldova, the team received part of the necessary information to estimate the VTTL, but the data was insufficient to resolve issues primarily related to the lack of SUTs. For Montenegro, the Commission only succeeded in establishing contact with the relevant national counterparts late in the project, at a stage by which the estimates could not be derived and properly validated before publication.

Table 174. Availability of data necessary to estimate the VTTL for EU candidate countries and potential candidates (national sources)

	SUT ⁶⁷		Household consumption structure			GFCF			Other important data available to estimate the VTTL	VAT revenue
	Availability	Approximate level of completeness	Availability	Granularity	Type of data available	Years, for which available	Granularity	Type of data available		Properties of data availability
AL	2019-2023	64x64	Data from SUT	2019-2023	64 CPA divisions	By institutional sector and type	2019-2023	5 sectors/12 types	Detailed estimates of VAT expenditures (per type), turnover of companies below the VAT registration threshold	Monthly cash series for domestic and customs VAT
BH	N/A	N/A	National accounts	2019-2023	12 COICOP sections	By sector of economic activity and type	2019-2023	19 sectors/2 types	-	Monthly cash series
GE	2019-2023 (unpublished)	64x64	Detailed HBS results	2019-2023	5-digit COICOP breakdown	By types	2019-2023	5 types (dwelling distinguished)	Turnover of companies below the VAT registration threshold, weighted average rates on output	Accrual yearly series
XK	2016 (unpublished)	65x65	Detailed HBS results	2016	4-digit COICOP breakdown (~350 categories)	By groups of products (SUT)/aggregate	2016/2019-2023	65 categories	-	Monthly cash series
MD	N/A	N/A	National accounts	2019-2023	12 COICOP sections	Aggregate	2019-2022	-	Turnover of companies below the VAT registration threshold	Yearly cash series
ME	2018	20x20	National accounts	2021	12 COICOP sections	Aggregate	2019-2023	-	-	-
MK	2019-2020	64x64	National accounts	2019-2023	12 COICOP sections	By sector of economic activity	2019-2023	-	-	Monthly cash series

	SUT ⁶⁷		Household consumption structure			GFCF			Other important data available to estimate the VTTL	VAT revenue
	Availability	Approximate level of completeness	Availability	Granularity	Type of data available	Years, for which available	Granularity	Type of data available		Properties of data availability
RS	2019-2021	64x64	National accounts	2019-2023	38 COICOP categories	By institutional sector and groups of products and services	2019-2023	5 sectors/99 groups	-	Monthly cash series
UA	2019-2021 (IOT)	42x42	National accounts	2019-2021	12 COICOP sections	By the institutional sector	2019-2021	5 sectors	Turnover of companies by turnover bands	Monthly accrual receipts, cash – refunds and customs VAT

Source: own elaboration.

Note: the table includes availability for the study team.

Assessment of the credibility of the VTTL estimates by country

Overall, no significant issues that might have affected the accuracy of the estimates were spotted for 19 Member States (rows marked in **green** in Table 175)⁶⁸. For five Member States, there were signals that the accuracy of the estimates may be somewhat lower (rows marked in **yellow** in Table 175). For two Member States – Bulgaria and Ireland – problems of a fundamental nature were encountered (rows marked in **red** in Table 175). For Bulgaria, the most recent use tables were for 2014, which likely had a large impact on accuracy for most recent years. For Ireland, the estimates for 2021 were negative. Despite the efforts of the administration to supply information to refine the estimates, they remained negative, which is a clear signal of inaccuracy. The estimates for Luxembourg were excluded from the main body of the report and from EU total values, as the significantly negative VAT compliance gap estimates for two consecutive years were a clear signal of underlying problems. The inaccuracy of top-down estimates for Luxembourg is likely related to the structurally limited share of household final consumption in VAT liability and to the strong reliance on administrative data used to calculate other components of the VTTL.

For EU candidate countries and potential candidates, despite the availability of required data for Albania, Georgia and Ukraine, estimates point to severe shifts, which raise concerns about accuracy and necessitate further investigation. For Kosovo, estimates were marked as uncertain, as the SUTs applied were relatively outdated. Estimates for North Macedonia and Serbia were excluded from the main body of the report, as their persistently negative VAT compliance gap estimates again signalled significant problems. For Bosnia and Herzegovina, estimates were also omitted from the main body, as they were derived using simplified calculations due to the lack of SUT data. For Moldova, the team was unable to obtain estimates because, apart from the SUT, sufficient proxies for the tax base could not be gathered.

Table 175. Assessment of the credibility of VAT compliance gap estimates

	Data availability	Data reliability	Magnitude of the VAT compliance gap	Shifts	Overall assessment	Comment
EU Member States						
BE						
BG						Most recent use tables available for 2014.
CZ						
CY						Large hike in 2020 and declines in 2021 and 2022, which may be somewhat affected by deferred payments or

⁶⁸ Please note that the method for this classification is different than in EC/CASE (2022), as it also incorporates the likelihood of solving problems.

	Data availability	Data reliability	Magnitude of the VAT compliance gap	Shifts	Overall assessment	Comment
						other elements that were not fully controlled in the modelling.
DK						
DE						Outdated information to estimate core model parameters that might have affected the accuracy of the VTTL estimates.
EE						Outdated information to estimate core model parameters that might have affected the accuracy of the VTTL estimates.
IE						2019-2021 use tables (published annually by Central Statistics Office, IE) are updated (rescaling each column separately) to match with latest National Accounts aggregates. 2022 and 2023 SUT tables are forecasted in a similar way on the basis of 2021 use table structure. Partially outdated information necessary to calculate model parameters. Negative estimates for 2021.
EL						
ES						Estimates of the impact of changes to the VAT rate matrix in 2023, based on national accounts and tax return data, differ, raising concerns about the reliability of the estimates for that year.

	Data availability	Data reliability	Magnitude of the VAT compliance gap	Shifts	Overall assessment	Comment
FR						
HR						
IT						
LV						Large downward shift in 2022 cross-validated with estimates by the national administration.
LT						
LU						A major upward revision of Luxembourg's VAT revenue data of up to 8.5% of revenues for recent years lead to a sharp downward revision of VAT compliance gap estimates, resulting in negative or near-zero values several consecutive years, compared with previous editions where all results were positive. These negative VAT compliance gap estimates cannot be considered credible. In addition, there was a large unexplained decrease in the estimated VAT compliance gap in 2021.
HU						
MT						

	Data availability	Data reliability	Magnitude of the VAT compliance gap	Shifts	Overall assessment	Comment
NL						
AT						Outdated information to estimate core model parameters that might have affected the accuracy of the VTTL estimates.
PL						Large downward shifts observed cross-validated with estimates by the national administration.
PT						
RO						Outdated information to estimate core model parameters that might have affected the accuracy of the VTTL estimates. Underlying GFCF data points to a substantially higher share of non-deductible VAT for the S11 sector than for other Member States, which raises data reliability concerns.
SI						
SK						
FI						
SE						

	Data availability	Data reliability	Magnitude of the VAT compliance gap	Shifts	Overall assessment	Comment
EU candidate countries and potential candidates						
AL						Large shifts in the estimated VAT compliance resulting from shifts in customs VAT revenue that warrant further scrutiny.
BH						Excluded due to SUT unavailability.
GE						Large shifts in estimated results that require further validation.
MD		-	-	-		Excluded due to SUT unavailability.
MK						Excluded due to persistently negative VAT estimates.
RS						Excluded due to persistently negative VAT estimates.
UA						Large shifts in estimated results that require further validation. Unavailability of information to accurately calculate correction for companies below the VAT registration threshold.
XK						The most recent use tables are available for 2016.

Source: own elaboration.

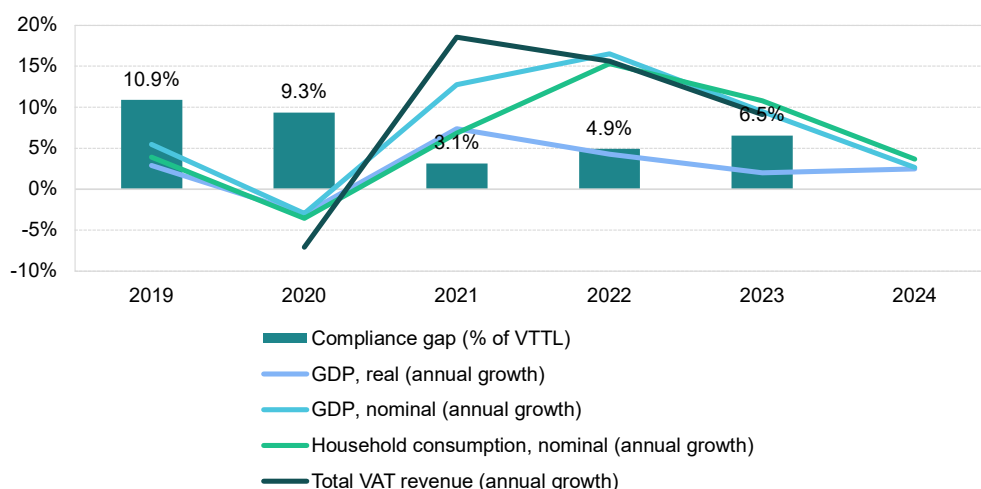
ANNEX F: Country-specific results for countries with estimates outside plausible ranges

Bosnia and Herzegovina

In 2023, VAT revenues in Bosnia and Herzegovina grew by 9.1%, a considerable but slower pace than the post-pandemic value of 15.6% recorded in 2022. The VAT compliance gap increased to 6.5% in 2023, up from 4.9% in 2022, but remained below the pre-pandemic level of 2019 (10.9%). In 2023, Bosnia and Herzegovina raised the threshold for mandatory VAT registration and took steps towards modernising VAT administration by introducing e-filing for taxpayers. In addition, clarifications were introduced concerning the VAT treatment of non-resident services, free trade zones and buildings. These policy and administrative changes influenced VAT revenue developments.

The country experienced a strong post-pandemic rebound, with real GDP growth peaking at 7.4% in 2021, supported by rising domestic demand and household consumption in nominal terms. This followed a sharp contraction to around -3.0% in 2020, caused by the COVID-19 pandemic. However, in recent years, growth has slowed down, reflecting challenges linked to ongoing geopolitical tensions and energy price volatility. As Bosnia and Herzegovina is highly integrated into Europe's trade networks – with the ratio of total trade to GDP reaching 100% in 2023 – weak recovery in the EU also weighed on its economic performance.

Figure 136. BA – VAT compliance gap, VAT revenues, GDP growth and household final consumption



Sources: own elaboration, Eurostat.

Real GDP growth in Bosnia and Herzegovina stood at 2.0% in 2023, a decline of 2.2pp compared to 2022, which could have contributed to an **increase in the VAT compliance gap**. Household final consumption in real terms, which had grown by 4.2% in 2021, slowed down to 1.8% in 2022 and further to 1.0% in 2023. By contrast, real government consumption growth accelerated from 1.3% in 2022 to 2.1% in 2023. Gross fixed capital formation (GFCF) registered a robust increase, rising by 12.1% in real terms in 2023 after a marginal 0.3% growth in 2022.

While measures reported in real values capture the actual change in economic activity by excluding inflation effects, nominal growth rates more directly reflect changes in the VAT base and potential VAT revenues. Accordingly, nominal final consumption expenditure growth slowed from 14.6% in 2022 to

11.1% in 2023. In particular, growth of nominal household final consumption of food and non-alcoholic beverages fell sharply (-7.4pp), which may have further contributed to an **increase in the VAT compliance gap**.

Inflation dropped to 2.2% in 2023, down sharply from a peak of 14.8% in 2022. The main drivers of inflation were energy prices, housing costs, transport and food. Overall, upward price pressures affected most major components of household consumption. In the context of the VAT compliance gap, it is notable that recreational, restaurant and accommodation services were among the fastest-growing categories of nominal household consumption in 2023, although their growth was slower than in 2022. Similarly, tourism demand, as measured by nights spent in tourist accommodations, rose by 14.6% in 2023, well below the 42.6% growth rate recorded in 2022. These last two developments can be regarded as factors that drive conditions conducive to a **decrease in the VAT compliance gap**.

In nominal terms, GFCF expanded by 14.3% in 2023. Combined with lower inflation, this suggests a tangible increase in real investment activity, particularly in fixed assets such as infrastructure, machinery and buildings.

On the supply side, performance varied across sectors. Services grew faster in value-added terms than other parts of the economy in 2023. By contrast, industry – after a strong rebound in 2021 and 2022 – experienced a slowdown due to supply-chain disruptions and high energy costs. These developments led to a 1.4pp increase in the share of services in total value added. Overall, this shift in the sectoral structure of Bosnia and Herzegovina's economy appears likely to have **increased the VAT compliance gap**, given that non-compliance risks tend to be higher in the services sector.

Table 176. BA – Factors affecting VAT compliance gap (2022-2023)

Variable	2023	Difference (2023 vs 2022)	Expected impact on 2023 VAT compliance gap
GDP growth, real	2.0%	-2.2pp	Increase
Final consumption expenditure growth, nominal	11.1%	-3.5pp	Increase
Household final consumption of food and non-alcoholic beverages growth, nominal	13.6%	-7.4pp	Increase
Services susceptible to non-compliance growth, nominal	12.1%	-14.8pp	Decrease
Services share in GDP	66.3%	1.4pp	Increase
Tourism (nights spent), growth	14.6%	-28.1pp	Decrease
Bankruptcy declarations, growth	n/a	n/a	n/a
Digital payments growth, nominal	n/a	n/a	n/a

Source: own elaboration based on Eurostat, Agency for Statistics of Bosnia and Herzegovina.

Note: for a discussion of the expected effects of these indicators, please see pages 18 and 19 in section II.a.

BA: VAT compliance gap (2019-2024)



- The VAT compliance gap in Bosnia and Herzegovina averaged 6.9% of the VTTL between 2019 and 2023⁶⁹.
- Compared to other EU candidate countries, the estimates of the VAT compliance gap were relatively stable. However, due to the unavailability of SUT data for Bosnia and Herzegovina and the reliance on alternative auxiliary sources, the credibility of these estimates is lower.

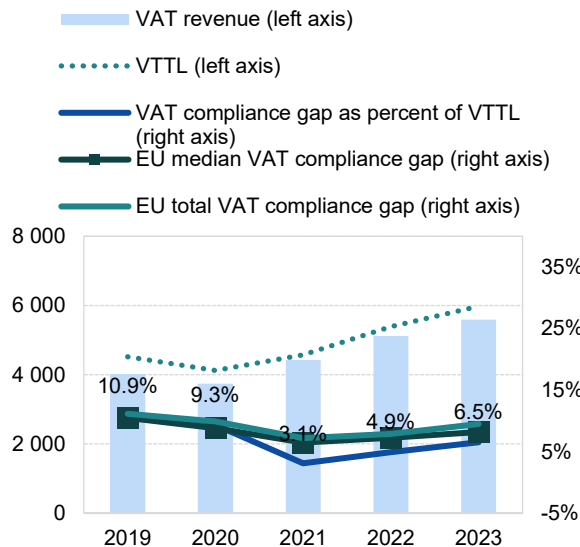
Table 177. BA – VTTL, VAT revenue, and VAT compliance gap

	2019	2020	2021	2022	2023
VTTL (BAM m)	4 514	4 123	4 572	5 386	5 978
<i>o/w liability on household final consumption</i>	3 526	3 246	3 559	4 216	4 708
<i>o/w liability on gov. and NPISH final consumption</i>	51	53	56	63	69
<i>o/w liability on intermediate consumption</i>	344	347	381	426	475
<i>o/w liability on GFCF</i>	593	476	576	680	725
<i>o/w net adjustments</i>	-	-	-	-	-
VAT revenue (BAM m)	4 022	3 738	4 430	5 122	5 588
VAT compliance gap (BAM m)	491	385	142	264	390
VAT compliance gap (percent of VTTL)	10.9%	9.3%	3.1%	4.9%	6.5%
<i>EU average VAT compliance gap (percent of VTTL)</i>	11.1%	9.9%	7.2%	7.9%	9.5%
VAT compliance gap change since 2019					-4.4pp

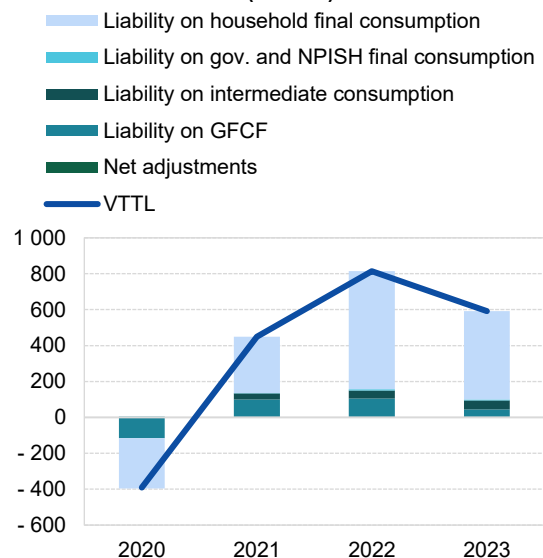
Source: own elaboration. Download underlying data [here](#). Note: Rounded changes may not equal the change between rounded values.

Figure 137. BA – VTTL, VAT revenue, and VAT compliance gap

VTTL, VAT revenue, and VAT compliance gap (BAM m, %)



Decomposition of VTTL annual change (BAM m)

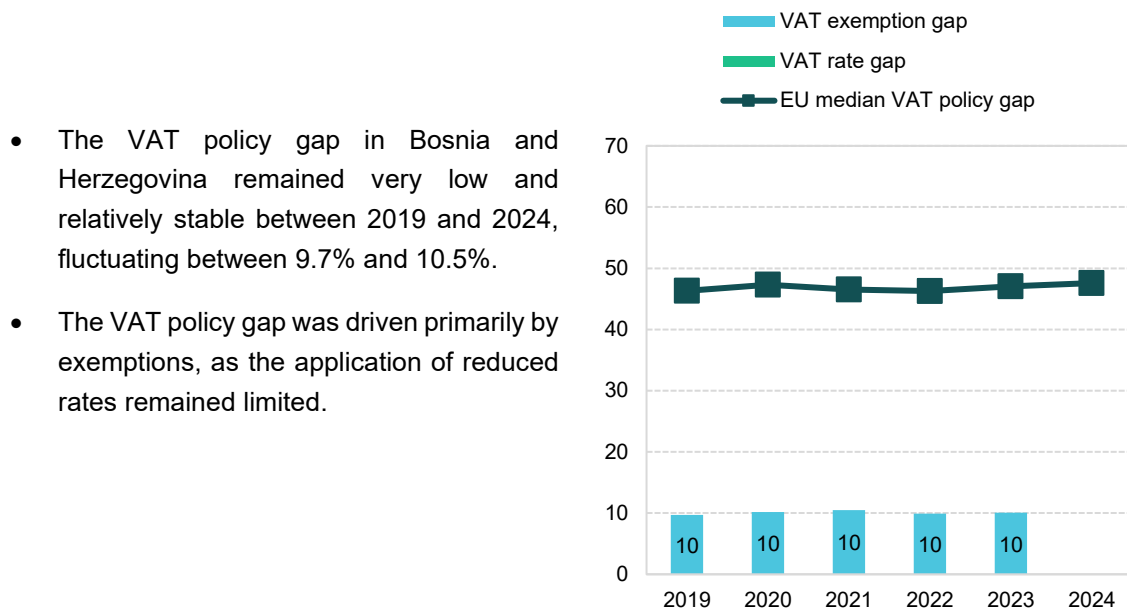


Source: own elaboration. Download underlying data [here](#).

⁶⁹ estimates are unreliable due to lacking national SUT. The estimates are based on the latest data available at the cut-off date for data collection (15/07/2025). As datasets are regularly revised, future editions will reassess and update the estimates accordingly.

BA: VAT policy gap (2019-2023)

Figure 138. BA – VAT policy gap (%)



Source: own elaboration. Download underlying data [here](#).

Table 178. BA – VAT policy gap decomposition

	2019	2020	2021	2022	2023
VAT policy gap (BAM m)	486 170	466 647	534 960	593 905	669 165
VAT exemption gap (BAM m)	485 976	466 522	534 807	593 706	668 957
VAT rate gap (BAM m)	194	126	152	199	208
C-efficiency (%)	88.6	87.9	96.1	94.7	92.2
VAT policy gap (%)	9.7	10.2	10.5	9.9	10.1
EU median policy gap (%)	46.1	47.1	46.1	46.0	46.4

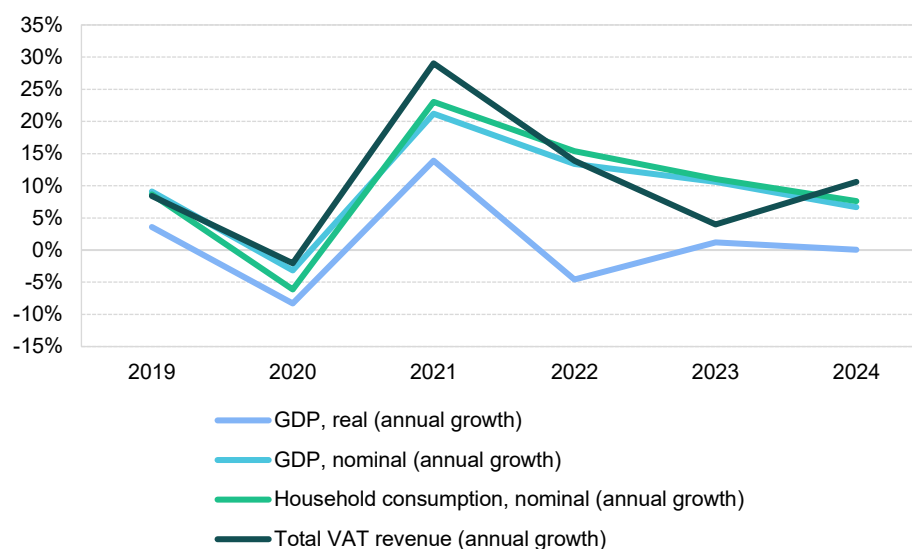
Source: own elaboration. Download underlying data [here](#).

Moldova

VAT revenues in Moldova grew by 4.0% in 2023, a slower pace in comparison with the post-pandemic peak of 29.0% in 2021 and the 13.9% growth recorded in 2022. In 2023, Moldova reduced the VAT rate for hotels and restaurants from 12% to 8%. Since these changes were introduced only at the end of the year, their direct impact on the tax base was likely limited. At the same time, the country advanced its digital fiscalisation by introducing compulsory e-invoicing for B2G transactions with plans for broader expansion. As a result, VAT revenue developments in 2023 were driven more by consumption patterns than by legislative measures.

In recent years, Moldova has been an example of a country constantly confronting a high degree of vulnerability to persistent external shocks. Since 2020, the country has been dealing with a range of compounding pressure: the COVID-19 pandemic combined with severe droughts, rising inflation and other spillover effects of Russia's war of aggression against Ukraine. While a strong post-pandemic rebound saw real GDP surge to nearly 14%, driven primarily by a sharp increase in domestic demand and household consumption, this recovery turned out to be relatively short-lived. The subsequent energy crisis, coupled with persistent geopolitical tensions, has restrained growth and increased uncertainty, posing challenges for overall economic activity and both domestic and foreign investments. As Moldova is integrated in Europe's transnational linkage structures, with a ratio of total trade to GDP at 94% in 2023, slow recovery in the EU posed a further limiting factor.

Figure 139. MD – VAT compliance gap, VAT revenues, GDP growth and household final consumption



Source: own elaboration based on National Bureau of Statistics of the Republic of Moldova.

Real GDP growth in Moldova in 2023 stood at 1.2%, a significant increase of 5.8pp compared to 2022, which could have contributed to the **decrease in the VAT compliance gap**. While household final consumption growth in real terms in 2021 was relatively strong at 17.3%, it contracted by 4.8% in 2022 and again by 1.7% in 2023. Furthermore, government consumption real growth fell from 10.7% in 2022 to -4.0% in 2023. Additionally, real values of GFCF stagnated in 2023 after a significant drop to -10.5% in 2022.

While measures reported in real values capture the actual change in economic activity by excluding inflation effects, nominal growth rates more directly reflect changes in the VAT base and potential VAT

revenues. Accordingly, nominal final consumption expenditure growth slowed from 15.7% in 2022 to 12.0% in 2023. In particular, growth of nominal household final consumption of food and non-alcoholic beverages fell sharply (-9.2pp), which may have further contributed to an **increase in the VAT compliance gap**.

Inflation dropped to 13.4% in 2023 from a 28.7% peak in 2022; this trend continued into 2024. The main drivers of inflation were food prices, particularly vegetables, dairy products and certain types of meat, as well as energy costs, including electricity, gas and heating. While the rapid price increases of 2022 eventually eased, some categories, such as fresh fruits, poultry and transport services – especially air travel – remained relatively high. Non-food goods, including clothing and household appliances, experienced more moderate price increases, reflecting greater stability in these sectors. Overall, the inflationary pressures were largely influenced by global supply chain disruptions, energy market volatility and regional geopolitical factors, with signs of gradual stabilization emerging in 2024.

In the context of the VAT compliance gap, it is worth noting that recreational services, restaurant and accommodation services were one of the fastest-growing categories in average monthly nominal consumption expenditure per capita. Additionally, the growth was significantly faster than in 2022, indicating an **increase in the VAT compliance gap**. On the other hand, the overall demand for tourism, as measured by overnight stays in establishments of collective touristic reception, grew only moderately to 5.1% in 2023, compared to the very significant 76.4% increase from 2022. This last development may be interpreted as a force influencing the **decrease in the VAT compliance gap**.

On the supply side of the economy, sectors were unevenly impacted. Importantly, services grew faster in value-added terms than other parts of the economy in 2023. After a significant rebound in 2021, value-added growth in the industry slowed down due to supply chain disruptions and high energy costs. These factors resulted in a 3.1pp increase in the share of services. Therefore, the overall impact of Moldova's shifting sectoral structure appears likely to have **increased the VAT compliance gap**, as the risk of non-compliance tends to be higher in the services sector.

Table 179. MD – Factors affecting VAT compliance gap (2022-2023)

Variable	2023	Difference (2023 vs 2022)	Expected impact on 2023 VAT compliance gap
GDP growth, real	1.2%	5.8pp	Decrease
Final consumption expenditure growth, nominal	12.0%	-3.7pp	Increase
Household final consumption of food and non-alcoholic beverages growth, nominal	10.5%	-9.2pp	Increase
Services susceptible to non-compliance growth, nominal	47.9%	10.6pp	Increase
Services share in GDP	59.5%	3.1pp	Increase
Tourism (nights spent), growth	5.1%	-71.3pp	Decrease
Bankruptcy declarations, growth	n/a	n/a	n/a
Digital payments growth, nominal	n/a	n/a	n/a

Source: own elaboration based on National Bureau of Statistics of the Republic of Moldova.

Note: for a discussion of the expected effects of these indicators, please see pages 18 and 19 in section II.a.

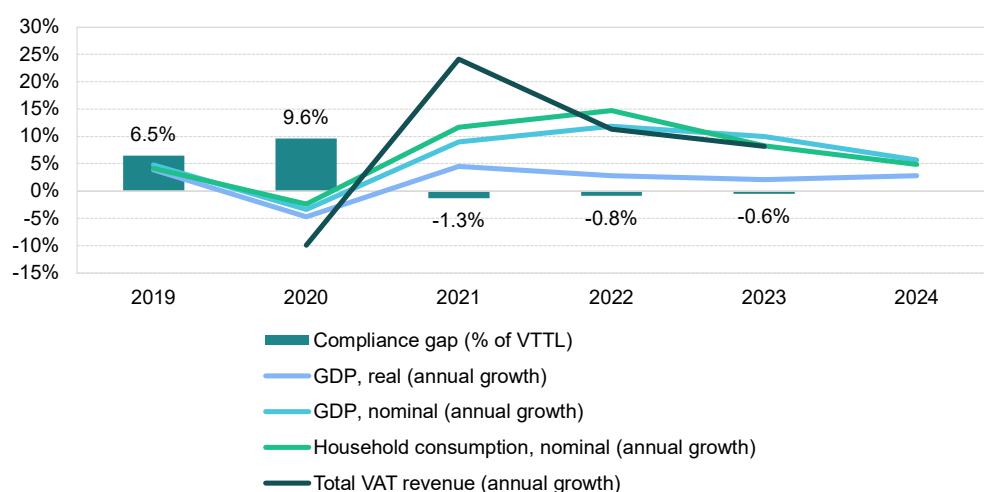
At this stage, estimates of the VTTL, VAT compliance, and VAT policy gaps could not be derived due to the unavailability of the SUT and other datasets that would allow for proxying the components of the VAT base. As the SUT are expected to become available in the future, these estimates will be derived in future studies. The Commission intends to continue close collaboration to improve data availability going forward.

North Macedonia

VAT revenues in North Macedonia grew by 8.3% in 2023, a slower pace than the post-pandemic value of 11.3% recorded in 2022. In 2023, North Macedonia expanded the reverse charge mechanism to B2B supplies from foreign entities and applied a 5% VAT rate to basic food products, publications, pellets and related heating equipment and thermal energy. A 10% rate applied to electricity during the first half of the year and to certain other food products. Additionally, special VAT bases were introduced for suppliers through auctions, the import of used vehicles and transfers of movable and immovable property in forced collection procedures. Clarifications were also made regarding VAT group liability. These policy and administrative measures were key drivers of VAT revenue in 2023.

The country experienced a moderate post-pandemic rebound, with real GDP growth peaking at 4.5% in 2021, supported by a surge in domestic demand and nominal household consumption. This followed a sharp contraction down to around -4.7% in 2020 due to the COVID-19 pandemic. In recent years, North Macedonia successfully strengthened its macroeconomic stability, maintaining a steady real GDP growth rate of around 2% despite persistent structural challenges, including geopolitical tensions and energy price volatility. As North Macedonia is highly integrated into European trade networks – with the ratio of total trade to GDP reaching 149% in 2023 – slow recovery in the EU also constrained economic growth.

Figure 140. MK – VAT compliance gap, VAT revenues, GDP growth and household final consumption



Sources: own elaboration, Eurostat.

Real GDP growth in North Macedonia stood at 2.1% in 2023, a slight decline of 0.7pp compared to 2022, which could have acted as a force contributed to an **increase in the VAT compliance gap**. Household final consumption growth in real terms, which had exhibited a robust increase up to 8.5% in 2021, slowed down to 5.5% in 2022 and further to 1.1% in 2023. Government consumption growth also improved slightly, moving from -4.3% in 2022 to -1.8% in 2023. Gross fixed capital formation (GFCF) rose by 5.7% in real terms in 2023, compared to 3.7% in 2022.

While measures reported in real values capture the actual change in economic activity by excluding inflation effects, nominal growth rates more directly reflect changes in the VAT base and potential VAT revenues. Accordingly, nominal final consumption expenditure growth slowed from 13.2% in 2022 to 8.5% in 2023. In particular, growth of nominal household final consumption of food and non-alcoholic

beverages fell sharply (-5.6pp), which may have further contributed to an **increase in the VAT compliance gap**.

Inflation fell to 14.0% in 2023, down from 9.0% in 2022. This downward trend continued into 2024. The main drivers of inflation were housing, water, electricity, gas and other fuels, as well as food, transport and services such as restaurants and hotels. Inflationary pressures were observed across most components of household consumption, except for communications, education and clothing and footwear. In the context of VAT compliance, recreational services, restaurants and accommodation were among the fastest-growing categories of nominal household consumption in 2023 and at much faster growth than in 2022. This suggests an **increase in the VAT compliance gap**. However, the year-over-year change in demand for tourism, measured by nights spent in tourist accommodations, grew at a much slower pace in 2023 (14.0%) compared to 2022 (37.6%). These last two developments can be regarded as factors driving conditions conducive to the **decrease in the VAT compliance gap**.

In nominal terms, GFCF increased by 13.3% in 2023. However, when adjusted for inflation, this points to a decline in real investment activity in fixed assets such as infrastructure, machinery and buildings.

On the supply side, sectoral performance varied. Services experienced a decline in nominal value-added growth relative to other sectors in 2023, resulting in a 1.0pp increase in the share of services. Overall, this shift in the sectoral structure of North Macedonia's economy has likely **increased the VAT compliance gap**, as the risk of non-compliance tends to be higher in the services sector.

Table 180. MK – Factors affecting VAT compliance gap (2022-2023)

Variable	2023	Difference (2023 vs 2022)	Expected impact on 2023 VAT compliance gap
GDP growth, real	2.1%	-0.7pp	Increase
Final consumption expenditure growth, nominal	8.5%	-4.7pp	Increase
Household final consumption of food and non-alcoholic beverages growth, nominal	9.5%	-5.6pp	Increase
Services susceptible to non-compliance growth, nominal	26.3%	13.1pp	Increase
Services share in GDP	57.3%	1.0pp	Increase
Tourism (nights spent), growth	14.0%	-23.6pp	Decrease
Bankruptcy declarations, growth	25.0%	15.7pp	Increase
Digital payments growth, nominal	n/a	n/a	n/a

Source: own elaboration based on Eurostat, State Statistical Office Republic of North Macedonia.

Note: for a discussion of the expected effects of these indicators, please see pages 18 and 19 in section II.a.

Other factors also influenced the VAT compliance gap in North Macedonia. Unfavourable economic conditions contributed to a 25.0% increase in bankruptcies in 2023, indicating to a potential **increase in the VAT compliance gap**. The impact varied across sectors, with accommodation and food services recording the highest rates. In 2024, the trend worsened further, with bankruptcies rising by another 25.0% across most major sectors.



MK: VAT compliance gap (2019-2024)

- After a decline of over 10.0pp in 2021, the estimated VAT compliance gap remained negative between 2021 and 2023⁷⁰.
- Negative estimates for the VAT compliance gap over several years indicate inaccuracies in VTTL modelling, in the case of North Macedonia likely resulting from insufficiently detailed data on the structure of household final consumption, which is available only for 12 COICOP sections, compared to the 64 CPA divisions available for the majority of countries covered in this report. Another limiting factor was that the most recent SUTs refer to 2020, thus proving somewhat outdated.

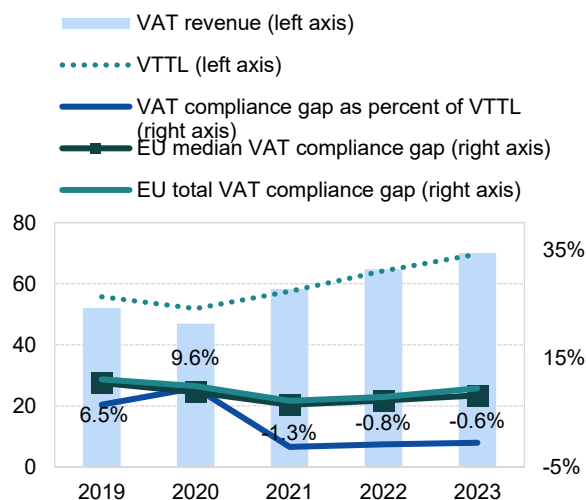
Table 181. MK – VTTL, VAT revenue, and VAT compliance gap

	2019	2020	2021	2022	2023
VTTL (MKD m)	55 672	51 855	57 445	64 226	69 665
<i>o/w liability on household final consumption</i>	<i>38 474</i>	<i>35 859</i>	<i>38 672</i>	<i>43 679</i>	<i>48 807</i>
<i>o/w liability on gov. and NPISH final consumption</i>	<i>408</i>	<i>451</i>	<i>495</i>	<i>513</i>	<i>567</i>
<i>o/w liability on intermediate consumption</i>	<i>8 570</i>	<i>7 999</i>	<i>9 699</i>	<i>10 407</i>	<i>10 861</i>
<i>o/w liability on GFCF</i>	<i>6 586</i>	<i>6 264</i>	<i>7 449</i>	<i>8 276</i>	<i>8 065</i>
<i>o/w net adjustments</i>	<i>1 633</i>	<i>1 282</i>	<i>1 129</i>	<i>1 350</i>	<i>1 367</i>
VAT revenue (MKD m)	52 059	46 893	58 194	64 764	70 050
VAT compliance gap (MKD m)	3 613	4 962	-749	-538	-384
VAT compliance gap (percent of VTTL)	6.5%	9.6%	-1.3%	-0.8%	-0.6%
<i>EU average VAT compliance gap (percent of VTTL)</i>	<i>11.1%</i>	<i>9.9%</i>	<i>7.2%</i>	<i>7.9%</i>	<i>9.5%</i>
VAT compliance gap change since 2019					-7.0pp

Source: own elaboration. Download underlying data [here](#). Note: Rounded changes may not equal the change between rounded values.

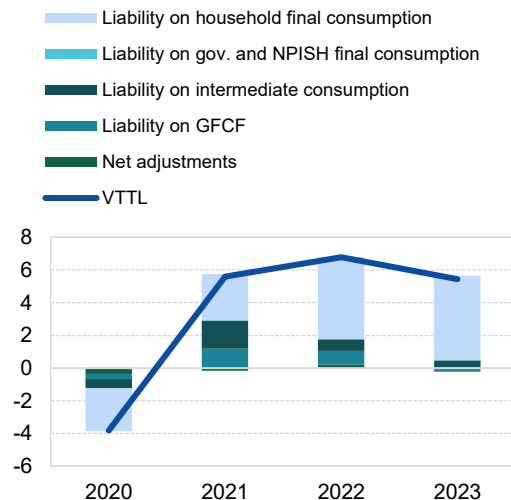
Figure 141. MK – VTTL, VAT revenue, and VAT compliance gap

VTTL, VAT revenue, and VAT compliance gap (MKD bn, %)



Source: own elaboration. Download underlying data [here](#).

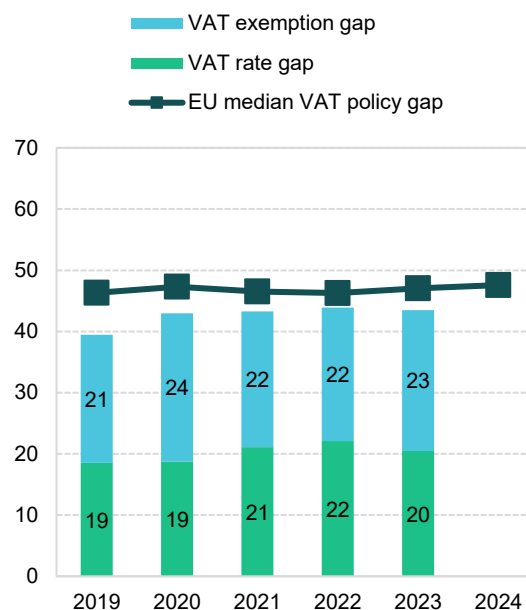
Decomposition of VTTL annual change (MKD bn)



⁷⁰ ⚠: estimates for the VAT compliance gap fall outside plausible ranges as explained in Box 2 (i.e., negative for several consecutive years). The estimates are based on the latest data available at the cut-off date for data collection (15/07/2025). As datasets are regularly revised, future editions will reassess and update the estimates accordingly.

MK: VAT policy gap (2019-2023)

Figure 142. MK – VAT policy gap (%)



Source: own elaboration. Download underlying data [here](#).

Table 182. MK – VAT policy gap decomposition

	2019	2020	2021	2022	2023
VAT policy gap (MKD m)	36 297	39 057	43 806	50 280	53 625
VAT exemption gap (MKD m)	19 249	21 988	22 444	24 954	28 359
VAT rate gap (MKD m)	17 047	17 068	21 361	25 325	25 266
C-efficiency (%)	56.5	50.7	57.5	56.4	56.2
VAT policy gap (%)	39.5	43.0	43.3	43.9	43.5
EU median policy gap (%)	46.1	47.1	46.1	46.0	46.4

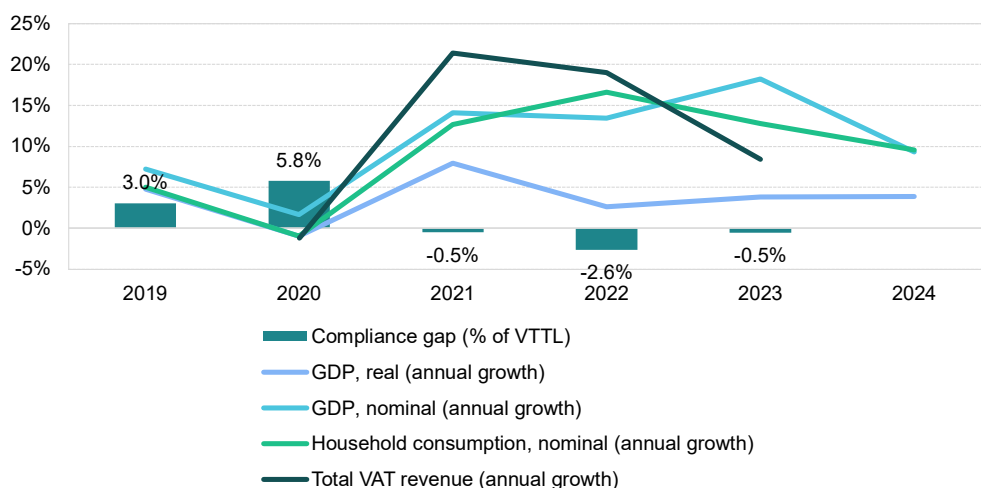
Source: own elaboration. Download underlying data [here](#).

Serbia

VAT revenues in Serbia grew by 8.4% in 2023, a slowdown from the 2022 post-pandemic value of 19.0%. In 2023, Serbia revised the valuation method for transactions between related parties. Mandatory B2B e-invoicing was introduced beginning in January 2023, harmonizing VAT procedures with fiscalisation and e-invoicing requirements. Additionally, at the end of 2023, Serbia adopted amendments to the electronic invoicing law scheduled to take effect in 2024. These policy and administrative changes were key drivers of VAT revenue in 2023.

Serbia experienced a strong post-pandemic rebound, with real GDP growth peaking at nearly 8% in 2021, supported by a surge in domestic demand and nominal household consumption. This followed a minor contraction to approximately -0.1% in 2020 due to the COVID-19 pandemic. In recent years, Serbia has maintained a steady real GDP growth rate of around 3% to 4%, despite ongoing structural challenges, including geopolitical tensions and energy price volatility. As Serbia is highly integrated into European trade networks – with the ratio of total trade to GDP at 115% in 2023 – a slow recovery in the EU also impacted economic growth. However, the acceleration of real GDP growth in 2023 (1.2pp) may be seen as a measure of economic activity contributing to a **decrease in the VAT compliance gap**. While measures reported in real values capture the actual change in economic activity by excluding inflation effects, nominal growth rates more directly reflect changes in the VAT base and potential VAT revenues. Accordingly, nominal final consumption expenditure growth slowed from 15.2% in 2022 to 12.1% in 2023. In particular, growth of nominal household final consumption of food and non-alcoholic beverages fell slightly (-7.4pp), which may have further contributed to an **increase in the VAT compliance gap**.

Figure 143. RS – VAT compliance gap, VAT revenues, GDP growth and household final consumption



Sources: own elaboration, Eurostat.

Inflation in Serbia rose to 12.1% in 2023, up from 11.7% in 2022; this trend continued into 2024. The main drivers of inflation were housing, water, electricity, gas and other fuels, as well as furnishings, food, transport and services such as restaurants and hotels. Inflationary pressures were observed across most components of household consumption, except for communications and education. In the context of the VAT compliance gap, recreational services, restaurants and accommodation were among the fastest-growing categories of nominal household consumption. However, their growth primarily mainly impacted the change in 2022 price levels. Similarly, tourism demand, measured by nights spent in tourist accommodations, grew at a much slower rate in 2023 (1.6%) compared to 2022 (50.1%). These last

two developments can be regarded as factors that drive conditions conducive to a **decrease in the VAT compliance gap**.

GFCF, reflecting investment in infrastructure, machinery and buildings, increased by 15.5% in nominal terms in 2023. Adjusted for inflation, this suggests a moderate increase in real investment activity.

On the supply side, sectoral performance varied. Services grew faster in value-added terms than other sectors in 2023. By contrast, industry experienced slower growth due to supply chain disruptions and high energy costs after a strong rebound in 2021 and 2022. These developments led to a 3.5pp increase in the share of services in the overall economy. Overall, this shift in the sectoral structure of Serbia's economy likely has **increased the VAT compliance gap**, as non-compliance risks tend to be higher in the services sector.

Table 183. RS – Factors affecting VAT compliance gap (2022-2023)

Variable	2023	Difference (2023 vs 2022)	Expected impact on 2023 VAT compliance gap
GDP growth, real	3.8%	1.2pp	Decrease
Final consumption expenditure growth, nominal	12.1%	-3.1pp	Increase
Household final consumption of food and non-alcoholic beverages growth, nominal	13.8%	-7.4pp	Increase
Services susceptible to non-compliance growth, nominal	13.7%	-40.3pp	Decrease
Services share in GDP	67.5%	3.5pp	Increase
Tourism (nights spent), growth	1.6%	-48.5pp	Decrease
Bankruptcy declarations, growth	n/a	n/a	n/a
Digital payments growth, nominal	n/a	n/a	n/a

Source: own elaboration based on Eurostat, Statistical Office of the Republic of Serbia.

Note: for a discussion of the expected effects of these indicators, please see pages 18 and 19 in section II.a.



RS: VAT compliance gap (2019-2023)

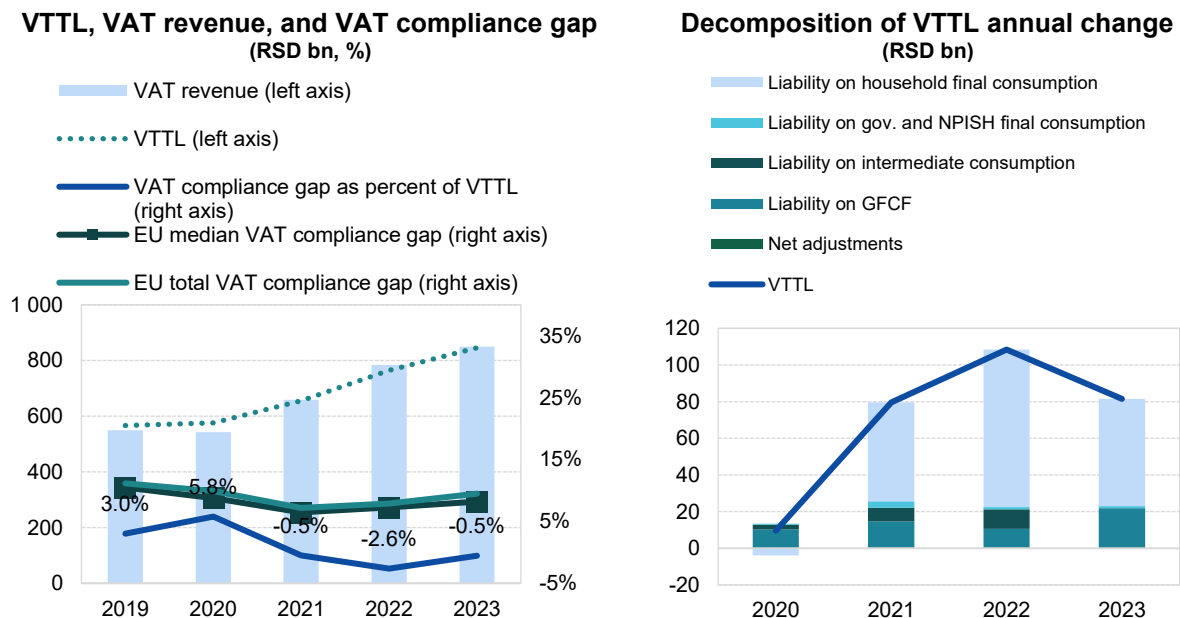
- After a decline of over 6pp in 2021, the estimated VAT compliance gap was negative between 2021 and 2023⁷¹.
- Negative estimates of the VAT compliance gap indicate inaccuracies in VTTL modelling.

Table 184. RS – VTTL, VAT revenue, and VAT compliance gap

	2019	2020	2021	2022	2023
VTTL (RSD m)	566 556	576 131	655 745	764 158	845 656
<i>o/w liability on household final consumption</i>	408 788	404 920	458 908	544 808	603 226
<i>o/w liability on gov. and NPISH final consumption</i>	6 919	7 425	10 983	12 186	13 442
<i>o/w liability on intermediate consumption</i>	74 307	76 993	84 477	95 092	95 120
<i>o/w liability on GFCF</i>	73 962	84 139	98 184	108 460	130 257
<i>o/w net adjustments</i>	2 580	2 654	3 193	3 611	3 611
VAT revenue (RSD m)	549 376	542 849	658 988	784 249	850 243
VAT compliance gap (RSD m)	17 180	33 282	-3 243	-20 091	-4 587
VAT compliance gap (percent of VTTL)	3.0%	5.8%	-0.5%	-2.6%	-0.5%
<i>EU average VAT compliance gap (percent of VTTL)</i>	11.1%	9.9%	7.2%	7.9%	9.5%
VAT compliance gap change since 2019					-3.6pp

Source: own elaboration. Download underlying data [here](#). Note: Rounded changes may not equal the change between rounded values.

Figure 144. RS – VTTL, VAT revenue, and VAT compliance gap



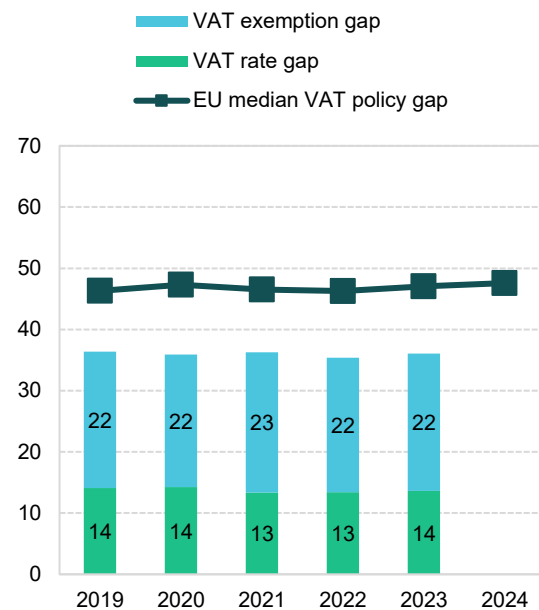
Source: own elaboration. Download underlying data [here](#).

⁷¹ ⚠: estimates for the VAT compliance gap fall outside plausible ranges as explained in Box 2 (i.e., negative for several consecutive years). The estimates are based on the latest data available at the cut-off date for data collection (15/07/2025). As datasets are regularly revised, future editions will reassess and update the estimates accordingly.

RS: VAT policy gap (2019-2023)

Figure 145. RS – VAT policy gap (%)

- The average VAT policy gap in Serbia between 2019 and 2023 was 36%.
- The gap was very stable, fluctuating between 35.4% and 36.4% of notional revenue.
- Forgone revenues were primarily caused by exemptions, which accounted for 62% of the VAT policy gap over the 2019-2023 period.



Source: own elaboration. Download underlying data [here](#).

Table 185. RS – VAT policy gap decomposition

	2019	2020	2021	2022	2023
VAT policy gap (RSD m)	323 651	322 853	373 218	418 714	476 993
VAT exemption gap (RSD m)	198 270	194 802	235 620	260 329	296 992
VAT rate gap (RSD m)	125 381	128 051	137 597	158 386	180 001
C-efficiency (%)	64.1	62.7	68.9	70.8	68.1
VAT policy gap (%)	36.4	35.9	36.3	35.4	36.1
EU median policy gap (%)	46.1	47.1	46.1	46.0	46.4

Source: own elaboration. Download underlying data [here](#).

ANNEX G: Visualisation and dissemination of results

This section consolidates observations and complements them with updated benchmarks and statistical evidence. Evidence confirms that the VAT gap study campaign reached its intended professional audience, as reflected by the predominance of desktop access. At the same time, user behaviour showed limited scrolling depth and modest referral traffic from social media.

Among social platforms, LinkedIn proved to be the most effective institutional channel, while high-level amplification through Commissioners' accounts significantly extended reach, although this did not translate into higher levels of interaction. The analysis also highlighted the decisive role of publication timing: the October 2023 release benefited from substantially higher visibility compared to the December 2024 edition. The Commission's *#ECForecast* campaign provided a model for structured, multi-phase dissemination, offering a relevant benchmark for future VAT gap campaigns. Against this background, the following sections examine international benchmarks in the digital presentation of economic reports, assess the performance of the VAT gap-related publications of the Publications Office and review best practices in launch formats. Together, these elements provide a consolidated evidence base for recommendations on website design and campaign planning.

International benchmarks on web presentation of reports

International organisations' practices in presenting complex analytical reports online were reviewed to contextualise the Commission's approach. Emphasis was placed on web front-ends that combine accessibility, clarity and multimedia elements to support engagement with technical content. Examples include [UNCTAD's *Trade and Development Report 2024*](#), [the OECD's *International Migration Outlook 2024*](#), [the UN Sustainable Development Solutions Network's *Europe Sustainable Development Report 2024*](#) and [the ILOSTAT platform](#). Each illustrates specific practices in structuring online content, ranging from modular downloads and interactive charts to summary dashboards and advanced search functions. These cases provide useful reference points for strengthening the digital dissemination of the VAT gap study.

To build on last year's review of dissemination practices, the present analysis considers several web front-ends since released by international organisations. The purpose is to illustrate how leading institutions present complex analytical material online, combining accessibility, clarity and an effective use of multimedia. The selected examples – from UNCTAD, the OECD, the UN Sustainable Development Solutions Network (SDSN) and ILOSTAT – highlight a variety of approaches that may inform the continued development of Commission outputs.

Table 186. Review of web front-ends used by major publishing institutions

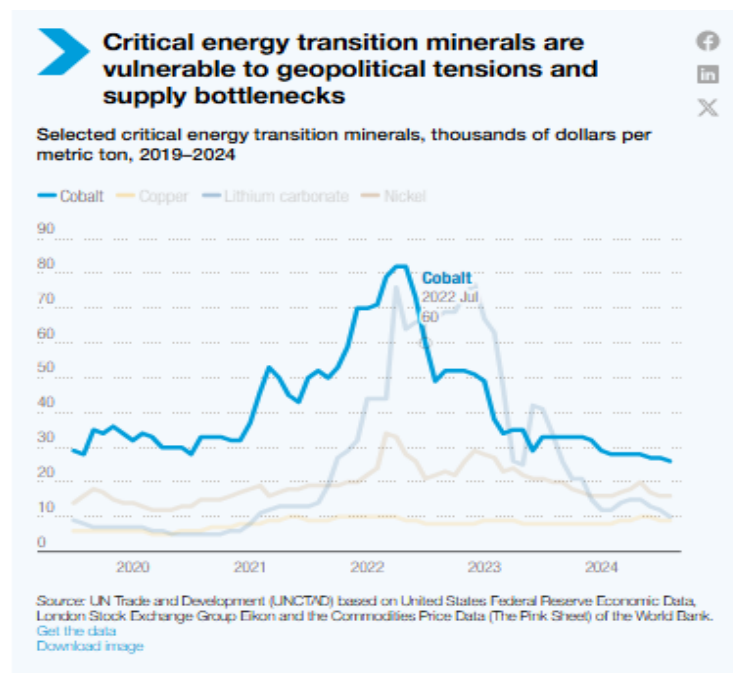
	Publishing institution					
	UNCTAD	ILOSTAT	WORLD BANK	IMF	OECD	SDSN
Executive summary /general description of the publication	yes	yes	yes	yes	yes	yes
Highlights of the most important findings	yes	sometimes	yes	yes	yes	yes

Publishing institution						
	UNCTAD	ILOSTAT	WORLD BANK	IMF	OECD	SDSN
Sections devoted to chapters	yes	no	yes	no	yes	yes
Description of the methodology	sometimes	no	sometimes	no	yes	yes
Simple static graphs and tables	yes	yes	yes	yes	yes	yes
Interactive graphs and tables	yes	sometimes	sometimes	no	no	yes
Data filtering options	yes	sometimes	yes	no	no	yes
Options for downloading data	yes	yes	yes	yes	yes	yes
Thematic sections/data grouping	yes	yes	yes	no	yes	yes
Links to source data	yes	yes	yes	yes	yes	yes
Links to the report in pdf	yes	yes	yes	yes	yes	yes
Various forms of communicating report	yes	yes	yes	yes	yes	no
Video/animation	yes	yes	yes	yes	no	no
Podcast	yes	no	no	no	no	no
Infographic	yes	no	sometimes	yes	yes	no

Source: own elaboration.

The [UNCTAD Trade and Development Report 2024](#) provides a clear example. The presentation of the report on the website is visually structured, using sliders and small images of chapter covers, each linking directly to the corresponding content. Users can download the full report in PDF format or select individual chapters, which facilitates targeted access to specific material. The site features an executive summary, highlights and sections dedicated to individual chapters, with expandable tabs containing key analysis, charts and recommendations. Data visualisations extracted from the report are interactive, enabling users to highlight selected elements. The charts are formatted as infographics with explanatory notes and social media sharing buttons, which can contribute to extending outreach. Communication was further enhanced across multiple channels: a short animation with key findings, a video message by the Secretary-General, a recorded press conference and a podcast – a format still rarely employed by international organisations.

Figure 146. Example of interactive data visualisation (UNCTAD, Trade and Development Report)



Source: <https://unctad.org/publication/trade-and-development-report-2024>.

[The OECD International Migration Outlook 2024](#) combines a downloadable PDF with a web-based presentation. While charts and tables are displayed in a conventional, non-interactive form, the OECD has adopted the practice of providing a leading infographic to encapsulate the report's main findings. This visual synthesis provides users with a comprehensive overview of the data and charts in a unified format.

Figure 147. Infographic illustrating main findings (OECD, International Migration Outlook 2024)

Disclaimers

Foreword

Editorial

Executive summary

Key facts and figures (Infographic)

1. Recent developments in international migration movements and labour market inclusion of immigrants

2. Recent developments in migration policy

3. Recent developments in migrant integration policy

4. Migrant entrepreneurship in OECD countries

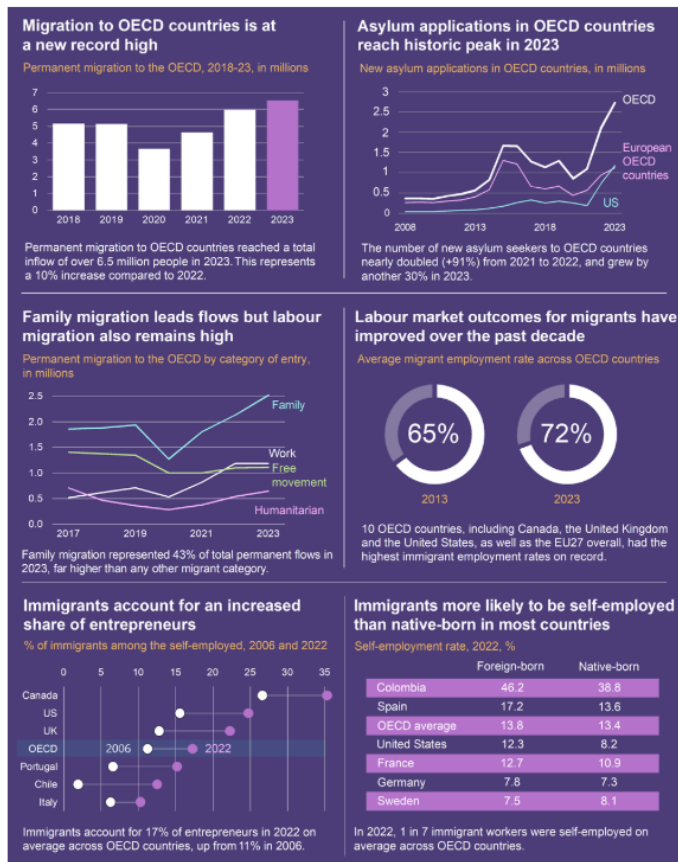
5. Country notes: Recent changes in migration movements and policies

Annex A. Statistical annex

List of the members of the OECD Expert Group on Migration

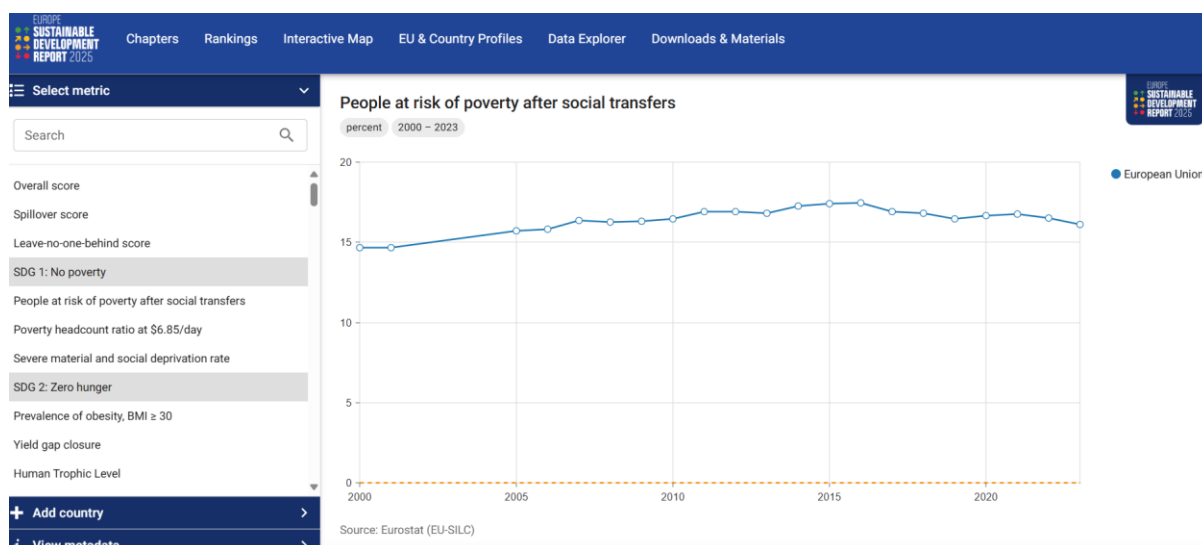
Composition of OECD International Migration

Key facts and figures (Infographic)



Source: https://www.oecd.org/en/publications/international-migration-outlook-2024_50b0353e-en/full-report/component-4.html#introduction-d5e219.

The [Europe Sustainable Development Report 2024](#), prepared by the SDSN, offers another example of user-friendly design. The dedicated subpage provides navigation through thematic tabs leading to specific report sections. Data is extracted and presented in grouped formats, such as country rankings, an interactive map and a data explorer. An attractive feature is the possibility for users to select different levels of detail according to their needs.

Figure 148. Example of dedicated page (Europe Sustainable Development Report 2024, SDSN)

Source: <https://eu-dashboards.sdginde.org/explorer?metric=people-at-risk-of-poverty-after-social-transfers>.

Finally, while not linked to a specific report, [the ILOSTAT platform](#) illustrates the benefits of an advanced search engine. Its intuitive design enables users to locate relevant datasets efficiently, offering a model of accessible navigation and targeted content retrieval.

Figure 149. Example of advanced search interface (ILOSTAT platform)

The collage illustrates six key features of the ILOSTAT platform:

- Data explorer:** A screenshot showing a search interface with filters for 'Region' and 'Indicator', and a table of results. Below it, the text reads: 'Quickly find, filter, pivot, and download ILOSTAT data in various formats'.
- Country profiles:** A screenshot showing a table of indicators for a selected country. Below it, the text reads: 'View the latest key indicators in ILOSTAT by country'.
- Bulk download facility:** A screenshot showing a table of indicators with download links. Below it, the text reads: 'ILOSTAT data in zipped CSV format'.
- Excel add-in:** A screenshot showing the ILOSTAT add-in interface within an Excel spreadsheet. Below it, the text reads: 'Download ILOSTAT data directly from Excel (click to install)'.
- R ILOSTAT:** A screenshot showing the R ILOSTAT package documentation. Below it, the text reads: 'Use our R package to search, download and manipulate ILOSTAT data'.
- Web service:** A screenshot showing the ILOSTAT web service interface. Below it, the text reads: 'Fast and direct access to ILOSTAT data'.

Source: <https://ilostat.ilo.org/data/>.

In conclusion, the examples above illustrate a clear trend towards greater interactivity, modular access to content and the use of multimedia to reinforce visibility. Good practices include offering both full and partial downloads, providing concise highlights and executive summaries, enabling interactive charts and data explorers and complementing reports with videos or podcasts. Such approaches demonstrate

how complex analytical material can be made more accessible to diverse audiences, while strengthening dissemination and impact.

International benchmarks on launch practices

This subsection reviews how leading international organisations design the launch of their flagship economic reports. The objective is to identify the formats and elements most commonly used to support and improve visibility, accessibility and outreach. The figure below summarises recent examples from the IMF, OECD, World Bank, the ECB and the European Commission, highlighting both the launch format and the standard components of a starter package.

International organisations apply structured and multi-channel formats when releasing their flagship economic reports. The IMF presents the *World Economic Outlook* through a press briefing, complemented by a blog entry from the Chief Economist and a dedicated hub with charts and data. The OECD issues a media advisory under embargo, followed by a live webcast and simultaneous publication of the report, executive summary, slide deck and press kit, together with ready-made social media cards. The World Bank introduces the *World Development Report* via a dedicated online landing page, which consolidates the full report, overview chapter, blogs, a data explorer and downloadable graphics. The European Central Bank consistently organises live press briefings streamed on its website, and subsequently provides on-demand recordings, visual statements, broadcast-quality video clips and photographs for media use. The European Commission, in turn, accompanies the release of the VAT gap study with publication on the EU publications portal, a press release, a newsletter announcement and dedicated infographics.

Across these institutions, a common starter package for report publication may be observed. It generally consists of four components: a media advisory with embargoed access for journalists; a launch event in the form of a press briefing or webcast streamed across institutional channels; a centralised online hub combining the full report, summary versions, data and visual material; and a social media toolkit with shareable infographics, short videos and pre-formatted content. These elements provide a consistent and recognisable model that supports visibility, accessibility and outreach of analytical publications.

Table 187. International benchmarks on launch practices

Institution	Launch format	Starter package elements	Reference
IMF	Press briefing in Washington; webcast; blog by Chief Economist	Full report (PDF/HTML), press release, blog post, data hub with downloadable charts and tables	IMF – World Economic Outlook, July 2024
OECD	Media advisory under embargo; live webcast; hybrid press conference	Report PDF, executive summary, slide deck, press kit, webcast recording, social media cards	OECD – Economic Outlook, June 2025
World Bank	Launch event (in person or virtual); online presentation	Dedicated landing page, full report, overview chapter, blogs, data explorer, graphics for download	World Bank – World Development Report 2024
ECB	Live webcast press briefing; media press room	Webcast (live and on demand), HD video clips, photographs, visual statement	ECB – Press conference and webcast archive

Source: own elaboration.

The review of international benchmarks confirms that the VAT gap study is already aligned with good practices in terms of modular access, allowing users to download the full publication as well as individual components such as the executive summary and country reports. Building on this foundation, further development should focus on expanding the range of audiovisual formats, notably infographics, explainer videos and potentially podcasts, in order to increase accessibility for non-professional audiences. At the same time, greater emphasis on publication timing and the preparation of a dedicated launch event could enhance overall visibility and ensure that the VAT gap study attracts sustained attention comparable to other flagship economic publications.

Dissemination channels and performance

VAT gap study publications are disseminated through two main channels: the **Publications Office portal** (op.europa.eu), which serves as the official archive for EU publications, and the **VAT gap website** (taxation-customs.ec.europa.eu), which presents the report in a thematic and user-oriented format. Analytics from these two sources provide complementary perspectives on how users accessed the material.

Since **December 18, 2024**, VAT gap results have been made available through a dedicated page on the Taxation and Customs website (https://taxation-customs.ec.europa.eu/taxation/vat/fight-against-vat-fraud/vat-gap_en). On March 27, 2025, the page was expanded to include the newly introduced country reports, consolidating its role as the single thematic hub for VAT gap content.

The Publications Office portal continues to serve as the official archive for EU publications, remaining the authoritative source for downloads and citations. Together, the two channels provide complementary perspectives: **Publications Office analytics** reflect the formal distribution of the VAT gap study, while **Taxation and Customs website analytics** capture user interaction and discoverability through search engines.

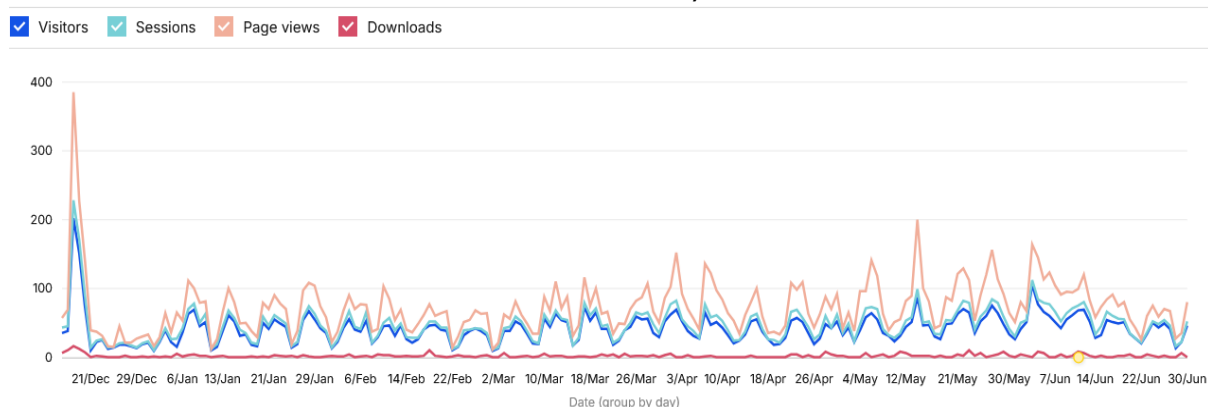
VAT gap study – 2024 edition

Between December 2024 and June 2025, the VAT gap page on the Taxation and Customs website attracted **5 827 unique visitors**, generating **9 146 sessions** and **13 896 page views**. A total of **359 downloads** were recorded during this period.

The strongest peak occurred on **18 December 2024**, the day of the launch of the main report. On that day alone, the page registered **202 unique visitors**, **228 sessions**, **385 page views** and **16 downloads**. This illustrates the immediate visibility generated by the release.

This initial surge of interest declined sharply within two days, after which activity stabilised at a lower level. From January 2025 onwards, traffic gradually increased again, reflecting steady search-driven discovery and renewed attention in spring.

Figure 150. VAT gap website – visitors, sessions, page views, downloads (18 December 2024 - 26 June 2025)



Source: Piwik PRO Analytics, Taxation and Customs VAT gap website.

Publications Office (downloads, page views and sessions)

A comparative analysis of Publications Office analytics confirms the decisive role of publication timing and coordinated promotion in determining the visibility of VAT gap studies. The main 2023 report, released in October, achieved 1 962 downloads, 3 705 page views and 3 141 sessions within three months. By contrast, the 2024 edition, published in December, recorded 1 411 downloads, 2 926 page views and 2 427 sessions, illustrating the reduced impact of dissemination during the year-end period.

Executive summaries consistently attracted lower attention, with 563 downloads in 2023 and only 147 in 2024. The 2024 infographic performed somewhat better, with 260 downloads, but remained modest compared with the main reports. The country reports introduced in March 2025 registered very limited engagement: downloads typically remained below 100 per country, with Romania (114), Poland (82) and Italy (55) among the highest performers. Sessions and page views per country report rarely exceeded 200 and 250, respectively.

Across two editions, access was overwhelmingly desktop-based (ranging between 81% and 95%), confirming the predominantly professional profile of the audience. There is also an early indication that graphical formats may attract relatively more attention than short text summaries: the 2024 infographic was downloaded almost twice as often as the 2023 factsheet (260 downloads versus 142) and considerably more than the 2024 executive summary (147 downloads).

Table 188. Comparative performance of 2023 and 2024 editions (three-month period)

Publication type	2023	2024
Main report	1 962 downloads / 3 705 page views / 3 141 sessions	1 411 downloads / 2 926 page views / 2 427 sessions
Executive summary (language versions combined)	591 downloads / 1319 page views / 1026 sessions	210 downloads / 376 page views / 336 sessions
Factsheet	142 downloads / 465 page views / 323 sessions	–
Infographic	–	260 downloads / 675 page views / 569 sessions

Publication type	2023	2024
Desktop share	81-96%	91%

Source: Piwik PRO Analytics, Publications Office; own elaboration.

Extended reporting data from Publications Office analytics up to June 2025 confirms the continued predominance of the main report. The infographic shows a clear upward trend compared with the initial three-month period. The executive summary, by contrast, remained less frequently consulted.

Table 189. Extended reporting of 2024 edition (six-month period)

Publication type	Downloads	Page views	Sessions
Main report	2 643	6 130	4 926
Infographic	483	1 381	1 121
Executive summary	359	708	601

Source: Piwik PRO Analytics, Publications Office (VAT gap 2024 report, 18/12/2024–26/06/2025).

These figures reinforce the emerging pattern that visual formats attract relatively higher engagement than text summaries. They also indicate that demand for the main report persists well beyond the initial launch window, suggesting that monitoring over a six-month period provides a more complete picture of user interest.

Country reports performance (March-June 2025)

The introduction of country reports in March 2025 provided a new analytical layer to the VAT gap study. Complementary data from the Publications Office and the Taxation and Customs website allow for a consolidated view of their early performance.

- **Publications Office analytics** confirm that downloads remained very limited, rarely exceeding 100 per country. Romania (114 downloads), Poland (82) and Italy (55) recorded the highest uptake, while most other reports attracted fewer than 50 downloads.
- **Taxation and Customs website analytics** provide a broader measure of interest. Country report pages generated several hundred visitors per country during the first three months, led by Romania (623), Poland (275) and Belgium (199). However, the conversion from visitors to downloads was consistently low, typically below 25%.

Importantly, the publication of country reports was not accompanied by a dedicated communication campaign. The absence of a coordinated promotion significantly limited their visibility and explains the discrepancy between online interest and actual downloads.

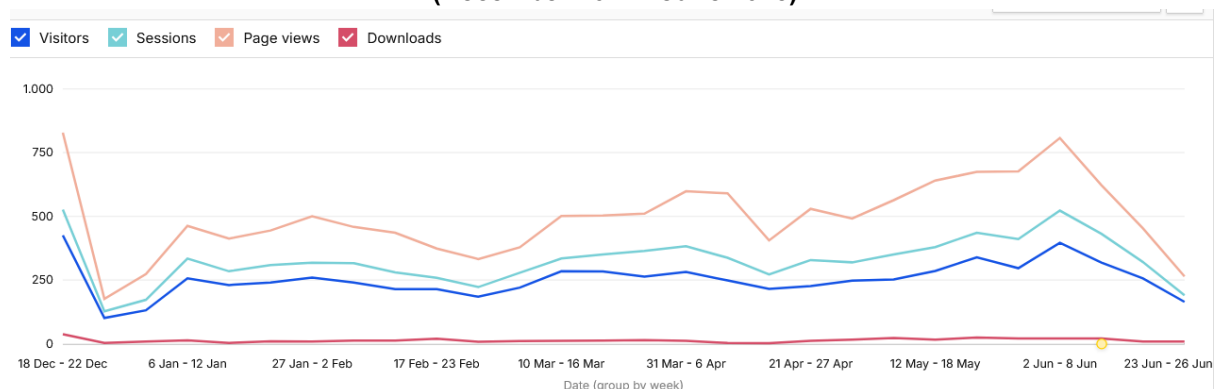
Table 190. Country report performance (three-month period)

Country	Publications Office (downloads)	Taxation and Customs (visitors)
Romania	114	623
Poland	82	275
Italy	55	154
Germany	34	185
Belgium	27	199

Source: Source: Piwik PRO Analytics, Publications Office and Taxation and Customs VAT gap website; 27/03–26/06/ 2025; own elaboration.

These findings confirm that the main VAT gap study remains the dominant reference document, while country-level outputs generate only modest engagement. The discrepancy between visitors and downloads suggests that while there was curiosity about the country reports, the lack of a coordinated campaign prevented them from achieving higher visibility. This underlines the importance of accompanying any future release of country-level outputs with clear timely promotion and stronger calls to action.

Complementary analytics from the Taxation and Customs website show that, beyond the limited downloads recorded, overall interaction with the VAT gap page rose steadily in the spring months of 2025. This renewed growth in activity coincided with the publication of the country reports at the end of March.

Figure 151. Weekly page views and interactions on the Taxation and Customs VAT gap page (December 2024 - June 2025)

Source: Piwik PRO Analytics, Taxation and Customs VAT gap website, 18/12/2024-26/06/2025.

Traffic sources: comparative patterns

The analysis of traffic sources provides complementary perspectives from the Publications Office and the Taxation and Customs VAT gap page. In 2023, over half of traffic towards the Publications Office page was referred from the Taxation and Customs website, confirming the effectiveness of a centralised institutional entry point. Direct access and organic search accounted for most of the remainder, while social media – mainly X and LinkedIn – generated over 300 page views, playing a secondary but visible role.

In 2024, traffic to the Publications Office became more fragmented. Direct access increased to over 1 200 page views and search engines contributed nearly 600 page views. Institutional referrals diversified beyond the Taxation and Customs website to include ec.europa.eu, Oxford Economics and the Commission Representation in Poland. By contrast, social media referrals fell sharply, with LinkedIn generating only 44 page views during the observation period, five months after publication.

Data from the Taxation and Customs VAT gap page in 2025 confirms this trend's persistence. The majority of visits were driven by search engines, which accounted for more than 7 200 page views, while direct access contributed nearly 4 820 page views. Smaller contributions came from Bing and other search engines. A notable new element was the emergence of AI platforms as referral sources, with ChatGPT domains generating over 800 page views. Social media referrals declined further, amounting to barely 120 page views across LinkedIn and Facebook. Institutional referrals, by contrast, were reduced to just over 100 page views.

Table 191. Comparative traffic sources (page views, five-month period after publication)

Source	Page views		
	2023 Publications Office (Oct-Mar)	2024 Publications Office (Dec-May)	2024/25 Taxation and Customs VAT gap page (Dec-May)
Search (Google + Bing)	202 (168 + 34)	563 (501 + 62)	7 292 (6 557 + 735)
Direct access	700	1 299	4 818
Institutional referrals	2 518 (Taxation & Customs)	3 447 (Taxation & Customs) + 194 (ec.europa.eu) + 155 (Rep. Poland)	109
Social media	316 (X 182 + LinkedIn 134)	44 (LinkedIn)	120 (LinkedIn 51 + Facebook 69)
AI platforms	—	—	807 (ChatGPT domains)

Source: Piwik PRO Analytics, Publications Office and Taxation and Customs VAT gap website (12/2024–05/2025); own elaboration.

The comparison of these datasets highlights different channels' complementary roles. Taken together, these patterns confirm a structural shift in dissemination channels. While in 2023 institutional referrals were the dominant entry point to the Publications Office, by 2024 traffic had become more fragmented, with direct access and search gaining importance. In 2025, the Taxation and Customs VAT gap page consolidated its role as a searchable gateway, with search engines and direct access as the main drivers. At the same time, AI platforms emerged as a new access pathway, while social media referrals declined to a negligible level. This confirms that the visibility of VAT gap publications increasingly depends on search optimisation and adaptation to emerging AI-driven discovery, rather than on traditional social media promotion.

Taxation and Customs VAT gap page usability and analytics

The Taxation and Customs VAT gap website is the central channel for presenting the VAT gap study to professional audiences. Its structure and technical configuration play an important role in ensuring that

key insights are accessible. This section reviews user behaviour and measurement issues observed during the 2024-2025 campaign and sets out recommendations to improve calls to action, outbound link consistency, navigation anchors and the accuracy of analytics. The objective is to enhance usability for stakeholders while ensuring reliable monitoring of outreach performance.

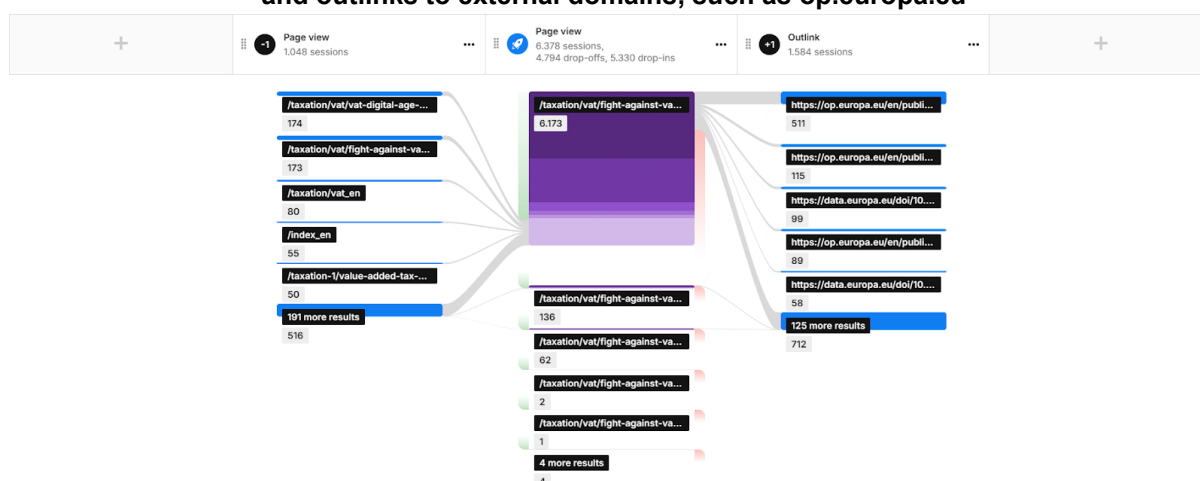
Recommendation 1. Standardising calls to action for report downloads

Website analytics covering the period from 1 December 2024 to 1 May 2025 show that, out of 6 173 total sessions, the full report was accessed in 610 sessions (9.88%) and the executive summary in 142 sessions (2.30%). As obtaining either the full report or the executive summary is a primary task for users, the current placement and styling of the links, embedded within running text, may reduce visibility and perceived affordance. In a public-sector context, where the main objective is to facilitate access for visitors rather than to maximise retention time, clearer pathways to sources are recommended.

Recommendation. Reposition and visually standardise the *Full report* and *Executive summary* calls to action directly below the introductory summary and above the *Relevance* section. These should use consistent button styling (primary/secondary hierarchy) and short, action-oriented labels (e.g. “Download full report”, “Read executive summary”). The same calls to action should be repeated after the first data visualisation and again near the end of the page to serve users who scroll.

- **Content / CMS only.** Insert a dedicated *Downloads* block beneath the summary, comprising two buttons (*Full report* and *Executive summary*).
- **Analytics (Piwik PRO).** Use UTM parameters (the tracking standard introduced by Urchin Analytics) or custom parameters to distinguish report outlinks. Adding UTM parameters to report links enables the identification of which channels generate downloads and thereby provides more accurate performance data.⁷²

Figure 152. User flow report generated within Piwik PRO shows transitions between website and outlinks to external domains, such as op.europa.eu



Source: Piwik PRO Analytics, Taxation and Customs VAT gap website.

⁷² e.g. ?utm_source=microsite&utm_medium=web&utm_campaign=publication&utm_content=top

Table 192. Outlink metrics

Outlink URL (domain and path)	Sessions
https://op.europa.eu/s/zJra	40
https://op.europa.eu/en/publication-detail/-/publication/1dcdad55-e0f2-11ee-8b2b-01aa75ed71a1/language-en	39
https://op.europa.eu/en/publication-detail/-/publication/dd40080c-bd27-11ef-91ed-01aa75ed71a1/language-en	31
https://data.europa.eu/doi/10.2778/9721725	27
https://op.europa.eu/s/u4uc	25
https://op.europa.eu/s/u4ue	25
https://data.europa.eu/doi/10.2778/2861558	23
https://op.europa.eu/s/u4t9	22
https://data.europa.eu/doi/10.2778/0641658	20
https://data.europa.eu/doi/10.2778/2516273	19

Source: Piwik PRO Analytics, Taxation and Customs VAT gap website; own elaboration.

Recommendation 2. Using canonical outbound links for Publications Office assets

For the 2024 full report, two different outbound links are currently used for the same resource: the DOI redirect/resolver hosted on data.europa.eu and the direct Publications Office URL. The German version of the page currently includes both links. A similar inconsistency is present for the executive summary.

Using mixed endpoints for the same asset fragments outbound-click data and reduces the reliability of subsequent analyses aimed at measuring website performance.

Recommendation. Adopt a single canonical URL per asset, either the DOI redirect/resolver or the direct Publications Office link, and to apply this consistently across all languages and placements. Mixed links should be replaced on the German page and the links to the executive summary aligned accordingly.

Recommendation 3. Introducing semantic anchors for country sections

At present, country links navigate to auto-generated anchors (e.g. `#paragraph_1483`) rather than descriptive identifiers (e.g. `#country-pl`). Non-semantic fragments reduce readability and hinder reliable analytics, increasing the risk of human error in the reporting phase.

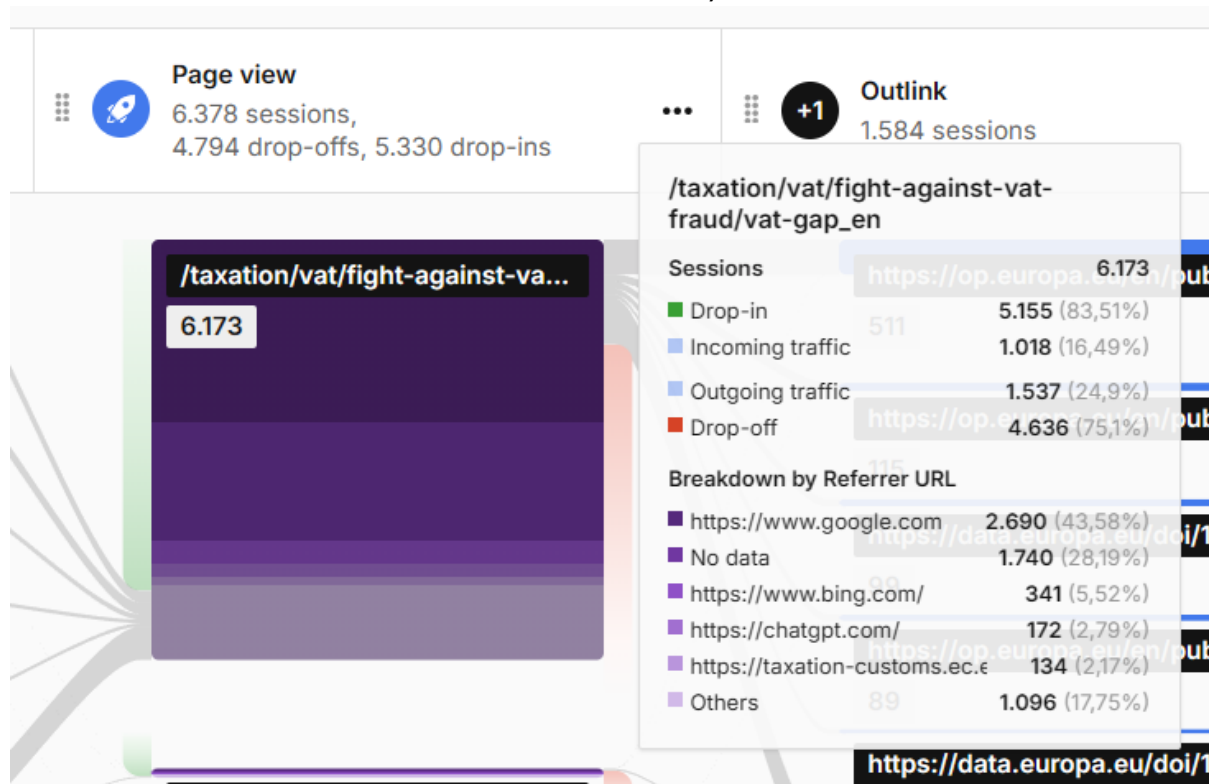
Recommendation. Replace auto-generated fragments with semantic, language-neutral anchors, preferably based on ISO country codes (e.g. `#country-de`, `#country-pl`). These should be used consistently across all languages and placements to ensure clarity for users and accuracy in monitoring.

Recommendation 4. Improving time-on-page measurement with heartbeat pings

The website is frequently the last page visited (with a drop-off rate of 75.1% measured between 1 December 2024 and 1 May 2025). Under standard analytics methods, time on page for exit visits is undercounted, as no subsequent page view event is recorded and the result defaults to zero seconds.

Piwik PRO offers an optional mechanism, known as heartbeat pings, which records periodic events while the browser tab is active. This allows time on page to be calculated as the sum of intervals between the initial page view and the last ping event. However, the use of a static interval does not necessarily improve precision and can inflate event counts, increasing billing volumes without proportional benefit.

Figure 153. User flow report in Piwik PRO illustrating drop-in and drop-off percentages and providing a detailed breakdown of referrer URLs and other dimensions (e.g. campaign name or source/medium)



Source: Piwik PRO Analytics, Taxation and Customs VAT gap website

Below follows a discussion of **how time-on-page is calculated**.

- **Without heartbeat (standard method).** Time on page = timestamp of the next event (next page view or tracked event) minus the timestamp of the current page view. If there is no next event (exit page), the result defaults to zero seconds.
- **With heartbeat enabled.** Piwik PRO sends periodic pings while the browser tab is active. Each ping provides a new timestamp, so time on page becomes the sum of intervals between the initial page view and the last ping event.

Recommendation. Enable heartbeat pings with a custom interval in order to balance measurement accuracy and action volume. An exponential baseline interval of three to four seconds should be applied for steady-state measurement.

Recommendation 5. Correcting bias in scroll-depth metrics caused by anchor navigation

The website's left-side navigation menu allows users to jump directly to specific sections of the page via anchor attributes. Standard scroll-depth instrumentation records these jumps as threshold crossings,

thereby overstating user progression and compromising the validity and comparability of data based on organic scrolling.

This bias reduces the reliability of engagement metrics and makes it difficult to distinguish between actual reading behaviour and navigation-induced jumps.

Options for implementation

- **Option 1 – Event labelling.** Instrument in-page navigation activations and set a short-lived in-memory flag (approximately 1 000 milliseconds). Scroll-depth events occurring while the flag is active are labelled *anchor_jump*; all other events are labelled *organic*. This preserves all observations while distinguishing navigation-induced jumps from organic scrolling, enabling unbiased (and segmentable) KPI construction.
- **Option 2 – Guarded scroll-depth.** Replace the default automatic scroll-depth tracking mechanism with a custom configuration that (i) suppresses threshold dispatches during the active period of the navigation flag and (ii) emits events only after viewport stability of approximately 500-1 000 milliseconds. This approach eliminates most false positives and yields more reliable scroll-depth insights.

Recommendation. Implement either event labelling or guarded scroll-depth tracking to improve the validity of scroll-based engagement metrics. These methods will ensure that analytics more accurately reflect user reading behaviour rather than artefacts of navigation.

Recommendation 6. Building on interim recommendations for website usability

The interim report on visualisation and dissemination identified two priority actions to improve the VAT gap website's usability and stakeholder engagement.

- **Executive summary implementation.** The interim report recommended the introduction of summary boxes at the top of the website to provide immediate access to critical metrics, such as the EUR 89 billion VAT compliance gap. This proposal was informed by Nielsen's eye-tracking research, which demonstrated that users concentrate most on the top and left portions of web pages.
- **Navigation restructuring.** The second recommendation called for the restructuring of the left-side navigation. The current document-based hierarchy should be replaced with a purpose-driven structure that reflects user objectives rather than internal organisational schemas, in line with Krug's usability principles. For instance, the navigation could be reorganised into sections such as *Executive Summary*, *Relevance*, *VAT Gap in the EU – Report 2024*, *Historical Reports*, *VAT Compliance Gap and MTIC Fraud*, *Questions & Answers* and *Related Resources*. Depending on the Commission's content management system capabilities, the implementation of nested subsections for the *VAT Gap in the EU – Report 2024* general sections can be considered to further enhance navigation precision (e.g., detailed results per selected country).

Recommendation

- **Alternative to executive summary implementation.** Introduce a compact summary box directly beneath the page title and above the Relevance section, containing three to five bullet points and three headline figures (EU total, latest-year change, one-line policy gap). A row of calls to action ("Download full report", "Executive summary", "Infographic") should be appended, linking to the relevant Publications Office assets.

- **Alternative to enhanced navigation structure.** Retain the existing country selector within the *Detailed results per selected region* section and add this section to the left-hand navigation as a first-level item pointing to its anchor, without relocating content.

Strategic lessons for campaign planning

Analytics from the Publications Office and the Taxation and Customs VAT gap website, complemented by survey data and traffic analyses, point to several strategic lessons for future VAT gap communication campaigns.

- 1. Optimise publication timing.** Evidence from the 2023 and 2024 editions confirms that autumn releases (October–November) generate higher engagement, while year-end launches result in significantly lower visibility. Future reports should therefore avoid December publication dates.
- 2. Establish a structured launch format.** Compared with international benchmarks, the VAT gap study would benefit from a defined launch package combining a press briefing or webcast, a centralised landing page, and coordinated institutional announcements. This would provide a focal point for visibility and align dissemination with other flagship economic reports.
- 3. Strengthen and coordinate social media activity.** Analytics show that referrals from LinkedIn and X declined sharply between 2023 and 2025, while search-driven access expanded. Campaigns should therefore prioritise coordinated, multi-phase social media promotion with clear hashtags and cross-account amplification to sustain traffic over time.
- 4. Expand audiovisual and visual formats.** Infographics attracted relatively more downloads than executive summaries, indicating that visual outputs resonate strongly with users. Future campaigns should systematically include short explainer videos and consider new formats such as podcasts or interactive charts to broaden outreach.
- 5. Ensure stronger promotion of country reports.** Early data from 2025 shows that, despite hundreds of page visits, country reports converted into very few downloads due to the absence of a dedicated communication campaign. Future country-level outputs require targeted promotion and clearer calls to action to achieve visibility comparable to the main study.
- 6. Consolidate performance monitoring.** The shift from institutional referrals to search engines and emerging AI platforms underscores the importance of harmonised monitoring. Systematic use of UTM parameters and consistent link management is needed to obtain reliable, comparable analytics across channels.
- 7. Adapt to new discovery channels.** The appearance of AI platforms as a significant referral source in 2025 highlights the need to ensure VAT gap content is optimised for AI-driven discovery. Future campaigns should explore how reports are indexed and presented in AI environments, alongside traditional web search optimisation.

ANNEX H: External reviews

Table 193. Review of the inception report (1)

Comment	Response
Prof. Karsten Staehr, Department of Economics and Finance, Tallinn University of Technology	
<u>General Comments</u>	
The inclusion of the candidate countries in the analysis is very welcome even if the data available entail some complications and possible compromises. The analysis for the candidate countries will surely provide new and interesting insights. The various case studies are very welcome as they are likely to provide interesting new results and may help shed light on the VAT gap estimates for the EU countries, the candidate countries and the potential candidate countries. Hopefully the final report will seek to tie the results from the various studies together. The inception report discusses the challenges stemming from data availability and data quality, particularly in relation to the candidate and the potential candidate countries. It would perhaps have been useful with a broader discussion of possible sources of biases and/or uncertainty in the estimates. It is likely not feasible to provide exact measures but the final report might seek to provide some quantitative indications of possible biases and uncertainties, for instance using information on the SUT, or by contrasting the results with those in other studies using the same or other methodologies. I appreciate that the high inflation that affected many European countries in 2022-2024 is brought up in Case study III and in Section I.d. The high inflation may not affect the VTTL estimations per se, but it might still affect the quality of the estimates. Inflation differs across product groups, and the relative price changes may lead to changes in consumption patterns. Changing consumption patterns also complicates the computation of price indexes. In some countries it has been suggested that the official	Thank you for these comments. We agree with the suggestion to compare estimates from various sources once the final estimates are available (in the Final Report). Additionally, we will expand the discussion on sources of imprecision, including the impact of the complexity of VAT matrices.

Comment	Response
price statistics do not provide reliable data in a situation with very high and fluctuating inflation. Finally, high inflation may make some forms of VAT underreporting easier. The inception report touches very peripherally on the issue of differentiated VAT rates. I would have liked a bit of discussion of the topic as it might have substantial policy implications. How does the presence of differentiated VAT affect the VTTL estimations? Do different VAT rates affect the precision of the VAT gap estimates? Are differentiated VAT generally associated with a larger VAT gap?	
Introduction	
The introduction is very short and arguably not a very good read. It largely lists the contents of the various parts of the inception report. There is no introduction to the topic of VAT gaps, their estimation, or how they can be used. I think this briefness is OK given the numerous previous reports on the topic, but it raises the question whether the introduction could have been skipped altogether.	At this stage, the objective of the introduction is to explain the purpose of this deliverable and to enumerate its elements. A full-fledged introduction to the substance of the analysis will be an important element of the Final Report
Methodological approach	
I.a. Proposed structural changes to the VTTL estimation (p. 6-13) The report discusses the VTTL methodology right from the start on p. 6. In some sense it would have been nice with a discussion of why the VTTL methodology has been chosen. Perhaps a reference to a couple of academic papers or previous VAT gap reports would have been nice? The discussions in Section I.a. are substantial and show that the report team has already taken many proactive steps that may improve data collection and data use. The material is at the same time fairly technical. The various improvements all seem helpful. The candidate or potential candidate countries are included in Table 1, where the availability of SUT data is depicted. Some of the SUT data appear quite old, which may be unfortunate given the possibility of large changes in the supply and use during the years from	We concur with the comment that the report should refer to the earlier studies that contain the assessment of concurrent approaches and included such a reference.

Comment	Response
2019 to 2023 (Covid, Russian invasion, relative price fluctuations). The third improvement appears to partly address this issue by increasing the accuracy of fast estimates, i.e., estimates for 2024.	
I.b. Estimation of the VAT gap of selected EU candidate and potential candidate countries (pp. 13-22) It is commendable that the report seeks to estimate VAT gaps for nine candidate or potential candidate countries. Such estimates will be very useful for EU institutions and the national authorities alike. The section is very well written, and it constitutes an excellent starting point for the further analysis. Table 5 lists the availability of existing VAT gap estimates. There are only estimates available for five countries. Do I understand correctly that there are no countries among the five where there is more than one VAT gap analysis available? Some rough estimate could have been provided in an extra row. Table 6 maps the data sources and availability needed for VTTL estimates for the nine counties. Parts / much of the data description appears to be only in the local languages, but I guess this is not an obstacle given modern translation tools. It is concluded in the text that necessary data are not available at present for several of the countries. The search for additional data will continue and this includes sending formal requests for data to the relevant authorities in the countries. The questionnaires are well phrased and not excessively complicated. I wonder whether it would be needed to translate the questionnaires into the local languages. C-efficiency is mentioned in the third paragraph on p. 18. It could be explained in a single sentence. The C-efficiency estimates are puzzling, not least the one for Bosnia and Herzegovina.	Thank you for your comments and reassurance on the approach taken.

Comment	Response
I.c. Selection and methodological approach to case studies (pp. 13-22) Section I.c outlines the contents of four case studies that will become a part of the VAT gap report. I find all of the case studies very interesting and some intriguing. I will only provide comments to some of the proposed studies. Study II on the Italian Superbonus is interesting and might have lessons for other countries. (Somewhat similar measures of tax cuts or subsidies to the construction sector have been tried in other countries, including Sweden and Denmark.) Potentially quantitative estimates could also be provided given that various sectors are differently affected / treated (DiD, Synthetic controls). It would of course also be interesting comparing the VAT revenue gain from better compliance with the costs of the programme. Case study III on the zig-zag in VAT compliance before, during and after the pandemic is also interesting, and the results could have lessons for tax administrations looking forward. (My gut feeling is that the virtual shutdown of domestic and foreign tourism could be an important factor.) One slight concern is that the planned investigations outlined in the third paragraph on p. 27 are not very concrete or detailed. Case study IV is important. It is related to study III so hopefully the two case studies will be carried out in tandem to reap possible synergies.	Thank you for the comments, we have expanded the outline for quantitative work on the third case study.
I.d. Analysis of the macroeconomic background Subsection I.d provides straightforward information on the macroeconomic dynamics in European countries which might affect the VAT gaps across countries and over time. The information appears relevant. Data on imports, exports, tourism exports and perhaps financial flows and stock may also be useful for modelling VAT compliance.	Thank you for the comment. We will certainly look at the series suggested. Although no econometric modelling was planned for this study, we will investigate semi-qualitatively and semi-quantitatively the country-by-country economic background to develop hypotheses

Comment	Response
I presume the macroeconomic data may be used in econometric analysis in the final report (as there should be sufficient data for an unbalanced panel data analysis). One key challenge may be the possibility of structural change.	regarding the estimated change in taxpayer compliance
II. Operational approach (pp. 34-38)	
This chapter provides details on the forthcoming work and in particular the deadlines and overall timeline. I find the chapter comprehensive and well written. The chapter starts very prudently with the arguably most untested and challenging part of the 2025 report, i.e., the inclusion of the many new candidate and potential candidate countries. The approach appears clear and reasonable. The overall timeline is discussed on pp. 26-37 and summarised in a table on p. 38. It is reassuring that the team has extensive experience compiling the VAT gap estimates and their experience suggests that the team will follow the timeline. There are no specific mapping of possible risk factors (such as problems obtaining data) that may alter or delay the analysis. Consequently, there is also no explicit buffers and contingency plans. I presume that the buffers are included in the timeline so that unforeseen events will not propagate through the project.	Thank you for the comment. Indeed, buffers were included in the timeline. As mentioned by the reviewer, one of the greatest risk for the timeliness and precision of the estimates, is the completeness of data provided by administrations. To facilitate this, the study team has foreseen a multi-stage process of ensuring that the data needs are well communicated. The road-sign signaling discussed in the report is another tool designed to facilitate data sharing.
III. Visualisation and dissemination	
It is a little hard to understand (pp. 39-40) whether the previous reports have been presented on Facebook, LinkedIn and other social networks. My guess is that dissemination on LinkedIn could be useful. Also, if the aim is to reach a young audience, then small fun clips on TikTok could be tried (cf. also the idea of producing short films, p. 41).	Thank you for the comment. The earlier studies were published/advertised on Twitter and LinkedIn. In the dissemination strategy, we will consider the use of Facebook and TikTok.

Comment	Response
One topic which is not explicated in Chapter II is the communication with national authorities. This is probably because the communication with the national authorities during the writing phase of the report is already discussed in Chapter II, but what are the plans for separate dissemination of the final report? Perhaps the dissemination of the final report to various national authorities could be explained in the report.⁷³	

⁷³ *The comparative aspect of the report means that report provides very useful information for policymaking since the best argument for policy is that a neighbouring country is doing better. Besides sending the report to national finance ministries, justice ministries and tax boards, it might also be useful to present the report in various countries, perhaps in particular in countries for which VAT gap analyses are scarce.*

Table 194. Review of the inception report (2)

Comment	Response
Prof. Marco Spallone, Luiss Guido Carli University	
Methodology	
<u>General Comment</u> The proposed solutions to improve the accuracy of measurements and the robustness of their interpretation are moving in the right direction. In particular, the innovative proposals aimed at overcoming some issues encountered during the drafting of the previous investigation are characterized by less reliance on <i>ad hoc</i> assumptions and greater effort to obtain more reliable results.	Thank you.
The idea of using the period marked by the pandemic to evaluate the adequacy of the models used to estimate the amount of uncollectible VAT revenues is interesting. However, one must consider the possibility that the model parameters may not be representative in a context characterized by significant public intervention, which may have altered long-term correlations between tax bases and VAT liabilities. Thus, conclusions about the soundness of estimation models should be approached cautiously.	Thank you for pointing to this caveat, which we will keep in mind when interpreting the results.
Addressing the issue of discrepancies between Eurostat data and data from NSI, given the inconsistencies highlighted in the report, is correct. It is equally appropriate to refer to the most recent and reliable data, following any corrections not implemented in the standardized historical series at the European level. Regarding the techniques proposed to handle periodic revisions carried out by national statistical institutes, the intent to go beyond simple rescaling is commendable. However, both in back casting and forecasting activities, it is crucial to identify the determinants of revisions to accurately reposition quantities both in terms of magnitude and distribution among components. In other words, behind revisions that are defined to be of statistical nature may lie adjustments due to changes in the underlying economic structure. For this reason, sophisticated modeling, such as that provided by Figaro, is inevitable if one wishes to go beyond a more simplistic approach.	Thank you for reassurance. We keep in mind that sources of discrepancies must be certain before applying the correct approach to forecasting and backcasting.

Comment	Response
Regarding the proposed innovations for fast estimates, a concern arises about the need for a preliminary analysis of the gains in terms of reliability. From my perspective, the proposed innovations undoubtedly entail significant additional effort, but do not necessarily guarantee substantial improvement in results. The question is whether this inception report could have anticipated how much improvement in forecasting capacity is expected.	The gains related to the change in the approach, as noted, could appear to be modest. We will be able to shed more light on this when the concurrent estimates using old and new approach become available.
A separate discussion concerns the proposals for countries aspiring to become members. The proposals in the inception report are well-designed to address the need to adapt both the quantity and quality of data to meet the requirements for sufficient reliability of results. One specific note concerns a point revisited in the comments on questionnaires: applying a fixed scheme, as proposed in the report (specific to Albania), for data collection and question definition can be risky without allowing for substantial adjustments to capture the peculiarities of very diverse economies, often characterized by significant informal sectors.	Thank you for these comments. We concur with this point and will be gathering evidence on the scale of the informal economy to assess whether it has been sufficiently incorporated into the national accounts. If not, some adjustments to the SUT might be justified.
Case studies	
<u>General Comment</u> All the proposed case studies are of great interest and highly informative. It is crucial to clarify in this inception report how the development of these case studies can provide important operational feedback to improve analyses and understand the most effective measures to increase compliance levels.	Thank you.

Comment	Response
For the EPPO, it should be emphasized that the proposed analysis must go beyond anecdotal evidence, however interesting it may be, and should aim to provide policy guidance on VAT regulations to discourage fraud and facilitate enforcement activities.	Due to this reason and other challenges related to this case study, it has been replaced. We are currently investigating the feasibility and attractiveness of two other case studies: (1) investigating the impact of soft positive enforcement initiatives, implemented in several Member States, on VAT compliance, and/or (2) the contribution of bankruptcies and insolvencies to the VAT compliance gap.
The Italian Superbonus case is highly informative as it allows for an implicit cost-benefit analysis for companies in a problematic sector like construction. Specifically, it would be very interesting to understand whether the same beneficial compliance effects could have been achieved with less substantial incentives. Indeed, the significant impact on public finances of this measure was one of the reasons why the scheme was only applied for a short period. By better modulating incentives, it might have been possible to achieve virtuous long-term effects. Among the questions to be submitted to stakeholders on this topic, one is missing: the minimum level of incentive capable of triggering the same behaviors as the Superbonus. There are also similar schemes implemented in Italy (various construction bonuses) for conducting comparisons and interesting analyses on these topics.	Thank you. Well noted.
The analysis of the pandemic experience is truly crucial to understand certain dynamics related to consumer behavior, which are fundamental to understand the VAT gap. In addition to a comprehensive qualitative analysis to be developed in the interim report, reference is made to the possibility of a quantitative analysis. It would be helpful to at least outline the objectives and methodology of this analysis to understand its scope in terms of both effort and results.	Thank you for these comments. We have outlined the objectives and expanded the outline for quantitative work on case study

Comment	Response
	III in the revised version of the report.
Regarding the study on policy gaps, which is also of great interest, the logic behind the selection of the countries analyzed should be better explained. While the selection has been clearly motivated, given the stated objectives of the analysis, it is not obvious why countries that have undergone substantial changes and reforms in their legislation were not considered. If none exist, it would be worth emphasizing this point.	We have expanded the justification in the revised version of the report.
Questionnaires	
<u>General Comment</u> The questionnaires are well-structured, considering the earlier observations, particularly those concerning the countries aspiring to become members. It is worth reiterating the need to resolve the trade-off between collecting homogeneous information and tailoring the questions to capture the key characteristics of diverse and often informal economies.	Thank you for this re-assurance.
<u>Additional Note</u> For completeness, check the content of cell N2 in the questionnaire on “Household Final Consumption Liability.”	The error was corrected.

Table 195. Review of the draft final report (1)

Comment	Response
Prof. Karsten Staehr, Department of Economics and Finance, Tallinn University of Technology	
Introduction	
It has been my pleasure to read the Draft Final Report for the 2025 version of “VAT gap in Europe”. The current report builds on the reports of previous years, and it therefore exhibits a large degree of “maturity”. It is very comprehensive, while maintaining a keen eye on numerous details and country-specific issues. The addition of the candidate and potential candidate countries is very welcome. (The data problems for several of these countries may be addressed over time.) Some case studies provide additional interesting and important insights. I also read and commented on the Interim Report, and my comments will therefore this time be relatively short, and they will focus on the readability of the report, possible minor issues and various typos. Most of my comments reflect individual preferences and may not require any changes in the text.	Thank you very much for the thorough review and comments that helped improving the presentation of the results.
General comments - Organisation and readability	
One minor concern relates to the readability of the report. The comprehensiveness and sheer volume of the report restrain the ease with which the report can be read, but the organization of the material also play a role.⁷⁴ I don’t think the issues pointed out below should be addressed in the current version of the report, but they could be considered when future versions of the report are written. At this stage the Draft Final Report does not provide a summary or executive summary at the beginning of the report. I suppose that this is intentional at this stage, and that such a summary will be added shortly. A summary is needed since the report is very long and comprehensive, but also because the introductory chapter (Ch. I) largely lists definitions and concepts but does not give a preview of results.	Thank you for these comments. As part of the refinements to the draft final report we elaborated on the hypotheses related to the determinants of non-compliance to improve the link between the background and the estimates. The report has also been reviewed by language quality control experts to improve readability. We also drafted the executive summary targeting readers who are interested in the core results of the study.

⁷⁴ I am aware that the report is meant to be used for policymaking and macroeconomic governance, and as such the readability of the report is only a minor problem

Comment	Response
It is perhaps puzzling that the first main chapter (Ch. II) is devoted to macroeconomic developments in the countries considered. This material is clearly relevant, but it hangs a bit in the air if the reader is not familiar with the methodological approach (Ch. VIII)? The methodologies used are discussed in the last chapter (Ch. VIII), and very little is explained about these methodologies until then. I understand that it is tempting to get the very technical material away from the beginning of the report, but the drawback is that the reader might not really get a good understanding or “feel” for the results presented in Chs. V-VII. Would it be possible (perhaps in future iterations of the report) to include a short chapter, which explained the methodologies in broad terms and provided some understanding of and intuition for the methodologies used (perhaps along the lines of the current Section VIII.a)? Such a chapter could also discuss some of the concepts and measurements in more detail than is currently done in Ch. I, possibly easing the reading of the report for the unsophisticated reader. The readability of the report might also be improved if there are more cross-references in the text, so that the reader can easily find the places in the report where, for instance, terms are discussed or where related issues are presented.	
General comments - Reliability, robustness and uncertainty	
I think the report does a great job providing information that allows the reader to understand the robustness of the results. This includes description of the macroeconomic dynamics and regulatory changes. Another means is the classification of the results into different degrees of “reliability”. This discrete classification is very welcome, though some of the countries with estimates classified as reliable surprised me. This includes Ireland, which often is left out of comparisons due to data for GDP and other macroeconomic variables being influenced by large international transactions. One could also question whether the estimate of a VAT gap Austria of 1 per cent in 2023 is “reliable”.	Thank you for these comments. Introducing bands/confidence intervals would indeed be very informative for the readers. Unfortunately, the errors around the numbers, for most of its sources, cannot be quantified. Monte Carlo simulations could be a solution if there are alternative assumptions behind certain

Comment	Response
One small concern is that all estimates are provided as point estimates, which in some sense exaggerates the precision of the estimations. One idea for future reports is to investigate whether it would be possible to use the model apparatus to produce some forms of confidence or probability intervals? Such intervals could be produced using Monte Carlo simulations or some other methodology if some information on the distribution of the underlying variables used in the estimations would be available. I understand that this is outside the scope of the current report, but some experimentation could take place in future reports.	parameters of the VTTL and this should be investigated further for the future studies.
BRIEFLY ON SOME INDIVIDUAL CHAPTERS	
The information in Ch. III “Policy context” is very useful, particularly for the candidate and potential candidate countries as this information has not previously been put together in this way. When reading it, I started wondering whether any of these changes are put in place to reduce evasion and avoidance and thus narrow the VAT gap, but this is arguably outside the scope of the report. Ch. IV “VAT compliance gap in the EU, candidate, and potential candidate countries” is a key chapter, which provides estimates of broad measures of the VAT-gap. The chapter is well written and provides interesting results. One concern is that the reader at this stage has only been given a superficial introduction to the calculations provided; it would be useful if the modelling methodology would be explained briefly at the beginning of the chapter or earlier in the report. The changes in the VAT gap from to year to year are in some cases substantial for individual countries, perhaps more than I would think possible in cases where the economic and regulatory changes are relatively modest. Section IV.a “Scale and the evolution of VAT compliance” is very nice, but a lot of statistics is provided with limited discussion of the findings. I acknowledge that data and discussion for each of the countries are provided later in the report, but would it be possible to provide a bit of discussion and some comparison of the results across countries already in Section IV.a?	Thank you for these comments. We expanded the interpretation of the changes in VAT compliance and policy gap estimates across different chapters.

Comment	Response
Moreover, given that some differences are considered later in the report, it might be useful to provide cross-references. Sections IV.a, IV.b and IV.c are all interesting; the results for Italy in IV.b are arguably surprising. I think it is an excellent idea to distinguish between countries for which reliable estimates of the VAT gap can be made and countries for which this is not possible. I would perhaps have liked a bit more discussion of the system already used to differentiate already in Ch. IV. Currently the system and the criteria are only discussed in Ch. VII, and even there the discussion is not very extensive. Ch. V “VAT policy gap in the EU, candidate, and potential candidate countries” provides various decompositions of the VAT gap documented in Ch. IV. Some of these decompositions are very informative, but also somewhat involved or complicated. The various decompositions are only described briefly, and it can be difficult to follow the results in detail. Some additional explanations would be used, especially if combined with references to various places in Ch. VIII. It follows from pp. 56-57 that the changes over time in the composition of the VAT gap are small for the combined EU. The analysis in Section V.b is interesting and quite ingenious. Ch. VI “VAT compliance and policy gaps – individual country assessment” is a long chapter and mainly of interest for country-specific assessments. The presentation follows a uniform structure for each country. For this chapter some smoothing of the text and editing of the language would be welcome. Ch. VII Changes in VAT revenue components (EU and EU Member States) is a very short chapter and perhaps not very central to the core theme of the report. The numbers in the figure and the table could also have been expressed relative to GDP. Ch. VIII Methodology is well written and very important for the report. As already discussed, it might be useful to introduce parts of the methodology at an earlier stage of the report as this might ease the reading and interpretation of the results in Chs. IV-VII. It would perhaps have been useful with more	

Comment	Response
references to the academic literature in this chapter, including studies that would suggest that the chosen top-down consumption-side approach is the most appropriate methodology in this case. Annexes A-I bring up a host auxiliary issues, including some methodological matters, statistical data sources and results for Luxembourg (for which the results are not deemed reliable). I am surprised that there are no references to the annexes in the main text, which seems to an oversight.	
Typos and various microscopic comments	
Some of the figures are difficult to read for various reasons. The lines or columns in some figures use colours that are not easy to distinguish without a careful reading of the figure. It is also difficult when the lines or columns overlap the horizontal axis so that it is difficult to read the legend on the horizontal axis; one example is Figure 35. p. 1: The title of the report is “VAT gap in Europe”. It is in some sense a little confusing that the same title has been used twice already. Perhaps it is time to start adding the year of the report to the title, i.e. “VAT gap in Europe 2025” this time. It is written on p. 8 that “A moderate recovery is expected in 2024, with projected growth at 1.0%”, but this number should be more or less known at this stage (Sept. 2025). p. 8, 1st paragraph: Insert paragraph break after “... including tax policy.” Figure 2 shows the data for EU27 using other colours than those provided in the legend. Is this logical? Figure 3: Are these data monthly year-on-year data? Figure 4 is perhaps not so easy to read. Perhaps the figure note could explain a bit more (or the figure could be removed)? Also, the heading refers to HICP while the figure note refers to CPI. Figure 6 is not very beautiful and not very easy to read. Would it be better to use columns for all of the investment components?	Thank you for these correction which we introduced to the final report.

Comment	Response
p. 17: Replace phrase "...negatively impacting VAT compliance" with "... likely negatively impacting VAT compliance." p. 22-23: The discussion of "The Reduced VAT Rates Directive" is divided between the main text and a box. Why this split (with the associated risk of repetitions)? p. 23: Please check this formulation: "In Luxembourg, the temporary decrease expired, and the standard rate returned to 16% from 17%." p. 24: Should the term "VAT groups" be explained? Should "reverse charge" be explained? p. 25: Replace "jargon" with "terminology". Figure 16: The title refers to "Neighbouring countries", but would "Candidate and potential candidate countries" be more precise? (The figure is otherwise very useful!) p. 29: It is stated that "Section VI offer detailed insights into developments in each Member State"; here the candidate and potential candidate countries should probably also be mentioned. p. 29: It is useful to repeat what the abbreviation VTTL stands for. p. 29: Some unclear / unfinished text in the paragraph(s) after Figure 17. Table 7: Explain that Luxembourg and several of the candidate and potential candidate countries are missing from the table because the estimates are deemed unreliable. p. 47: The ceasing of the Portuguese lottery in Dec. 2023 and onward may provide some information; causal identification would require some form of difference-in-difference estimation which may or may not be possible. An s could be added in the heading of Figure 32: "VAT policy gaps". Many tables, including Table 9, have a table note stating "Luxembourg was excluded due to the low reliability of the estimates." Notice that many of the candidate or potential candidate countries are also excluded.	

Comment	Response
Tables 10-13: is per cent, percentage point or some other denomination of the numbers in the tables missing? Figure 35 is a little clumsy. Could the title be simplified and the material from the title used in a figure note? Alternatively, could the figure be rethought, e.g. by considering each country separately? p. 183, line 2: The word “rat” should be “rates”. Ch. VIII: It is a little confusing that one font is used for the variables in the formulas and another in the text. This is largely due to limitations afforded by Word. Annexes: There should be references in the main text to all of the annexes.	
Overall assessment	
My overall assessment is that the Draft Final Report of “VAT gap in Europe” for 2025 is excellent. I hope that some of my comments above would be of some value though a and needs very few edits, in part addressing some of the comments above, before the prefix “Draft” can be removed.	Thank you very much.

Table 196. Review of the draft final report (2)

Comment	Response
Prof. Marco Spallone, Luiss Guido Carli University	
Executive Summary	
This referee report provides an assessment of the Draft Final Report on the VAT Gap in Europe 2025. While methodological aspects have been covered in the referee report on the Inception Report, the present review focuses on the results, highlighting positive and negative trends, their robustness, and the main drivers of observed differences. Comparisons with previous VAT Gap reports, academic research, and external institutions such as OECD, IMF, and CASE are included. A separate Word file with tracked-changes comments will be attached for a line-by-line review.	Thank you very much for the thorough review and comments that helped improving the presentation of the results.
Introduction and Scope	
The Draft Final Report under review provides updated estimates of the VAT Gap across EU Member States, covering the years up to 2023 with fast estimates for 2024. This referee report does not repeat the methodological assessment already made in the inception phase; instead, it evaluates the clarity of presentation and, more importantly, the significance and robustness of the results. Special attention is given to the identification of positive and negative trends, the consistency of results across Member States, and the comparison with alternative research findings.	-
Assessment of Results	
The report highlights both encouraging improvements and renewed challenges in VAT compliance. Between 2018 and 2022, the average VAT compliance gap in the EU fell significantly, from approximately 11.2% of the VAT Total Tax Liability (VTTL) in 2018 to around 7.0% in 2022, according to the European Commission's 2023 VAT Gap study. Italy, in particular, recorded one of the most substantial improvements, reducing its compliance gap from 21.6% in 2018 to 10.6% in 2022. This improvement was largely attributed to strong enforcement actions and specific policy incentives such as the Superbonus 110 scheme. However, the trend reversed in 2023, when several Member States,	Thank you for these comments. As part of the refinements to the draft final report we elaborated on the hypotheses related to the determinants of non-compliance to improve the link between the background and the estimates.

Comment	Response
including Italy, experienced a renewed widening of the gap due to macroeconomic headwinds, inflationary pressures, and partial re-expansion of the shadow economy. The persistence of the policy gap, however, deserves more emphasis. Despite gains in compliance, the policy gap—reflecting reduced rates and exemptions—remains structurally high across the EU. This indicates that forgone revenues due to political choices outweigh, in some countries, those lost to non-compliance. The report could benefit from a clearer narrative on this aspect, making explicit the trade-offs between equity, efficiency, and revenue needs. In particular: • In some sections the report relates the VAT gap to variables such as the value of financial assets or household consumption, but does not explain the underlying economic transmission mechanisms. • The authors should briefly explain how a fall in asset values might influence consumption decisions and hence the VAT base, clearly distinguishing between empirical correlations and theoretical causation.	
Robustness of Results	
The robustness of the findings is generally supported by consistency with earlier Commission reports. The downward trend up to 2022 is well in line with Eurostat-based national accounts and matches the trajectory reported in successive VAT Gap reports. Nevertheless, the 2023 reversal underscores the sensitivity of compliance gaps to cyclical downturns, a phenomenon already observed in earlier reports (e.g., 2015-2016). When compared with other studies, however, some discrepancies emerge. The OECD and IMF often report narrower compliance gaps, partly because of differences in methodology. While the Commission relies on a top-down approach anchored in national accounts aggregates, some external studies employ bottom-up techniques, combining microdata on firm behaviour, survey	Thank you for these comments. The extension of the study and substitution of the current methodological approach has been thoroughly analysed in the 2022 report. According to its findings, top-down consumption-side approach was the only one guaranteeing broad coverage in terms of the number of countries covered.

Comment	Response
evidence, and administrative records. Such differences naturally yield variation in absolute figures. For example, OECD's Consumption Tax Trends suggests slightly lower compliance gaps for high-capacity administrations (e.g., Germany, the Netherlands) than those reported in the Draft Final Report. Similarly, CASE studies, while largely consistent with the Commission, sometimes attribute a smaller share of the gap to policy choices. It is therefore important that the Draft Final Report explicitly acknowledges these methodological contrasts, clarifying that differences across studies do not necessarily indicate errors, but rather stem from alternative conceptualisations of the VAT gap. Such transparency would enhance the credibility and robustness of the results. In particular: • In contrast to top-down, the bottom-up approach uses micro-level data from tax returns, audits and administrative records to compute the potential tax due for each taxpayer and compare it with actual payments. This method provides more detailed insights into specific segments of the tax system and the types of non-compliance involved. • Its advantages include improved precision through detailed data, the ability to design targeted interventions, mitigation of selection bias using machine-learning techniques, sector-by-sector analysis, adaptability to different taxes and the possibility of producing upper and lower bounds for the gap. • However, it requires extensive access to confidential micro-data, may suffer from endogeneity and selection bias if audit samples are not representative, does not cover the informal economy and may risk double-counting when aggregating components. The report could consider complementing the top-down estimates with econometric models that link the VAT gap to macroeconomic variables (e.g. unemployment, consumption, investment) to test the sensitivity of results and generate confidence intervals.	

Comment	Response
Some recent studies have combined top-down and micro-data approaches to derive more robust estimates and to assess the effectiveness of compliance measures.	
Drivers of Differences	
The divergences across countries and across studies can be explained by several structural and policy drivers. Probably, the report could benefit from a taxonomy of differences to guide the reader through the reading of state by state analysis. For example: - o Digitalisation: Countries with mandatory e-invoicing and digital reporting (e.g., Italy, Spain) have shown sustained improvements in compliance. - o Policy incentives: Temporary schemes such as Italy's Superbonus 110 boosted formalisation of transactions, though the effect is fading. - o Enforcement capacity: Stronger tax administrations (e.g., Germany, the Netherlands) tend to report lower gaps. - o Informal economy: Higher informality in Southern and Eastern Europe correlates with larger VAT gaps. - o National accounts revisions: Substantial revisions (e.g., in Ireland, the Baltic States) directly impact the denominator of the VAT gap calculation, causing volatility. - o Economic cycles: The rebound in 2021-22 narrowed gaps, but the 2023 slowdown widened them again.	Thank you for these comments. As part of the refinements to the draft final report we elaborated on the hypotheses related to the determinants of non-compliance.
Presentation and Clarity	

Comment	Response
The report is structured logically and contains comprehensive annexes, yet improvements in presentation are required. Tables and graphs should be accompanied by clearer captions and standardized terminology. For instance, the use of “positive” and “negative” trends could be replaced with more precise descriptors such as “increase” and “decrease.” Some country chapters are richer in detail, while others remain superficial, reducing comparability. Case studies are informative but need stronger causal explanation. These points are documented in detail in the tracked-changes comments that will be attached separately. In particular: • The draft occasionally uses “positive/negative” to describe changes in the gap. This can confuse readers about whether “positive” means an increase or a desirable outcome. I recommend replacing it with “increase/decrease” throughout the report. • Similarly, the term “VAT compliance gap” should be defined consistently and contrasted with “non-compliance”. • Several cross-references point to tables or figures are mis-numbered or not yet introduced. A careful check of the table/figure numbering and hyperlinks would improve readability. • Graphs often lack explanatory captions or clear axes. For example: ○ One figure highlighting a shaded red area does not explain what the area represents. ○ Each chart should have a descriptive caption indicating the data source, the variables plotted, and the time interval. ○ Avoid colour coding that implies a normative judgement (e.g. red for “bad” and green for “good”) and instead focus on plain descriptions of changes. ○ Include a short paragraph in the text summarising the key message of each figure.	Thank you for these comments. We amended the wording pointing to the sign of change in the VAT gaps to eliminate confusion. We also added missing references and expanded relevant captions. At the same time, we decided to keep conditional formatting/colouring in tables to facilitate interpretation of the included values.

Comment	Response
Conclusions and Recommendations	
The Draft Final Report represents a valuable update on VAT gaps in Europe, capturing both progress and persistent challenges. Its strengths lie in continuity with previous editions and the integration of relevant case studies. However, the credibility of the results would be enhanced by more explicit benchmarking against alternative studies, a clearer articulation of structural drivers, and improvements in the clarity of presentation. Key recommendations are: • Emphasise long-term trends to contextualise annual fluctuations. • Work on robustness checks such as sensitivity analyses and confidence intervals. • Benchmark more systematically against OECD, IMF, and CASE results. • Clarify the impact of methodological differences between top-down and bottom-up approaches. • Standardise presentation and ensure comparable depth across all country chapters.	Thank you for these comments. We developed description of long-term trends and the interpretation of annual fluctuations. We also increased the standardisation of the country chapters. We agree that introducing bands/confidence intervals would indeed be very informative for the readers. Unfortunately, the errors around the numbers, for most of its sources, cannot be quantified. At the same time, we kept benchmarking that is limited only to the publicly available estimates of national administrations.

ANNEX I: Statistical appendix

Table 197. VTTL (EUR million)

Country	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
EU Member States												
BE	31 212	30 272	31 578	32 263	33 887	35 364	36 541	34 189	36 941	40 808	42 643	43 939
BG	4 659	4 930	5 045	5 058	5 323	5 630	6 236	5 999	6 881	8 306	9 105	.
CZ	14 491	13 948	15 177	15 601	16 926	18 560	19 836	18 487	20 340	23 812	25 946	.
DK	27 687	27 955	28 610	29 497	30 776	32 004	32 726	32 656	35 391	38 255	37 434	38 707
DE	223 018	230 242	232 436	241 411	249 693	258 511	272 895	238 713	280 170	310 182	321 260	328 860
EE	1 814	1 911	1 986	2 092	2 305	2 469	2 638	2 617	2 911	3 491	3 874	4 275
IE	11 668	12 406	13 543	14 028	14 107	15 168	16 167	14 022	16 083	19 217	22 027	.
EL	18 807	17 287	17 965	19 075	20 663	20 503	20 262	16 458	18 129	21 265	22 288	23 500
ES	69 100	70 189	72 283	74 791	80 133	82 896	86 008	73 874	84 599	96 236	101 596	111 096
FR	160 630	165 520	167 521	169 312	178 555	182 436	187 247	175 146	193 443	209 942	218 170	222 783
HR	.	5 988	6 400	6 544	6 886	7 389	7 611	7 056	8 653	10 036	11 366	12 584
IT	134 345	138 946	137 201	138 932	140 593	139 532	140 832	127 664	137 521	155 819	166 211	171 372
CY	.	1 521	1 647	1 713	2 128	2 235	2 320	2 114	2 430	2 888	3 080	3 223
LV	2 220	2 248	2 361	2 372	2 548	2 826	2 951	2 913	3 232	3 762	4 072	4 148
LT	3 706	3 879	3 954	4 097	4 426	4 637	4 875	4 920	5 392	6 427	6 958	7 380
HU	11 497	11 969	12 779	12 344	13 682	14 422	15 533	14 595	15 873	17 532	19 957	.
MT	808	932	893	950	1 050	1 200	1 263	1 173	1 323	1 558	1 674	1 816
NL	47 134	47 199	49 756	50 500	53 024	59 060	65 480	65 220	69 460	77 905	81 645	85 348
AT	27 744	27 955	28 736	29 768	30 909	31 954	32 613	30 216	31 690	36 590	38 283	39 416
PL	37 851	38 799	39 925	38 733	42 897	47 095	49 806	47 891	51 783	53 683	65 452	75 802
PT	16 220	17 020	17 598	17 890	18 653	19 734	20 550	18 118	19 990	23 883	24 987	27 526
RO	18 901	19 347	19 797	17 423	18 249	19 181	19 849	19 514	22 000	26 234	30 651	33 944
SI	3 229	3 490	3 491	3 506	3 620	3 940	4 163	3 730	4 434	5 145	5 415	5 589
SK	6 844	7 133	7 230	6 783	7 125	7 552	8 183	8 063	8 352	9 672	10 359	10 967
FI	20 008	20 181	20 069	20 679	21 723	22 204	23 069	22 735	23 647	25 604	25 864	26 238
SE	40 432	40 147	42 244	44 017	45 811	44 515	44 058	44 716	51 358	53 846	50 844	52 665
EU*	934 026	961 415	980 224	999 379	1 045 692	1 081 018	1 123 709	1 032 800	1 152 025	1 282 099	1 351 160	.
Former EU Member State												
UK	157 263	177 775	203 316	187 922	183 644	188 440	190 221	.	.	.	.	.
EU candidate countries and potential candidates												
AL	.	.	.	.	.	.	1 599	1 529	1 680	2 026	2 346	.
GE	.	.	.	.	.	.	1 710	1 647	1 918	2 580	3 135	.
UA	.	.	.	.	.	.	18 170	17 428	20 302	.	.	.
XK	.	.	.	.	.	.	1 042	1 040	1 202	1 372	1 469	.
Countries with estimates outside plausible ranges**												
LU**	3 545	3 889	3 510	3 503	3 561	3 845	4 016	4 010	4 452	4 953	5 112	.
BA**	.	.	.	.	.	.	2 308	2 108	2 337	2 754	3 056	.
MK**	.	.	.	.	.	.	905	841	932	1 042	1 132	.
RS**	.	.	.	.	.	.	4 807	4 900	5 577	6 506	7 212	.

Source: own elaboration. Download underlying data [here](#).

Annotation: * EU estimates exclude Luxembourg due to recent data revisions yielding results outside plausible ranges.

** Estimates for these countries are outside plausible ranges due to missing or poor-quality underlying data, or inconsistencies in the results that could not be resolved to date. They are nevertheless reported here for transparency and completeness.

Table 198. Household final consumption liability (EUR million)

Country	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
EU Member States											
BE	17 586	17 326	17 855	18 522	19 148	19 731	20 273	18 408	19 906	21 820	22 499
BG	3 451	3 567	3 615	3 735	3 986	4 057	4 430	4 182	4 940	6 011	6 513
CZ	9 303	8 917	9 447	9 900	10 661	11 457	11 962	10 642	11 339	13 596	14 721
DK	15 992	16 165	16 604	17 289	18 052	18 836	19 283	18 902	20 472	22 000	21 398
DE	139 672	142 792	140 938	145 894	149 768	153 562	163 087	134 904	156 096	174 968	183 222
EE	1 273	1 338	1 374	1 437	1 525	1 628	1 714	1 658	1 868	2 287	2 449
IE	7 243	7 418	7 732	7 816	7 278	8 014	8 617	7 178	8 197	10 016	11 474
EL	13 498	12 750	13 459	14 745	15 827	16 604	16 184	12 594	13 794	16 645	17 481
ES	50 150	51 285	52 864	55 178	58 709	60 170	61 274	48 868	56 858	64 405	67 591
FR	94 591	98 441	98 826	99 691	102 853	106 028	104 849	95 534	104 835	115 677	122 213
HR	.	4 416	4 613	4 792	5 079	5 353	5 411	4 621	5 875	7 066	7 511
IT	95 797	98 362	98 134	99 315	100 344	102 153	103 020	88 464	93 823	107 555	114 785
CY	.	961	1 084	1 121	1 231	1 298	1 341	1 107	1 281	1 513	1 661
LV	1 729	1 748	1 801	1 868	1 963	2 075	2 140	2 051	2 291	2 756	2 916
LT	3 063	3 168	3 233	3 394	3 664	3 846	3 994	3 835	4 266	4 952	5 217
HU	8 221	8 297	8 605	9 033	9 528	9 541	10 156	8 947	9 875	10 993	12 694
MT	437	458	521	542	588	633	666	488	573	767	869
NL	25 882	25 363	25 953	26 218	27 205	30 541	33 284	32 304	35 400	40 082	43 416
AT	18 984	18 992	19 259	19 885	20 658	21 358	21 808	19 304	19 717	23 557	24 751
PL	26 146	26 878	27 605	27 434	30 211	32 277	34 533	33 120	35 378	36 422	42 946
PT	12 210	12 823	13 190	13 345	13 791	14 455	15 091	12 867	14 063	17 169	17 628
RO	11 171	11 677	12 153	10 946	11 495	12 362	13 124	12 200	14 041	17 041	19 585
SI	2 284	2 442	2 448	2 575	2 679	2 840	2 991	2 622	3 093	3 585	3 715
SK	5 101	5 303	5 007	5 054	5 437	5 732	6 044	6 058	6 158	7 108	7 480
FI	11 041	11 074	11 386	11 575	11 830	12 121	12 205	11 684	12 443	13 515	13 881
SE	21 100	20 672	22 041	22 604	23 327	22 877	22 688	22 542	26 441	27 875	26 195
EU*	595 924	612 632	619 748	633 905	656 838	679 550	700 168	615 082	683 024	769 379	814 810
Former EU Member State											
UK	102 731	118 086	133 938	124 841	122 972	126 962	128 370	.	.	.	.
EU candidate countries and potential candidates											
AL	.	.	.	.	.	.	1 429	1 347	1 463	1 746	2 070
GE	.	.	.	.	.	.	1 162	1 181	1 401	1 844	2 176
UA	.	.	.	.	.	.	14 166	13 882	16 279	.	.
XK	.	.	.	.	.	.	744	757	868	1 005	1 073
Countries with estimates outside plausible ranges**											
LU**	1 129	1 238	1 289	1 423	1 450	1 540	1 535	1 425	1 690	1 911	1 899
BA**	.	.	.	.	.	.	1 803	1 660	1 820	2 156	2 407
MK**	.	.	.	.	.	.	626	581	627	709	793
RS**	.	.	.	.	.	.	3 469	3 444	3 903	4 638	5 145

Source: own elaboration. Download underlying data [here](#).

Annotation: * EU estimates exclude Luxembourg due to recent data revisions yielding results outside plausible ranges.

** Estimates for these countries are outside plausible ranges due to missing or poor-quality underlying data, or inconsistencies in the results that could not be resolved to date. They are nevertheless reported here for transparency and completeness.

Table 199. NPISH and government final consumption liability (EUR million)

Country	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
EU Member States											
BE	1 419	1 424	1 435	1 272	1 401	1 472	1 532	1 629	1 835	1 994	2 094
BG	138	155	141	145	152	175	196	230	271	287	329
CZ	728	704	772	799	788	896	987	1 007	1 045	1 113	1 266
DK	700	709	723	687	714	711	730	749	806	813	821
DE	5 896	6 207	6 553	6 825	6 924	7 199	7 648	7 443	11 867	12 503	12 668
EE	26	34	35	64	68	76	86	90	101	113	127
IE	181	173	183	202	194	667	711	794	908	1 001	1 101
EL	582	424	615	688	734	674	719	865	892	806	836
ES	2 387	2 413	2 433	2 494	2 715	2 894	3 094	3 087	3 228	3 624	3 833
FR	1 426	1 606	1 631	1 695	1 737	1 777	2 832	3 993	4 077	4 208	4 382
HR	.	209	212	195	216	191	192	485	541	572	656
IT	2 095	2 054	2 207	2 343	1 689	1 597	1 605	2 255	2 344	2 591	2 514
CY	.	30	28	27	26	28	29	33	40	44	47
LV	45	43	49	56	66	69	69	73	96	99	109
LT	43	41	43	44	46	43	52	52	61	67	112
HU	385	371	393	362	422	474	608	737	735	697	807
MT	15	16	15	47	53	57	63	74	81	83	91
NL	565	556	595	571	568	489	643	631	763	831	898
AT	758	957	943	947	958	1 486	1 533	1 587	1 644	1 764	1 879
PL	1 600	1 698	1 758	1 743	1 821	1 958	1 908	1 954	2 241	2 433	2 801
PT	219	229	444	487	535	550	593	598	592	637	664
RO	794	940	894	793	718	769	999	1 118	1 064	1 194	1 245
SI	62	69	76	85	83	97	99	107	117	125	136
SK	96	93	96	98	98	132	104	103	94	107	118
FI	456	465	478	504	489	520	565	566	557	634	672
SE	2 223	2 184	1 814	1 768	1 821	1 827	1 904	1 906	2 237	2 327	2 345
EU*	22 840	23 801	24 567	24 943	25 035	26 828	29 502	32 166	38 236	40 668	42 551
Former EU Member State											
UK	2 967	3 176	4 706	3 733	3 527	3 428	3 656	.	.	.	.
EU Candidate countries and potential candidates											
AL	.	.	.	.	.	.	19	21	21	29	35
GE	.	.	.	.	.	.	2	2	2	3	4
UA	.	.	.	.	.	.	375	254	272	.	.
XK	.	.	.	.	.	.	17	18	19	20	23
Countries with estimates outside plausible ranges**											
LU**	31	30	32	33	43	37	38	41	45	47	50
BA**	.	.	.	.	.	.	26	27	29	32	35
MK**	.	.	.	.	.	.	7	7	8	8	9
RS**	.	.	.	.	.	.	59	63	93	104	115

Source: own elaboration. Download underlying data [here](#).

Annotation: * EU estimates exclude Luxembourg due to recent data revisions yielding results outside plausible ranges.

** Estimates for these countries are outside plausible ranges due to missing or poor-quality underlying data, or inconsistencies in the results that could not be resolved to date. They are nevertheless reported here for transparency and completeness.

Table 200. Intermediate consumption liability (EUR million)

Country	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
EU Member States											
BE	6 407	6 103	6 697	7 017	7 331	7 815	8 223	8 051	8 878	9 832	10 357
BG	497	568	567	586	645	761	809	785	879	1 062	1 152
CZ	2 773	2 608	2 789	2 940	3 206	3 506	3 873	3 855	4 234	5 030	5 574
DK	7 093	7 086	7 149	6 933	7 209	7 439	7 821	8 023	8 557	9 531	9 502
DE	39 982	42 450	44 879	47 417	49 274	52 101	54 424	52 409	61 669	67 056	67 585
EE	227	232	244	263	319	344	380	361	410	482	556
IE	3 054	3 200	3 808	3 820	4 492	4 121	4 516	3 767	4 430	4 997	5 406
EL	1 769	1 759	1 988	2 006	2 189	1 873	1 934	1 848	2 063	2 199	2 180
ES	8 818	8 525	8 451	8 552	10 204	10 634	11 310	11 375	13 404	15 578	16 600
FR	27 867	27 176	30 159	30 568	32 095	32 866	34 318	33 011	37 319	40 655	40 431
HR	.	742	896	970	991	1 015	1 019	838	977	1 068	1 406
IT	18 786	21 543	21 250	21 634	22 324	22 371	22 629	23 062	23 513	25 353	24 973
CY	.	423	398	401	441	466	502	516	585	722	685
LV	299	293	317	323	347	442	498	496	537	626	657
LT	330	373	410	409	439	456	501	556	638	775	827
HU	1 468	1 607	1 709	1 692	1 882	2 040	2 192	2 147	2 460	2 780	3 073
MT	304	393	262	277	311	387	431	498	529	565	560
NL	13 000	12 853	13 718	13 687	14 220	16 346	16 910	17 307	18 161	19 283	19 384
AT	4 021	4 093	4 188	4 183	4 317	4 385	4 574	4 637	5 091	5 494	5 702
PL	5 460	5 482	5 925	5 847	6 384	7 401	7 692	7 176	8 248	8 551	11 012
PT	2 568	2 625	2 433	2 732	2 925	3 055	3 190	3 067	3 507	3 935	4 330
RO	1 778	2 196	2 132	1 729	1 837	2 095	2 275	2 551	2 749	3 069	3 521
SI	447	491	468	469	461	519	560	541	630	717	784
SK	911	883	931	877	908	966	1 162	1 100	1 288	1 531	1 664
FI	4 343	4 545	4 276	4 396	4 651	4 737	4 850	4 943	5 129	5 508	5 748
SE	9 941	9 797	10 299	10 569	10 815	10 628	10 658	11 026	12 098	12 789	12 370
EU*	162 143	168 048	176 340	180 294	190 217	198 767	207 252	203 947	227 985	249 190	256 041
Former EU Member State											
UK	34 448	39 300	44 960	40 605	38 441	38 807	38 869	.	.	.	.
EU candidate countries and potential candidates											
AL	.	.	.	.	.	.	116	119	128	149	173
GE	.	.	.	.	.	.	160	144	163	223	287
UA	.	.	.	.	.	.	1 884	1 868	2 104	.	.
XK	.	.	.	.	.	.	134	128	138	152	165
Countries with estimates outside plausible ranges**											
LU**	820	875	1 070	1 138	1 189	1 384	1 471	1 581	1 659	1 759	1 670
BA**	.	.	.	.	.	.	176	178	195	218	243
MK**	.	.	.	.	.	.	139	130	157	169	176
RS**	.	.	.	.	.	.	631	655	719	810	811

Source: own elaboration. Download underlying data [here](#).

Annotation: * EU estimates exclude Luxembourg due to recent data revisions yielding results outside plausible ranges.

** Estimates for these countries are outside plausible ranges due to missing or poor-quality underlying data, or inconsistencies in the results that could not be resolved to date. They are nevertheless reported here for transparency and completeness.

Table 201. GFCF liability (EUR million)

Country	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
EU Member States											
BE	4 725	4 739	4 957	4 808	5 319	5 653	5 769	5 541	5 707	6 396	6 828
BG	521	600	679	585	532	641	810	792	777	929	1 094
CZ	1 690	1 744	2 192	1 971	2 275	2 786	3 097	3 095	3 833	4 143	4 555
DK	3 179	3 276	3 402	3 828	4 025	4 225	4 083	4 219	4 715	4 934	4 775
DE	36 084	37 176	37 843	39 483	41 422	44 735	46 644	42 427	48 687	53 476	56 042
EE	278	298	323	318	381	420	455	510	534	609	743
IE	1 031	1 443	1 649	1 995	1 839	2 073	2 113	2 158	2 431	3 058	3 896
EL	2 691	2 114	1 641	1 355	1 605	1 047	1 070	874	1 080	1 256	1 396
ES	7 353	7 311	7 777	7 891	7 758	8 356	9 407	9 788	10 084	11 636	12 583
FR	31 814	32 852	31 667	32 168	36 803	37 305	40 328	38 621	43 209	44 622	46 023
HR	.	587	592	567	586	820	1 004	1 087	1 230	1 291	1 741
IT	13 564	13 305	13 318	13 883	14 625	13 696	15 557	15 733	19 685	22 333	26 146
CY	.	106	108	159	427	413	415	425	484	553	632
LV	186	211	238	175	217	293	299	344	365	339	454
LT	398	442	461	470	526	570	646	810	773	974	1 179
HU	1 222	1 506	1 894	1 099	1 658	2 234	2 511	2 730	2 754	3 021	3 335
MT	50	63	82	58	71	102	97	106	126	127	142
NL	7 205	7 867	8 962	9 481	10 487	11 272	14 183	14 603	14 657	17 096	17 359
AT	2 545	2 585	2 890	3 284	3 437	3 416	3 524	3 611	3 854	4 184	4 320
PL	3 647	4 033	4 072	3 139	3 890	4 824	5 028	5 018	5 237	5 435	7 768
PT	887	1 017	1 170	941	1 031	1 187	1 237	1 285	1 477	1 629	1 800
RO	4 740	3 821	4 193	3 638	3 950	4 018	3 394	3 524	4 187	4 979	6 319
SI	334	401	419	303	329	402	427	402	523	642	690
SK	725	869	1 206	763	680	761	915	860	869	986	1 167
FI	3 622	3 498	3 316	3 513	3 987	4 300	4 842	4 942	4 889	5 273	4 964
SE	6 562	6 861	7 521	8 486	9 307	8 857	8 487	9 001	10 390	10 626	9 714
EU*	135 053	138 726	142 574	144 362	157 168	164 407	176 343	172 506	192 556	210 545	225 666
Former EU Member State											
UK	13 466	15 202	18 555	17 396	16 997	17 269	18 516	.	.	.	.
EU candidate countries and potential candidates											
AL	.	.	.	.	.	.	208	205	241	248	268
GE	.	.	.	.	.	.	367	302	321	453	593
UA	.	.	.	.	.	.	1 707	1 404	1 614	.	.
XK	.	.	.	.	.	.	128	117	152	168	177
Countries with estimates outside plausible ranges**											
LU**	306	348	411	625	580	565	613	682	611	768	997
BA**	.	.	.	.	.	.	303	244	294	348	371
MK**	.	.	.	.	.	.	107	102	121	134	131
RS**	.	.	.	.	.	.	628	716	835	923	1 111

Source: own elaboration. Download underlying data [here](#).

Annotation: * EU estimates exclude Luxembourg due to recent data revisions yielding results outside plausible ranges.

** Estimates for these countries are outside plausible ranges due to missing or poor-quality underlying data, or inconsistencies in the results that could not be resolved to date. They are nevertheless reported here for transparency and completeness.

Table 202. Net adjustments (EUR million)

Country	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
EU Member States											
BE	1 075	680	634	644	688	693	744	561	614	767	865
BG	51	40	42	8	7	-3	-9	10	13	16	17
CZ	-3	-25	-24	-9	-4	-86	-83	-111	-111	-69	-170
DK	724	720	733	761	777	792	808	763	841	977	939
DE	1 384	1 618	2 223	1 791	2 304	913	1 091	1 530	1 851	2 178	1 743
EE	9	9	9	11	12	2	3	-1	-2	0	0
IE	160	173	172	195	303	293	210	125	118	145	150
EL	267	239	263	281	308	305	355	278	300	359	395
ES	392	655	759	675	746	842	923	755	1 026	992	989
FR	4 932	5 445	5 238	5 190	5 067	4 461	4 920	3 987	4 002	4 780	5 121
HR	.	33	87	20	13	10	-16	26	30	39	52
IT	4 102	3 682	2 292	1 758	1 611	-285	-1 979	-1 850	-1 844	-2 012	-2 208
CY	.	0	28	5	4	29	33	33	40	55	55
LV	-39	-47	-44	-49	-45	-53	-56	-51	-57	-58	-64
LT	-127	-145	-192	-220	-249	-279	-318	-333	-346	-340	-376
HU	202	189	177	158	191	134	66	33	49	41	48
MT	3	2	13	27	27	22	7	7	14	16	12
NL	482	560	528	543	545	411	459	376	478	612	587
AT	1 436	1 328	1 456	1 469	1 539	1 310	1 175	1 077	1 384	1 591	1 631
PL	998	709	564	571	591	635	646	623	679	842	925
PT	336	326	361	385	372	487	438	302	352	513	563
RO	418	713	425	317	250	-65	57	121	-41	-48	-20
SI	101	87	79	74	68	83	86	58	71	76	89
SK	11	-14	-10	-9	2	-38	-43	-59	-57	-60	-71
FI	545	598	613	691	768	527	608	600	629	674	600
SE	606	634	569	590	541	326	321	241	193	229	221
EU*	18 066	18 209	16 996	15 876	16 435	11 466	10 444	9 100	10 224	12 316	12 092
Former EU Member State											
UK	3 652	2 010	1 156	1 347	1 707	1 974	810	.	.	.	.
EU candidate countries and potential candidates											
AL	.	.	.	.	.	.	-173	-164	-172	-146	-200
GE	.	.	.	.	.	.	19	18	30	56	76
UA	.	.	.	.	.	.	38	20	32	.	.
XK	.	.	.	.	.	.	19	20	24	27	31
Countries with estimates outside plausible ranges**											
LU**	1 259	1 398	709	284	300	319	359	281	446	468	495
BA**	.	.	.	.	.	.	0	0	0	0	0
MK**	.	.	.	.	.	.	27	21	18	22	22
RS**	.	.	.	.	.	.	22	23	27	31	31

Source: own elaboration. Download underlying data [here](#).

Annotation: * EU estimates exclude Luxembourg due to recent data revisions yielding results outside plausible ranges.

** Estimates for these countries are outside plausible ranges due to missing or poor-quality underlying data, or inconsistencies in the results that could not be resolved to date. They are nevertheless reported here for transparency and completeness.

Table 203. VAT revenues (EUR million)

Country	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
EU Member States												
BE	27 250	27 518	27 594	28 750	29 763	31 053	31 702	29 061	34 283	36 031	37 413	37 814
BG	3 898	3 810	4 059	4 417	4 873	5 128	5 655	5 635	6 671	7 786	8 324	.
CZ	11 694	11 602	12 382	13 101	14 703	16 075	16 931	16 022	18 084	21 857	23 859	.
DK	24 320	24 950	25 672	26 770	28 049	29 199	29 064	30 528	32 786	35 231	34 120	35 628
DE	197 005	203 081	211 616	218 779	226 582	235 130	244 112	221 565	260 333	289 641	289 965	296 831
EE	1 558	1 711	1 873	1 975	2 149	2 331	2 483	2 469	2 847	3 309	3 476	3 846
IE	10 372	11 528	11 831	12 603	13 060	14 149	15 271	13 552	16 602	18 769	20 195	.
EL	12 593	12 676	12 885	14 333	14 642	15 288	15 390	12 925	15 160	18 621	19 756	21 384
ES	60 951	62 825	67 913	70 214	73 970	77 536	79 301	69 435	82 249	92 250	93 825	100 300
FR	144 490	148 454	151 680	154 490	162 011	168 177	174 424	162 090	185 350	199 272	206 049	206 332
HR	.	5 455	5 698	5 991	6 404	6 841	7 305	6 322	7 647	8 895	10 492	11 450
IT	93 921	96 567	100 345	102 086	107 576	109 333	113 687	102 580	116 712	133 232	141 199	145 178
CY	.	1 512	1 506	1 654	1 720	1 955	2 066	1 786	2 182	2 706	2 979	3 170
LV	1 690	1 787	1 876	2 032	2 164	2 449	2 653	2 569	2 866	3 689	3 851	3 926
LT	2 611	2 764	2 889	3 028	3 310	3 522	3 856	4 009	4 688	5 644	5 911	6 408
HU	9 073	9 754	10 676	10 595	11 729	12 950	13 916	13 429	15 230	17 100	18 474	.
MT	582	642	673	712	810	920	934	849	1 001	1 190	1 269	1 401
NL	42 408	42 951	44 746	47 849	49 833	52 712	58 115	58 971	65 400	70 458	75 920	79 145
AT	24 895	25 386	26 247	27 301	28 304	29 323	30 388	28 169	30 622	35 497	37 891	39 175
PL	27 780	29 317	30 089	30 854	36 339	40 423	42 383	41 856	49 317	47 672	54 999	67 522
PT	13 710	14 682	15 368	15 767	16 810	17 868	18 926	16 941	19 289	22 909	24 086	26 272
RO	11 710	11 496	12 939	10 968	11 650	12 890	13 711	13 450	15 511	19 238	21 449	23 936
SI	3 046	3 155	3 220	3 318	3 481	3 763	3 962	3 553	4 294	4 713	5 150	5 339
SK	4 696	5 021	5 423	5 424	5 919	6 319	6 830	6 749	7 366	8 556	9 272	9 904
FI	18 888	18 948	18 974	19 694	20 404	21 364	21 974	22 005	23 551	25 061	25 087	25 856
SE	39 048	38 846	40 532	42 788	44 098	43 403	43 412	43 981	49 215	51 954	48 132	48 617
EU*	788 189	816 437	848 707	875 494	920 353	960 101	998 450	930 502	1 069 255	1 181 280	1 223 143	.
Former EU Member State												
UK	139 220	158 347	183 164	167 827	162 724	168 703	176 317	.	.	.	.	.
EU candidate countries and potential candidates												
AL	.	.	.	.	.	.	1 076	1 053	1 319	1 609	1 768	.
GE	.	.	.	.	.	.	1 553	1 331	1 572	2 442	2 967	.
UA	.	.	.	.	.	.	12 990	12 692	16 748	.	.	.
XK	.	.	.	.	.	.	850	778	1 032	1 214	1 350	.
Countries with estimates outside plausible ranges**												
LU**	3 438	3 749	2 991	3 148	3 382	3 534	3 948	3 843	4 539	5 098	5 102	.
BA**	.	.	.	.	.	.	2 057	1 911	2 265	2 619	2 857	.
MK**	.	.	.	.	.	.	846	760	944	1 051	1 138	.
RS**	.	.	.	.	.	.	4 662	4 617	5 605	6 677	7 251	.

Source: own elaboration. Download underlying data [here](#).

Annotation: * EU estimates exclude Luxembourg due to recent data revisions yielding results outside plausible ranges.

** Estimates for these countries are outside plausible ranges due to missing or poor-quality underlying data, or inconsistencies in the results that could not be resolved to date. They are nevertheless reported here for transparency and completeness.

Table 204. VAT compliance gap (EUR million)

Country	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
EU Member States												
BE	3 962	2 755	3 984	3 513	4 124	4 311	4 839	5 128	2 657	4 777	5 230	6 126
BG	761	1 121	985	641	450	501	580	364	209	519	781	.
CZ	2 796	2 345	2 794	2 499	2 223	2 485	2 904	2 465	2 256	1 955	2 087	.
DK	3 367	3 006	2 938	2 727	2 728	2 805	3 661	2 128	2 604	3 024	3 314	3 080
DE	26 013	27 161	20 820	22 632	23 111	23 381	28 783	17 148	19 837	20 541	31 295	32 029
EE	256	200	113	117	156	138	155	148	64	182	398	429
IE	1 296	878	1 712	1 426	1 047	1 020	896	469	-519	448	1 832	.
EL	6 214	4 611	5 080	4 742	6 021	5 215	4 872	3 533	2 969	2 644	2 532	2 116
ES	8 149	7 364	4 370	4 577	6 163	5 360	6 707	4 439	2 350	3 986	7 771	10 796
FR	16 140	17 066	15 841	14 822	16 544	14 259	12 823	13 056	8 093	10 670	12 121	16 451
HR	.	533	702	553	482	548	306	734	1 006	1 141	875	1 134
IT	40 424	42 379	36 856	36 846	33 017	30 199	27 145	25 084	20 809	22 587	25 012	26 194
CY	.	9	141	59	408	280	254	328	248	182	101	54
LV	530	460	484	340	384	377	298	345	366	74	220	222
LT	1 095	1 115	1 065	1 070	1 116	1 115	1 019	912	704	783	1 048	971
HU	2 424	2 215	2 103	1 748	1 953	1 473	1 617	1 166	643	432	1 484	.
MT	226	290	220	238	240	281	329	324	323	369	405	415
NL	4 726	4 248	5 010	2 651	3 191	6 348	7 365	6 249	4 060	7 447	5 725	6 203
AT	2 849	2 569	2 488	2 466	2 605	2 631	2 226	2 048	1 068	1 094	392	241
PL	10 071	9 483	9 836	7 879	6 558	6 672	7 423	6 035	2 467	6 011	10 453	8 279
PT	2 511	2 338	2 230	2 123	1 844	1 866	1 623	1 177	701	974	900	1 254
RO	7 192	7 850	6 858	6 454	6 599	6 291	6 138	6 063	6 489	6 997	9 201	10 008
SI	183	335	271	188	138	177	200	177	141	432	264	251
SK	2 147	2 112	1 808	1 360	1 206	1 233	1 353	1 314	987	1 116	1 087	1 062
FI	1 120	1 233	1 095	985	1 319	840	1 095	730	96	543	777	382
SE	1 384	1 302	1 712	1 228	1 713	1 112	645	735	2 143	1 893	2 712	4 047
EU*	145 837	144 978	131 517	123 885	125 339	120 917	125 258	102 299	82 771	100 819	128 017	.
Former EU Member State												
UK	18 043	19 427	20 151	20 095	20 920	19 737	13 904	.	.	.	.	.
EU candidate countries and potential candidates												
AL	.	.	.	.	.	.	522	475	361	417	578	.
GE	.	.	.	.	.	.	157	315	346	138	169	.
UA	.	.	.	.	.	.	5 180	4 736	3 553	.	.	.
XK	.	.	.	.	.	.	191	262	169	158	119	.
Countries with estimates outside plausible ranges**												
LU**	107	140	519	355	180	311	68	167	-87	-146	9	.
BA**	.	.	.	.	.	.	251	197	72	135	199	.
MK**	.	.	.	.	.	.	59	80	-12	-9	-6	.
RS**	.	.	.	.	.	.	146	283	-28	-171	-39	.

Source: own elaboration. Download underlying data [here](#).

Annotation: * EU estimates exclude Luxembourg due to recent data revisions yielding results outside plausible ranges.

** Estimates for these countries are outside plausible ranges due to missing or poor-quality underlying data, or inconsistencies in the results that could not be resolved to date. They are nevertheless reported here for transparency and completeness.

Table 205. VAT compliance gap – all available estimates (%)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
	Backcasted series																			Full estimates					Forecast
EU Member States																									
BE	7.2%	11.8%	9.6%	12.8%	11.2%	10.9%	11.2%	9.5%	13.2%	13.9%	12.2%	13.5%	15.3%	13.6%	10.0%	13.1%	11.4%	12.6%	12.4%	13.2%	15.0%	7.2%	11.7%	12.3%	13.9%
BG	33.3%	35.8%	43.9%	32.8%	23.6%	19.5%	16.6%	22.1%	14.0%	24.8%	21.8%	23.6%	19.3%	14.2%	20.0%	17.4%	10.2%	6.0%	8.9%	9.3%	6.1%	3.0%	6.3%	8.6%	.
CZ	24.9%	24.2%	24.6%	26.8%	7.4%	5.5%	11.1%	14.9%	18.7%	20.3%	23.2%	18.7%	21.8%	20.7%	18.2%	18.9%	16.5%	13.6%	14.6%	14.6%	13.3%	11.1%	8.2%	8.0%	.
DK	16.1%	15.7%	15.1%	14.5%	14.6%	13.8%	13.9%	13.6%	15.7%	14.1%	14.6%	15.0%	14.8%	15.8%	14.4%	13.9%	12.3%	11.9%	11.6%	11.2%	6.5%	7.4%	7.9%	8.9%	8.0%
DE	12.0%	14.4%	13.9%	13.7%	13.9%	13.8%	12.5%	14.2%	13.3%	10.6%	10.8%	12.1%	13.3%	13.5%	13.4%	10.8%	11.0%	10.9%	11.1%	10.5%	7.2%	7.1%	6.6%	9.7%	9.7%
EE	11.0%	14.5%	15.3%	16.1%	22.0%	12.4%	8.9%	7.7%	17.7%	11.3%	12.5%	14.4%	14.6%	16.1%	12.5%	7.7%	7.5%	7.1%	5.9%	5.9%	5.7%	2.2%	5.2%	10.3%	10.0%
IE	9.5%	1.6%	4.1%	6.0%	3.1%	7.3%	7.3%	8.7%	10.8%	15.1%	12.0%	11.3%	11.3%	6.3%	2.8%	8.3%	5.9%	8.5%	6.0%	5.5%	3.3%	-3.2%	2.3%	8.3%	.
EL	15.8%	13.0%	13.9%	18.4%	19.0%	21.8%	22.8%	22.5%	20.3%	26.1%	22.6%	30.1%	24.9%	28.3%	21.9%	25.8%	24.8%	29.0%	25.5%	24.0%	21.5%	16.4%	12.4%	11.4%	9.0%
ES	6.4%	8.3%	9.6%	6.7%	5.0%	0.6%	1.3%	9.9%	21.9%	34.5%	11.8%	16.2%	12.6%	14.4%	11.1%	7.1%	7.2%	7.6%	6.4%	7.8%	6.0%	2.8%	4.1%	7.6%	9.7%
FR	2.4%	4.3%	5.8%	6.3%	5.1%	5.0%	5.5%	5.5%	7.3%	11.5%	6.7%	5.4%	9.7%	8.1%	8.3%	7.5%	6.8%	7.3%	6.5%	6.8%	7.5%	4.2%	5.1%	5.6%	7.4%
HR	.	.	.	.	.	.	.	.	.	.	.	.	.	.	12.7%	13.8%	11.2%	9.7%	10.3%	4.0%	10.4%	11.6%	11.4%	7.7%	9.0%
IT	22.8%	24.8%	24.1%	28.1%	28.5%	27.5%	23.9%	23.5%	26.4%	31.5%	23.9%	27.0%	26.3%	27.6%	26.2%	24.4%	24.1%	20.9%	20.1%	19.3%	19.6%	15.1%	14.5%	15.0%	15.3%
CY	.	.	.	.	.	.	.	.	.	.	.	.	.	.	12.3%	22.0%	16.2%	18.1%	11.4%	11.0%	15.5%	10.2%	6.3%	3.3%	1.7%
LV	14.2%	19.0%	20.1%	20.0%	21.3%	13.4%	9.7%	9.2%	24.1%	40.4%	32.7%	34.6%	26.3%	26.6%	23.1%	22.7%	15.4%	16.8%	12.8%	10.1%	11.8%	11.3%	2.0%	5.4%	5.3%
LT	25.4%	28.6%	27.8%	33.1%	37.3%	31.1%	27.8%	23.6%	23.9%	34.9%	29.6%	29.8%	31.0%	31.1%	30.3%	27.0%	26.1%	25.2%	24.1%	20.9%	18.5%	13.1%	12.2%	15.1%	13.2%
HU	16.9%	22.8%	24.9%	20.9%	18.4%	22.0%	22.3%	19.4%	21.5%	21.3%	21.6%	21.3%	21.5%	21.0%	18.4%	15.8%	13.5%	13.6%	9.5%	10.4%	8.0%	4.1%	2.5%	7.4%	.
MT	31.4%	32.1%	30.4%	30.1%	34.8%	24.0%	24.8%	27.7%	26.8%	25.1%	29.2%	30.2%	31.6%	30.7%	31.8%	22.2%	23.1%	20.9%	21.9%	26.0%	27.6%	24.4%	23.7%	24.2%	22.9%
NL	16.7%	15.8%	14.5%	13.9%	11.2%	10.7%	10.2%	8.1%	11.5%	16.7%	9.3%	13.7%	13.1%	13.9%	12.8%	13.9%	9.1%	9.9%	10.9%	11.2%	9.6%	5.8%	9.6%	7.0%	7.3%
AT	7.2%	8.9%	6.0%	9.3%	9.7%	9.8%	12.1%	11.0%	11.0%	7.3%	9.4%	11.2%	8.4%	9.8%	8.7%	8.2%	7.8%	7.9%	8.3%	6.8%	6.8%	3.4%	3.0%	1.0%	0.6%
PL	27.3%	31.4%	28.8%	28.0%	27.4%	19.7%	15.7%	12.4%	19.1%	25.2%	22.5%	22.8%	29.0%	28.6%	26.4%	26.6%	22.3%	17.7%	15.2%	14.9%	12.6%	4.8%	11.2%	16.0%	10.9%
PT	-1.1%	0.7%	1.4%	1.5%	2.2%	-1.3%	1.1%	2.6%	4.0%	15.0%	12.6%	12.9%	15.1%	15.3%	13.4%	12.3%	11.5%	9.6%	8.8%	7.9%	6.5%	3.5%	4.1%	3.6%	4.6%
RO	32.7%	40.0%	30.5%	30.4%	35.9%	25.5%	28.3%	27.1%	28.3%	40.3%	35.6%	31.5%	32.8%	33.1%	35.5%	29.8%	32.2%	32.0%	29.0%	30.9%	31.1%	29.5%	26.7%	30.0%	29.5%
SI	2.8%	4.7%	4.2%	5.1%	4.9%	4.6%	4.1%	6.0%	8.2%	10.0%	8.0%	5.8%	8.8%	5.2%	9.1%	7.2%	4.8%	3.3%	3.7%	4.8%	4.7%	3.2%	8.4%	4.9%	4.5%
SK	20.9%	20.8%	22.1%	14.6%	17.5%	14.1%	20.8%	24.7%	23.6%	30.0%	31.4%	25.6%	35.1%	29.8%	28.0%	25.1%	20.1%	17.0%	16.5%	16.5%	16.3%	11.8%	11.5%	10.5%	9.7%
FI	6.6%	7.8%	7.3%	7.4%	8.1%	6.0%	6.4%	9.0%	9.7%	4.6%	8.4%	5.1%	4.8%	5.3%	5.6%	4.9%	4.2%	5.5%	3.9%	4.7%	3.2%	0.4%	2.1%	3.0%	1.5%
SE	6.2%	6.4%	6.2%	5.3%	5.0%	4.7%	5.7%	4.4%	3.3%	2.5%	2.2%	2.9%	5.8%	2.5%	2.3%	2.0%	0.7%	1.7%	0.9%	1.5%	1.6%	4.2%	3.5%	5.3%	7.7%
EU (average)*	11.6%	13.3%	13.2%	13.3%	13.1%	12.4%	12.2%	13.0%	15.2%	17.7%	13.6%	14.5%	15.2%	14.9%	14.1%	12.8%	12.1%	11.8%	11.2%	10.6%	9.9%	7.2%	7.9%	9.5%	.
EU (median)*	15.0%	15.1%	14.8%	14.5%	14.3%	12.9%	11.7%	11.7%	16.7%	18.5%	13.6%	15.6%	15.2%	15.6%	13.4%	13.9%	11.4%	11.4%	11.0%	10.5%	8.8%	6.5%	7.3%	8.2%	.
Former EU Member State																									
UK	12.7%	13.5%	13.1%	10.2%	11.4%	11.6%	13.0%	13.1%	15.0%	13.8%	12.2%	10.9%	11.9%	10.8%	10.9%	9.9%	10.7%	11.4%	10.5%	7.3%	.	.	.	.	.
EU candidate countries and potential candidates																									
AL	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	32.7%	31.1%	21.5%	20.6%	24.6%	.
GE	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	9.2%	19.2%	18.0%	5.4%	5.4%	.
UA	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	28.5%	27.2%	17.5%	.	.	.
XK	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	18.4%	25.2%	14.1%	11.5%	8.1%	.
Countries with estimates outside plausible ranges**																									
LU**	11.7%	11.4%	9.6%	9.4%	7.1%	5.5%	5.2%	7.4%	9.2%	5.4%	5.4%	5.8%	5.3%	6.5%	6.8%	5.6%	6.5%	0.3%	4.6%	1.7%	4.2%	-2.0%	-2.9%	0.2%	.
BA**	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	10.9%	9.3%	3.1%	4.9%	6.5%	.
MK**	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	6.5%	9.6%	-1.3%	-0.8%	-0.6%	.
RS**	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	3.0%	5.8%	-0.5%	-2.6%	-0.5%	.

Source: own elaboration. Download underlying data [here](#).

Annotation: "EU (average)" refers to the weighted average, calculated using each country's share in the EU VTTL as its weight. "EU (median)" represents a robust central estimate: half of the Member States score above it, and half below.

* EU estimates exclude Luxembourg due to recent data revisions yielding results outside plausible ranges.

** Estimates for these countries are outside plausible ranges due to missing or poor-quality underlying data, or inconsistencies in the results that could not be resolved to date. They are nevertheless reported here for transparency and completeness.

Table 206. Notional ideal revenue (EUR million)

Country	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
EU Member States												
BE	63 202	64 393	65 978	67 615	69 830	72 124	75 422	73 561	78 781	88 212	93 743	97 316
BG	6 764	7 016	7 381	7 516	7 890	8 137	8 873	8 796	10 193	12 201	13 700	15 159
CZ	24 849	24 142	25 798	26 525	28 864	30 692	34 563	33 527	37 114	43 352	47 640	48 254
DK	46 493	47 393	48 596	50 092	51 726	52 987	54 711	54 884	59 093	61 773	62 090	63 795
DE	401 452	411 656	419 350	436 513	449 845	463 153	494 126	466 236	518 150	567 113	594 199	617 435
EE	2 822	2 950	3 101	3 243	3 531	3 720	4 120	4 129	4 531	5 366	5 975	7 341
IE	24 752	25 313	26 505	28 010	29 536	31 924	33 440	31 879	36 098	42 780	48 459	48 947
EL	39 227	38 235	38 003	37 946	40 331	39 940	41 441	37 415	40 991	47 418	51 329	53 367
ES	173 374	174 156	179 424	184 730	193 095	196 461	203 637	183 585	202 772	229 677	248 643	265 654
FR	346 808	354 844	357 136	363 013	372 534	378 887	390 880	380 980	407 026	437 177	458 705	474 066
HR	.	9 898	9 817	10 095	10 432	11 066	12 109	11 262	13 377	15 717	17 915	20 168
IT	287 321	295 442	300 229	304 356	310 495	311 171	313 637	290 532	317 231	352 574	377 653	388 897
CY	.	3 013	3 044	3 187	3 402	3 710	3 913	3 584	4 040	4 659	5 161	5 405
LV	3 843	3 976	4 067	4 163	4 481	6 890	4 592	4 526	4 995	5 651	6 327	6 602
LT	5 859	6 071	6 317	6 584	6 959	7 309	7 760	7 872	8 610	10 215	11 424	12 091
HU	20 078	20 585	21 749	22 055	24 707	26 476	29 072	27 642	29 970	33 302	38 637	40 649
MT	1 233	1 291	1 375	1 378	1 485	1 686	1 933	1 773	2 007	2 271	2 666	2 980
NL	99 025	100 529	104 235	106 305	110 381	120 008	123 893	123 195	133 472	148 224	159 472	168 229
AT	49 456	50 667	51 909	53 578	55 533	57 076	58 871	57 023	60 513	66 882	71 486	74 545
PL	73 946	76 717	78 299	76 091	82 417	85 631	92 817	91 295	98 223	114 315	131 787	149 308
PT	33 390	33 850	34 873	36 016	37 676	39 664	41 157	38 263	41 123	47 336	50 922	54 345
RO	26 463	27 997	29 829	26 627	29 237	30 467	33 319	33 274	36 961	43 292	49 649	54 454
SI	5 913	6 397	6 497	6 671	6 914	7 349	7 727	7 360	8 410	9 703	10 407	11 003
SK	11 336	11 593	12 234	12 282	12 838	13 576	14 495	14 707	15 621	18 049	19 410	20 472
FI	39 721	40 152	40 242	41 436	42 090	43 568	44 702	44 405	45 814	48 680	51 851	52 686
SE	77 482	76 446	79 236	81 864	84 204	82 437	83 472	84 959	94 053	96 779	94 756	98 817
EU*	1 864 813	1 914 723	1 955 224	1 997 893	2 070 433	2 126 106	2 214 682	2 116 663	2 309 171	2 552 718	2 724 008	2 851 986
Former EU Member State												
UK	354 837	389 401	443 640	409 925	394 943	398 104	412 290	.	.	.	.	.
EU candidate countries and potential candidates												
AL	.	.	.	.	.	.	2 216	2 132	2 343	2 744	3 237	.
GE	.	.	.	.	.	.	2 346	2 310	2 630	3 528	4 200	.
UA	.	.	.	.	.	.	22 412	22 007	25 542	.	.	.
XK	.	.	.	.	.	.	1 230	1 247	1 440	1 636	1 760	.
Countries with limited reliability of estimates**												
LU**	3 983	4 186	4 995	5 164	5 453	5 691	5 904	6 032	6 573	7 185	7 291	8 085
BA**	.	.	.	.	.	.	2 556	2 347	2 611	3 057	3 399	.
MK**	.	.	.	.	.	.	1 495	1 474	1 643	1 858	2 003	.
RS**	.	.	.	.	.	.	7 554	7 646	8 752	10 071	11 280	.

Source: own elaboration. Download underlying data [here](#).

Annotation: * EU estimates exclude Luxembourg due to recent data revisions yielding results outside plausible ranges.

** Estimates for these countries are outside plausible ranges due to missing or poor-quality underlying data, or inconsistencies in the results that could not be resolved to date. They are nevertheless reported here for transparency and completeness.

Table 207. VAT policy gap (EUR million)

Country	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
EU Member States												
BE	34 003	34 564	34 660	35 550	36 152	37 303	39 225	39 681	42 137	47 759	51 548	53 838
BG	1 806	2 001	2 063	2 312	2 380	2 505	2 625	2 804	3 322	3 906	4 608	5 257
CZ	8 200	9 169	10 001	10 750	11 589	12 636	14 542	14 842	16 563	19 298	21 405	22 160
DK	19 853	19 816	20 231	20 895	21 206	21 559	22 264	22 593	24 109	23 973	25 106	25 543
DE	171 019	184 369	185 907	196 738	201 816	206 141	221 165	227 461	237 907	256 853	272 855	288 489
EE	861	1 034	1 118	1 161	1 276	1 302	1 470	1 499	1 605	1 858	2 083	3 046
IE	12 995	13 120	13 682	14 886	15 765	17 059	17 383	17 962	20 128	23 712	26 599	26 986
EL	19 927	20 693	20 247	19 088	19 957	19 798	21 372	21 142	23 065	26 385	29 290	30 131
ES	93 449	102 753	106 802	108 301	112 245	114 206	117 629	109 712	118 172	133 436	147 043	154 564
FR	185 195	183 854	187 967	199 415	199 740	202 765	206 880	209 124	216 871	230 769	244 316	255 150
HR	.	3 550	3 538	3 373	3 356	3 462	4 461	4 209	4 729	5 690	6 566	7 602
IT	131 018	161 770	161 826	164 149	168 761	170 819	170 264	160 499	177 239	194 075	208 619	214 661
CY	.	1 350	1 371	1 247	1 340	1 554	1 619	1 498	1 642	1 815	2 125	2 226
LV	1 280	1 467	1 566	1 412	1 513	2 335	1 561	1 538	1 680	1 793	2 150	2 299
LT	1 494	1 549	1 786	2 155	2 181	2 371	2 552	2 600	2 849	3 422	4 068	4 285
HU	7 268	8 623	9 157	9 929	11 277	12 277	13 516	13 024	14 068	15 713	18 628	19 831
MT	512	160	430	519	554	577	666	596	679	713	987	1 147
NL	51 493	52 168	54 133	54 808	55 991	59 905	58 411	57 972	64 007	70 314	77 821	82 878
AT	20 129	22 941	23 677	24 723	25 596	26 054	27 156	27 527	29 588	31 136	34 098	36 052
PL	31 871	37 634	38 173	36 825	38 686	39 452	43 424	43 833	46 917	61 235	67 008	74 317
PT	17 330	17 212	17 699	18 233	19 177	20 089	20 841	20 319	21 320	23 662	26 167	27 094
RO	4 499	7 862	7 752	9 846	11 170	12 445	13 519	13 871	14 903	16 991	18 962	20 470
SI	2 561	2 937	3 042	3 165	3 299	3 437	3 607	3 659	4 014	4 595	5 041	5 464
SK	3 095	4 305	4 484	5 359	5 600	5 978	6 262	6 578	7 199	8 304	8 969	9 419
FI	19 940	20 095	20 252	21 307	21 020	21 843	22 229	22 256	22 784	23 738	26 573	27 039
SE	37 811	36 873	38 124	39 255	39 857	39 249	39 500	40 318	42 779	43 019	43 997	46 242
EU*	877 607	951 870	969 691	1 005 402	1 031 505	1 057 122	1 094 141	1 087 118	1 160 276	1 274 165	1 376 632	1 446 188
Former EU Member State												
UK	182 386	209 411	232 704	218 614	208 246	209 664	222 069	.	.	.	.	.
EU candidate countries and potential candidates												
AL	.	.	.	.	.	.	617	603	663	718	891	.
GE	.	.	.	.	.	.	636	663	712	948	1 065	.
UA	.	.	.	.	.	.	4 242	4 579	5 241	.	.	.
XK	.	.	.	.	.	.	188	207	238	264	290	.
Countries with limited reliability of estimates**												
LU**	2 119	1 735	2 110	1 806	2 088	2 015	2 246	2 301	2 567	2 699	2 673	3 192
BA**	.	.	.	.	.	.	249	239	274	304	342	.
MK**	.	.	.	.	.	.	590	633	711	816	871	.
RS**	.	.	.	.	.	.	2 746	2 746	3 174	3 565	4 068	.

Source: own elaboration. Download underlying data [here](#).

Annotation: * EU estimates exclude Luxembourg due to recent data revisions yielding results outside plausible ranges.

** Estimates for these countries are outside plausible ranges due to missing or poor-quality underlying data, or inconsistencies in the results that could not be resolved to date. They are nevertheless reported here for transparency and completeness.

Table 208. VAT policy gap (% of notional ideal revenue)

Country	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
EU Member States												
BE	53.8	53.7	52.5	52.6	51.8	51.7	52.0	53.9	53.5	54.1	55.0	55.3
BG	26.7	28.5	28.0	30.8	30.2	30.8	29.6	31.9	32.6	32.0	33.6	34.7
CZ	33.0	38.0	38.8	40.5	40.2	41.2	42.1	44.3	44.6	44.5	44.9	45.9
DK	42.7	41.8	41.6	41.7	41.0	40.7	40.7	41.2	40.8	38.8	40.4	40.0
DE	42.6	44.8	44.3	45.1	44.9	44.5	44.8	48.8	45.9	45.3	45.9	46.7
EE	30.5	35.0	36.1	35.8	36.1	35.0	35.7	36.3	35.4	34.6	34.9	41.5
IE	52.5	51.8	51.6	53.1	53.4	53.4	52.0	56.3	55.8	55.4	54.9	55.1
EL	50.8	54.1	53.3	50.3	49.5	49.6	51.6	56.5	56.3	55.6	57.1	56.5
ES	53.9	59.0	59.5	58.6	58.1	58.1	57.8	59.8	58.3	58.1	59.1	58.2
FR	53.4	51.8	52.6	54.9	53.6	53.5	52.9	54.9	53.3	52.8	53.3	53.8
HR	.	35.9	36.0	33.4	32.2	31.3	36.8	37.4	35.3	36.2	36.6	37.7
IT	45.6	54.8	53.9	53.9	54.4	54.9	54.3	55.2	55.9	55.0	55.2	55.2
CY	.	44.8	45.0	39.1	39.4	41.9	41.4	41.8	40.6	39.0	41.2	41.2
LV	33.3	36.9	38.5	33.9	33.8	33.9	34.0	34.0	33.6	31.7	34.0	34.8
LT	25.5	25.5	28.3	32.7	31.3	32.4	32.9	33.0	33.1	33.5	35.6	35.4
HU	36.2	41.9	42.1	45.0	45.6	46.4	46.5	47.1	46.9	47.2	48.2	48.8
MT	41.5	12.4	31.3	37.7	37.3	34.2	34.4	33.6	33.8	31.4	37.0	38.5
NL	52.0	51.9	51.9	51.6	50.7	49.9	47.1	47.1	48.0	47.4	48.8	49.3
AT	40.7	45.3	45.6	46.1	46.1	45.6	46.1	48.3	48.9	46.6	47.7	48.4
PL	43.1	49.1	48.8	48.4	46.9	46.1	46.8	48.0	47.8	53.6	50.8	49.8
PT	51.9	50.8	50.8	50.6	50.9	50.6	50.6	53.1	51.8	50.0	51.4	49.9
RO	17.0	28.1	26.0	37.0	38.2	40.8	40.6	41.7	40.3	39.2	38.2	37.6
SI	43.3	45.9	46.8	47.4	47.7	46.8	46.7	49.7	47.7	47.4	48.4	49.7
SK	27.3	37.1	36.7	43.6	43.6	44.0	43.2	44.7	46.1	46.0	46.2	46.0
FI	50.2	50.0	50.3	51.4	49.9	50.1	49.7	50.1	49.7	48.8	51.2	51.3
SE	48.8	48.2	48.1	48.0	47.3	47.6	47.3	47.5	45.5	44.5	46.4	46.8
EU (average)*	.	.	.	.	.	.	49.4	51.4	50.2	49.9	50.5	.
EU (median)*	42.7	44.8	45.0	45.1	45.6	45.6	46.1	47.1	46.1	46.0	46.4	46.8
Former EU Member State												
UK	51.4	53.8	52.5	53.3	52.7	52.7	53.9	.	.	.	.	.
EU candidate countries and potential candidates												
AL	.	.	.	.	.	.	27.8	28.3	28.3	26.2	27.5	.
GE	.	.	.	.	.	.	27.1	28.7	27.1	26.9	25.4	.
UA	.	.	.	.	.	.	18.9	20.8	20.5	.	.	.
XK	.	.	.	.	.	.	15.3	16.6	16.6	16.1	16.5	.
Countries with estimates outside plausible ranges**												
LU**	53.2	41.4	42.3	35.0	38.3	35.4	38.0	38.2	39.1	37.6	36.7	39.5
BA**	.	.	.	.	.	.	9.7	10.2	10.5	9.9	10.1	.
MK**	.	.	.	.	.	.	39.5	43.0	43.3	43.9	43.5	.
RS**	.	.	.	.	.	.	36.4	35.9	36.3	35.4	36.1	.

Source: own elaboration. Download underlying data [here](#).

Annotation: "EU (average)" refers to the weighted average, calculated using each country's share in the EU notional ideal revenue as its weight. "EU (median)" represents a robust central estimate: half of the Member States score above it, and half below.

* EU estimates exclude Luxembourg due to recent data revisions yielding results outside plausible ranges.

** Estimates for these countries are outside plausible ranges due to missing or poor-quality underlying data, or inconsistencies in the results that could not be resolved to date. They are nevertheless reported here for transparency and completeness.

Table 209. Actionable VAT policy gap (EUR million)

Country	2019	2020	2021	2022	2023	2024
EU Member States						
BE	18 617	18 637	19 974	23 694	25 882	26 855
BG	786	750	904	1 215	1 525	1 552
CZ	5 735	5 335	5 826	7 581	8 745	9 244
DK	6 558	6 471	7 137	6 855	7 581	7 266
DE	107 816	118 196	114 598	127 950	142 314	147 421
EE	604	594	640	750	906	1 607
IE	9 457	8 254	9 653	12 229	13 984	16 973
EL	11 936	11 422	13 503	16 425	18 549	19 374
ES	71 628	62 382	68 744	82 834	95 114	99 754
FR	101 555	99 833	102 583	113 399	122 569	128 499
HR	2 317	2 061	2 471	3 229	4 081	4 585
IT	90 110	78 596	94 279	108 587	121 359	124 635
CY	1 001	788	890	1 008	1 220	1 258
LV	742	685	708	689	965	976
LT	1 222	1 178	1 205	1 580	2 020	1 880
HU	6 987	6 672	6 938	7 428	9 078	9 485
MT	372	257	321	373	606	719
NL	23 536	21 918	25 810	29 861	33 587	34 783
AT	14 794	14 629	15 642	16 752	18 462	19 078
PL	29 891	29 284	31 179	44 118	48 505	50 376
PT	12 122	11 235	11 972	13 915	16 053	16 172
RO	7 827	8 192	9 058	10 710	12 247	12 137
SI	1 960	1 832	2 079	2 694	2 996	3 073
SK	3 045	2 654	2 854	3 413	3 821	3 896
FI	10 101	9 701	9 185	9 876	10 579	10 341
SE	14 806	14 645	17 817	18 576	19 537	20 618
EU*	555 526	536 204	575 974	665 742	742 284	772 557
Countries with estimates outside plausible ranges**						
LU**	719	672	758	739	916	961

Source: own elaboration. Download underlying data [here](#).

Annotation: * EU estimates exclude Luxembourg due to recent data revisions yielding results outside plausible ranges.

** Estimates for these countries are outside plausible ranges due to missing or poor-quality underlying data, or inconsistencies in the results that could not be resolved to date. They are nevertheless reported here for transparency and completeness.

Table 210. Actionable VAT policy gap (% of notional ideal revenue)

Country	2019	2020	2021	2022	2023	2024
EU Member States						
BE	24.7	25.3	25.4	26.9	27.6	27.6
BG	8.9	8.5	8.9	10.0	11.1	10.2
CZ	16.6	15.9	15.7	17.5	18.4	19.2
DK	12.0	11.8	12.1	11.1	12.2	11.4
DE	21.8	25.4	22.1	22.6	24.0	23.9
EE	14.7	14.4	14.1	14.0	15.2	21.9
IE	28.3	25.9	26.7	28.6	28.9	34.7
EL	28.8	30.5	32.9	34.6	36.1	36.3
ES	35.2	34.0	33.9	36.1	38.3	37.6
FR	26.0	26.2	25.2	25.9	26.7	27.1
HR	19.1	18.3	18.5	20.5	22.8	22.7
IT	28.7	27.1	29.7	30.8	32.1	32.0
CY	25.6	22.0	22.0	21.6	23.6	23.3
LV	16.2	15.1	14.2	12.2	15.3	14.8
LT	15.8	15.0	14.0	15.5	17.7	15.5
HU	24.0	24.1	23.1	22.3	23.5	23.3
MT	19.2	14.5	16.0	16.4	22.7	24.1
NL	19.0	17.8	19.3	20.1	21.1	20.7
AT	25.1	25.7	25.8	25.0	25.8	25.6
PL	32.2	32.1	31.7	38.6	36.8	33.7
PT	29.5	29.4	29.1	29.4	31.5	29.8
RO	23.5	24.6	24.5	24.7	24.7	22.3
SI	25.4	24.9	24.7	27.8	28.8	27.9
SK	21.0	18.0	18.3	18.9	19.7	19.0
FI	22.6	21.8	20.0	20.3	20.4	19.6
SE	17.7	17.2	18.9	19.2	20.6	20.9
EU (average)*	25.1	25.3	24.9	26.1	27.2	27.1
EU (median)*	23.0	23.1	22.1	22.0	23.6	23.3
Countries with estimates outside plausible ranges**						
LU**	12.2	11.1	11.5	10.3	12.6	11.9

Source: own elaboration. Download underlying data [here](#).

Annotation: "EU (average)" refers to the weighted average, calculated using each country's share in the EU notional ideal revenue as its weight. "EU (median)" represents a robust central estimate: half of the Member States score above it, and half below.

* EU estimates exclude Luxembourg due to recent data revisions yielding results outside plausible ranges.

** Estimates for these countries are outside plausible ranges due to missing or poor-quality underlying data, or inconsistencies in the results that could not be resolved to date. They are nevertheless reported here for transparency and completeness

Table 211. VAT rate gap (EUR million)

Country	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
EU Member States												
BE	7 395	7 984	7 899	7 681	7 764	8 059	8 598	8 703	9 615	11 600	12 272	12 652
BG	129	199	168	263	285	285	312	203	311	515	572	626
CZ	1 566	1 405	1 419	1 483	1 616	1 690	2 083	1 927	2 526	3 173	3 466	3 855
DK	279	430	362	377	382	417	426	278	302	433	416	446
DE	33 722	29 435	29 664	30 213	30 741	31 699	33 239	37 459	38 212	45 357	49 502	51 013
EE	76	75	79	86	90	98	110	95	104	137	149	178
IE	4 183	4 324	2 399	5 762	5 821	6 449	5 964	5 303	6 639	8 272	8 836	10 498
EL	5 335	5 315	4 274	3 448	4 092	4 396	5 621	5 138	6 109	8 317	9 400	9 862
ES	27 220	25 264	26 182	25 959	27 847	28 750	30 553	24 343	28 464	34 814	40 965	42 164
FR	49 247	35 386	41 636	43 189	43 649	44 677	47 674	44 497	47 130	52 025	55 598	57 285
HR	.	405	864	1 164	1 128	1 031	1 497	1 200	1 538	2 167	2 750	3 039
IT	38 214	45 961	46 456	47 496	51 423	51 945	52 261	44 729	48 000	56 458	64 493	65 271
CY	.	366	908	720	765	678	695	532	647	857	764	783
LV	131	130	128	180	194	254	169	139	171	219	239	236
LT	193	246	253	212	197	217	250	203	250	489	727	561
HU	1 044	688	1 002	1 135	1 637	2 186	2 397	2 375	2 499	2 856	3 305	3 461
MT	222	164	215	236	251	279	290	245	272	337	395	445
NL	10 893	12 210	11 544	12 483	13 088	14 136	11 819	10 521	11 409	14 515	15 597	16 468
AT	5 935	5 266	5 704	6 043	6 028	8 709	9 232	9 765	10 693	11 484	12 631	13 224
PL	13 680	12 165	12 095	11 820	12 961	13 209	14 457	14 238	15 466	23 468	24 571	23 169
PT	6 344	3 746	4 039	4 993	5 551	5 837	6 132	5 282	5 983	7 563	7 220	8 817
RO	1 059	808	1 728	2 380	2 833	3 744	4 015	3 947	4 119	5 029	5 286	6 639
SI	692	723	759	816	840	874	916	828	906	1 140	1 267	1 316
SK	204	191	179	674	688	733	783	852	917	1 030	1 386	1 419
FI	3 059	3 640	2 846	4 197	4 041	4 170	4 321	4 068	4 216	4 687	4 500	4 654
SE	6 044	6 336	6 186	6 644	6 830	6 659	6 826	6 447	7 061	7 759	7 723	8 036
EU*	216 862	202 861	208 989	219 653	230 744	241 180	250 640	233 315	253 559	304 703	334 028	346 114
Former EU Member State												
UK	45 419	12 805	38 525	36 549	34 739	35 254	36 294	.	.	.	.	.
EU candidate countries and potential candidates												
AL	.	.	.	.	.	.	18	16	18	26	35	.
GE	.	.	.	.	.	.	211	210	250	323	308	.
UA	.	.	.	.	.	.	759	715	809	.	.	.
XK	.	.	.	.	.	.	115	118	137	152	164	.
Countries with limited reliability of estimates**												
LU**	498	611	812	854	996	1 043	1 081	1 053	1 113	1 314	1 372	1 249
BA**	.	.	.	.	.	.	0	0	0	0	0	.
MK**	.	.	.	.	.	.	277	277	347	411	410	.
RS**	.	.	.	.	.	.	1 064	1 089	1 170	1 348	1 535	.

Source: own elaboration. Download underlying data [here](#).

Annotation: * EU estimates exclude Luxembourg due to recent data revisions yielding results outside plausible ranges.

** Estimates for these countries are outside plausible ranges due to missing or poor-quality underlying data, or inconsistencies in the results that could not be resolved to date. They are nevertheless reported here for transparency and completeness.

Table 212. VAT rate gap (% of notional ideal revenue)

Country	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
EU Member States												
BE	11.7	12.4	12.0	11.4	11.1	11.2	11.4	11.8	12.2	13.2	13.1	13.0
BG	1.9	2.8	2.3	3.5	3.6	3.5	3.5	2.3	3.1	4.2	4.2	4.1
CZ	6.3	5.8	5.5	5.6	5.6	5.5	6.0	5.7	6.8	7.3	7.3	8.0
DK	0.6	0.9	0.7	0.8	0.7	0.8	0.8	0.5	0.5	0.7	0.7	0.7
DE	8.4	7.2	7.1	6.9	6.8	6.8	6.7	8.0	7.4	8.0	8.3	8.3
EE	2.7	2.5	2.6	2.6	2.6	2.6	2.7	2.3	2.3	2.6	2.5	2.4
IE	16.9	17.1	9.1	20.6	19.7	20.2	17.8	16.6	18.4	19.3	18.2	21.4
EL	13.6	13.9	11.2	9.1	10.1	11.0	13.6	13.7	14.9	17.5	18.3	18.5
ES	15.7	14.5	14.6	14.1	14.4	14.6	15.0	13.3	14.0	15.2	16.5	15.9
FR	14.2	10.0	11.7	11.9	11.7	11.8	12.2	11.7	11.6	11.9	12.1	12.1
HR	.	4.1	8.8	11.5	10.8	9.3	12.4	10.7	11.5	13.8	15.4	15.1
IT	13.3	15.6	15.5	15.6	16.6	16.7	16.7	15.4	15.1	16.0	17.1	16.8
CY	.	12.1	29.8	22.6	22.5	18.3	17.8	14.8	16.0	18.4	14.8	14.5
LV	3.4	3.3	3.1	4.3	4.3	3.7	3.7	3.1	3.4	3.9	3.8	3.6
LT	3.3	4.0	4.0	3.2	2.8	3.0	3.2	2.6	2.9	4.8	6.4	4.6
HU	5.2	3.3	4.6	5.1	6.6	8.3	8.2	8.6	8.3	8.6	8.6	8.5
MT	18.0	12.7	15.7	17.1	16.9	16.5	15.0	13.8	13.5	14.8	14.8	14.9
NL	11.0	12.1	11.1	11.7	11.9	11.8	9.5	8.5	8.5	9.8	9.8	9.8
AT	12.0	10.4	11.0	11.3	10.9	15.3	15.7	17.1	17.7	17.2	17.7	17.7
PL	18.5	15.9	15.4	15.5	15.7	15.4	15.6	15.6	15.7	20.5	18.6	15.5
PT	19.0	11.1	11.6	13.9	14.7	14.7	14.9	13.8	14.5	16.0	14.2	16.2
RO	4.0	2.9	5.8	8.9	9.7	12.3	12.0	11.9	11.1	11.6	10.6	12.2
SI	11.7	11.3	11.7	12.2	12.1	11.9	11.9	11.2	10.8	11.8	12.2	12.0
SK	1.8	1.7	1.5	5.5	5.4	5.4	5.4	5.8	5.9	5.7	7.1	6.9
FI	7.7	9.1	7.1	10.1	9.6	9.6	9.7	9.2	9.2	9.6	8.7	8.8
SE	7.8	8.3	7.8	8.1	8.1	8.1	8.2	7.6	7.5	8.0	8.2	8.1
EU (average)*	.	.	.	.	.	.	11.3	11.0	11.0	11.9	12.3	.
EU (median)*	9.7	9.5	8.9	10.7	10.5	11.1	11.6	10.9	11.0	11.7	11.4	12.0
Former EU Member State												
UK	12.8	3.3	8.7	8.9	8.8	8.9	8.8					
EU candidate countries and potential candidates												
AL	.	.	.	.	.	.	0.8	0.8	0.8	0.9	1.1	.
GE	.	.	.	.	.	.	9.0	9.1	9.5	9.2	7.3	.
UA	.	.	.	.	.	.	3.4	3.3	3.2	.	.	.
XK	.	.	.	.	.	.	9.4	9.4	9.5	9.3	9.3	.
Countries with estimates outside plausible ranges**												
LU**	12.5	14.6	16.3	16.5	18.3	18.3	18.3	17.5	16.9	18.3	18.8	15.4
BA**	.	.	.	.	.	.	0.0	0.0	0.0	0.0	0.0	.
MK**	.	.	.	.	.	.	18.5	18.8	21.1	22.1	20.5	.
RS**	.	.	.	.	.	.	14.1	14.2	13.4	13.4	13.6	.

Source: own elaboration. Download underlying data [here](#).

Annotation: "EU (average)" refers to the weighted average, calculated using each country's share in the EU notional ideal revenue as its weight. "EU (median)" represents a robust central estimate: half of the Member States score above it, and half below.

* EU estimates exclude Luxembourg due to recent data revisions yielding results outside plausible ranges.

** Estimates for these countries are outside plausible ranges due to missing or poor-quality underlying data, or inconsistencies in the results that could not be resolved to date. They are nevertheless reported here for transparency and completeness.

Table 213. National policy-driven VAT exemption gap (EUR million)

Country	2019	2020	2021	2022	2023	2024
EU Member States						
BE	6 204	6 234	6 341	7 662	8 876	9 319
BG	388	399	406	536	793	741
CZ	2 991	2 855	2 522	3 450	4 105	4 204
DK	4 590	4 555	5 177	4 623	5 321	4 789
DE	54 657	63 184	54 478	60 233	69 406	71 976
EE	403	411	434	498	619	1 312
IE	1 860	1 317	1 047	2 179	3 506	4 690
EL	4 763	4 988	6 004	6 474	7 406	7 675
ES	32 571	30 491	33 490	39 671	46 453	49 344
FR	37 738	39 310	38 970	43 210	47 892	50 425
HR	570	705	743	871	1 010	1 191
IT	30 167	26 860	36 294	40 892	44 138	46 410
CY	88	89	77	-35	252	263
LV	361	361	366	242	461	458
LT	732	743	660	781	911	888
HU	3 742	3 548	3 668	3 827	4 900	5 067
MT	241	233	249	226	386	438
NL	6 187	5 844	7 759	9 026	11 725	11 672
AT	3 522	2 992	3 096	3 358	3 765	3 693
PL	13 583	13 100	13 277	17 475	21 170	23 983
PT	3 470	3 586	3 494	3 585	5 993	4 338
RO	3 256	3 449	4 132	4 716	5 864	4 198
SI	768	759	883	1 221	1 386	1 397
SK	1 644	1 239	1 259	1 499	1 519	1 518
FI	3 765	3 726	3 074	3 217	4 188	3 879
SE	4 927	5 163	8 168	8 358	9 354	10 027
EU*	223 188	226 141	236 065	267 795	311 400	323 895
Countries with estimates outside plausible ranges**						
LU**	-495	-493	-539	-719	-615	-486

Source: own elaboration. Download underlying data [here](#).

Annotation: * EU estimates exclude Luxembourg due to recent data revisions yielding results outside plausible ranges.

** Estimates for these countries are outside plausible ranges due to missing or poor-quality underlying data, or inconsistencies in the results that could not be resolved to date. They are nevertheless reported here for transparency and completeness.

Table 214. National policy-driven VAT exemption gap (%)

Country	2019	2020	2021	2022	2023	2024
EU Member States						
BE	8.2	8.5	8.0	8.7	9.5	9.6
BG	4.4	4.5	4.0	4.4	5.8	4.9
CZ	8.7	8.5	6.8	8.0	8.6	8.7
DK	8.4	8.3	8.8	7.5	8.6	7.5
DE	11.1	13.6	10.5	10.6	11.7	11.7
EE	9.8	10.0	9.6	9.3	10.4	17.9
IE	5.6	4.1	2.9	5.1	7.2	9.6
EL	11.5	13.3	14.6	13.7	14.4	14.4
ES	16.0	16.6	16.5	17.3	18.7	18.6
FR	9.7	10.3	9.6	9.9	10.4	10.6
HR	4.7	6.3	5.6	5.5	5.6	5.9
IT	9.6	9.2	11.4	11.6	11.7	11.9
CY	2.2	2.5	1.9	-0.7	4.9	4.9
LV	7.9	8.0	7.3	4.3	7.3	6.9
LT	9.4	9.4	7.7	7.6	8.0	7.3
HU	12.9	12.8	12.2	11.5	12.7	12.5
MT	12.5	13.1	12.4	9.9	14.5	14.7
NL	5.0	4.7	5.8	6.1	7.4	6.9
AT	6.0	5.2	5.1	5.0	5.3	5.0
PL	14.6	14.3	13.5	15.3	16.1	16.1
PT	8.4	9.4	8.5	7.6	11.8	8.0
RO	9.8	10.4	11.2	10.9	11.8	7.7
SI	9.9	10.3	10.5	12.6	13.3	12.7
SK	11.3	8.4	8.1	8.3	7.8	7.4
FI	8.4	8.4	6.7	6.6	8.1	7.4
SE	5.9	6.1	8.7	8.6	9.9	10.1
EU (average)*	10.1	10.7	10.2	10.5	11.4	11.4
EU (median)*	9.0	8.9	8.6	8.5	9.7	9.1
Countries with estimates outside plausible ranges**						
LU**	-8.4	-8.2	-8.2	-10.0	-8.4	-6.0

Source: own elaboration. Download underlying data [here](#).

Annotation: "EU (average)" refers to the weighted average, calculated using each country's share in the EU notional ideal revenue as its weight. "EU (median)" represents a robust central estimate: half of the Member States score above it, and half below.

* EU estimates exclude Luxembourg due to recent data revisions yielding results outside plausible ranges.

** Estimates for these countries are outside plausible ranges due to missing or poor-quality underlying data, or inconsistencies in the results that could not be resolved to date. They are nevertheless reported here for transparency and completeness.

Table 215. EU policy-mandated VAT exemption gap (EUR million)

Country	2019	2020	2021	2022	2023	2024
EU Member States						
BE	3 814	3 699	4 019	4 432	4 734	4 884
BG	86	148	187	163	159	185
CZ	661	553	779	958	1 174	1 185
DK	1 543	1 638	1 658	1 799	1 844	2 030
DE	19 919	17 553	21 908	22 361	23 405	24 433
EE	91	88	102	115	138	117
IE	1 634	1 635	1 967	1 778	1 642	1 785
EL	1 552	1 297	1 390	1 633	1 744	1 838
ES	8 503	7 547	6 791	8 348	7 696	8 246
FR	16 143	16 026	16 484	18 164	19 079	20 789
HR	251	156	190	192	321	355
IT	7 681	7 007	9 985	11 238	12 728	12 954
CY	219	167	166	186	204	213
LV	212	185	171	229	266	283
LT	240	232	295	310	381	431
HU	848	749	771	744	872	957
MT	-160	-220	-199	-190	-175	-165
NL	5 530	5 553	6 642	6 321	6 265	6 643
AT	2 040	1 872	1 854	1 910	2 066	2 161
PL	1 851	1 945	2 436	3 175	2 764	3 224
PT	2 520	2 368	2 495	2 767	2 841	3 017
RO	556	797	807	964	1 097	1 301
SI	277	245	291	333	343	361
SK	618	564	678	883	916	960
FI	2 015	1 907	1 895	1 972	1 892	1 808
SE	3 053	3 036	2 589	2 459	2 460	2 556
EU*	81 698	76 748	86 349	93 244	96 856	102 548
Countries with estimates outside plausible ranges**						
LU**	133	112	183	144	159	198

Source: own elaboration. Download underlying data [here](#).

Annotation: * EU estimates exclude Luxembourg due to recent data revisions yielding results outside plausible ranges.

** Estimates for these countries are outside plausible ranges due to missing or poor-quality underlying data, or inconsistencies in the results that could not be resolved to date. They are nevertheless reported here for transparency and completeness.

Table 216. EU policy-mandated VAT exemption gap (%)

Country	2019	2020	2021	2022	2023	2024
EU Member States						
BE	5.1	5.0	5.1	5.0	5.0	5.0
BG	1.0	1.7	1.8	1.3	1.2	1.2
CZ	1.9	1.6	2.1	2.2	2.5	2.5
DK	2.8	3.0	2.8	2.9	3.0	3.2
DE	4.0	3.8	4.2	3.9	3.9	4.0
EE	2.2	2.1	2.2	2.1	2.3	1.6
IE	4.9	5.1	5.5	4.2	3.4	3.6
EL	3.7	3.5	3.4	3.4	3.4	3.4
ES	4.2	4.1	3.3	3.6	3.1	3.1
FR	4.1	4.2	4.0	4.2	4.2	4.4
HR	2.1	1.4	1.4	1.2	1.8	1.8
IT	2.4	2.4	3.1	3.2	3.4	3.3
CY	5.6	4.7	4.1	4.0	3.9	3.9
LV	4.6	4.1	3.4	4.1	4.2	4.3
LT	3.1	3.0	3.4	3.0	3.3	3.6
HU	2.9	2.7	2.6	2.2	2.3	2.4
MT	-8.3	-12.4	-9.9	-8.4	-6.6	-5.5
NL	4.5	4.5	5.0	4.3	3.9	3.9
AT	3.5	3.3	3.1	2.9	2.9	2.9
PL	2.0	2.1	2.5	2.8	2.1	2.2
PT	6.1	6.2	6.1	5.8	5.6	5.6
RO	1.7	2.4	2.2	2.2	2.2	2.4
SI	3.6	3.3	3.5	3.4	3.3	3.3
SK	4.3	3.8	4.3	4.9	4.7	4.7
FI	4.5	4.3	4.1	4.0	3.6	3.4
SE	3.7	3.6	2.8	2.5	2.6	2.6
EU (average)*	3.7	3.6	3.7	3.7	3.6	3.6
EU (median)*	3.6	3.3	3.3	3.2	3.3	3.3
Countries with estimates outside plausible ranges**						
LU**	2.3	1.9	2.8	2.0	2.2	2.4

Source: own elaboration. Download underlying data [here](#).

Annotation: "EU (average)" refers to the weighted average, calculated using each country's share in the EU notional ideal revenue as its weight. "EU (median)" represents a robust central estimate: half of the Member States score above it, and half below.

* EU estimates exclude Luxembourg due to recent data revisions yielding results outside plausible ranges.

** Estimates for these countries are outside plausible ranges due to missing or poor-quality underlying data, or inconsistencies in the results that could not be resolved to date. They are nevertheless reported here for transparency and completeness.

Table 217. Non-actionable VAT policy gap (EUR million)

Country	2019	2020	2021	2022	2023	2024
EU Member States						
BE	20 608	21 044	22 163	24 065	25 666	26 983
BG	1 839	2 054	2 417	2 691	3 083	3 705
CZ	8 807	9 507	10 737	11 717	12 660	12 916
DK	15 706	16 122	16 972	17 118	17 525	18 277
DE	113 349	109 265	123 309	128 903	130 542	141 069
EE	865	905	965	1 108	1 177	1 438
IE	7 926	9 708	10 475	11 483	12 615	10 013
EL	9 436	9 720	9 562	9 961	10 741	10 756
ES	46 002	47 330	49 428	50 602	51 929	54 810
FR	105 324	109 291	114 288	117 370	121 747	126 651
HR	2 144	2 149	2 258	2 461	2 485	3 016
IT	80 154	81 902	82 960	85 488	87 261	90 026
CY	618	709	752	807	904	968
LV	819	853	973	1 103	1 184	1 323
LT	1 330	1 422	1 644	1 842	2 048	2 405
HU	6 529	6 352	7 131	8 286	9 551	10 346
MT	294	339	358	340	380	429
NL	34 876	36 054	38 197	40 452	44 234	48 095
AT	12 362	12 898	13 946	14 385	15 635	16 974
PL	13 533	14 550	15 737	17 117	18 503	23 941
PT	8 719	9 083	9 348	9 747	10 114	10 922
RO	5 692	5 678	5 844	6 282	6 715	8 333
SI	1 647	1 827	1 934	1 901	2 045	2 391
SK	3 217	3 924	4 344	4 891	5 148	5 523
FI	12 127	12 555	13 599	13 862	15 994	16 698
SE	24 694	25 673	24 962	24 443	24 460	25 624
EU*	538 615	550 914	584 303	608 423	634 347	673 632
Countries with limited reliability of estimates**						
LU**	1 527	1 629	1 809	1 959	1 758	2 231

Source: own elaboration. Download underlying data [here](#).

Annotation: * EU estimates exclude Luxembourg due to recent data revisions yielding results outside plausible ranges.

** Estimates for these countries are outside plausible ranges due to missing or poor-quality underlying data, or inconsistencies in the results that could not be resolved to date. They are nevertheless reported here for transparency and completeness.

Table 218. Non-actionable VAT policy gap (% of notional ideal revenue)

Country	2019	2020	2021	2022	2023	2024
EU Member States						
BE	27.3	28.6	28.1	27.3	27.4	27.7
BG	20.7	23.4	23.7	22.1	22.5	24.4
CZ	25.5	28.4	28.9	27.0	26.6	26.8
DK	28.7	29.4	28.7	27.7	28.2	28.7
DE	22.9	23.4	23.8	22.7	22.0	22.8
EE	21.0	21.9	21.3	20.6	19.7	19.6
IE	23.7	30.5	29.0	26.8	26.0	20.5
EL	22.8	26.0	23.3	21.0	20.9	20.2
ES	22.6	25.8	24.4	22.0	20.9	20.6
FR	26.9	28.7	28.1	26.8	26.5	26.7
HR	17.7	19.1	16.9	15.7	13.9	15.0
IT	25.6	28.2	26.2	24.2	23.1	23.1
CY	15.8	19.8	18.6	17.3	17.5	17.9
LV	17.8	18.9	19.5	19.5	18.7	20.0
LT	17.1	18.1	19.1	18.0	17.9	19.9
HU	22.5	23.0	23.8	24.9	24.7	25.5
MT	15.2	19.1	17.8	15.0	14.3	14.4
NL	28.1	29.3	28.6	27.3	27.7	28.6
AT	21.0	22.6	23.0	21.5	21.9	22.8
PL	14.6	15.9	16.0	15.0	14.0	16.0
PT	21.2	23.7	22.7	20.6	19.9	20.1
RO	17.1	17.1	15.8	14.5	13.5	15.3
SI	21.3	24.8	23.0	19.6	19.7	21.7
SK	22.2	26.7	27.8	27.1	26.5	27.0
FI	27.1	28.3	29.7	28.5	30.8	31.7
SE	29.6	30.2	26.5	25.3	25.8	25.9
EU (average)*	24.3	26.0	25.3	23.8	23.3	23.6
EU (median)*	22.3	24.3	23.8	22.0	21.9	22.3
Countries with limited reliability of estimates**						
LU**	25.9	27.0	27.5	27.3	24.1	27.6

Source: own elaboration. Download underlying data [here](#).

Annotation: "EU (average)" refers to the weighted average, calculated using each country's share in the EU notional ideal revenue as its weight. "EU (median)" represents a robust central estimate: half of the Member States score above it, and half below.

* EU estimates exclude Luxembourg due to recent data revisions yielding results outside plausible ranges.

** Estimates for these countries are outside plausible ranges due to missing or poor-quality underlying data, or inconsistencies in the results that could not be resolved to date. They are nevertheless reported here for transparency and completeness.

Table 219. Actionable standard VAT rate (%)

Country	2019	2020	2021	2022	2023
EU Member States					
BE	14.5	14.2	14.2	13.9	13.8
BG	19.4	19.4	19.1	18.7	18.7
CZ	16.9	16.9	16.8	16.5	16.3
DK	22.1	22.0	22.0	22.5	22.0
DE	14.7	13.1	14.4	14.3	14.1
EE	17.7	17.9	17.9	17.9	17.8
IE	14.6	12.8	13.3	13.4	13.4
EL	16.6	15.6	15.0	14.6	14.2
ES	12.6	12.7	12.6	12.2	11.7
FR	14.2	14.0	14.2	14.2	14.1
HR	20.2	20.9	20.8	20.0	19.6
IT	14.2	14.4	13.8	13.6	13.4
CY	14.3	14.9	14.7	14.8	14.4
LV	17.4	17.9	18.1	17.8	17.4
LT	17.7	17.9	17.8	17.4	17.0
HU	20.8	20.6	20.6	20.7	20.5
MT	14.9	15.8	15.5	15.5	14.3
NL	15.4	15.6	15.2	15.5	15.4
AT	15.1	14.7	14.5	14.8	14.5
PL	15.5	15.4	15.4	13.5	14.4
PT	15.5	15.1	15.2	15.2	14.6
RO	15.4	15.5	15.3	15.3	15.4
SI	16.2	16.0	16.3	15.9	15.5
SK	16.8	16.6	16.1	16.0	15.9
FI	17.7	18.0	18.3	18.4	18.0
SE	19.3	19.3	19.4	19.4	19.0
EU (average)*	15.1	14.7	14.9	14.8	14.5
EU (median)*	15.8	15.7	15.4	15.5	15.4
Countries with estimates outside plausible ranges**					
LU**	16.8	16.9	16.9	17.1	16.5

Source: own elaboration. Download underlying data [here](#).

Annotation: "EU (average)" refers to the weighted average, calculated using each country's share in the EU notional ideal revenue as its weight. "EU (median)" represents a robust central estimate: half of the Member States score above it, and half below.

* EU estimates exclude Luxembourg due to recent data revisions yielding results outside plausible ranges.

** Estimates for these countries are outside plausible ranges due to missing or poor-quality underlying data, or inconsistencies in the results that could not be resolved to date. They are nevertheless reported here for transparency and completeness.

Table 220. Statutory standard VAT rate (%)

Country	2019	2020	2021	2022	2023	2024
EU Member States						
BE	21	21	21	21	21	21
BG	20	20	20	20	20	20
CZ	21	21	21	21	21	21
DK	25	25	25	25	25	25
DE	19	17.46	19	19	19	19
EE	20	20	20	20	20	22
IE	23	22.33	22.67	23	23	23
EL	24	24	24	24	24	24
ES	21	21	21	21	21	21
FR	20	20	20	20	20	20
HR	25	25	25	25	25	25
IT	22	22	22	22	22	22
CY	19	19	19	19	19	19
LV	21	21	21	21	21	21
LT	21	21	21	21	21	21
LU	17	17	17	17	16	17
HU	27	27	27	27	27	27
MT	18	18	18	18	18	18
NL	21	21	21	21	21	21
AT	20	20	20	20	20	20
PL	23	23	23	23	23	23
PT	23	23	23	23	23	23
RO	19	19	19	19	19	19
SI	22	22	22	22	22	22
SK	20	20	20	20	20	20
FI	24	24	24	24	24	24.38
SE	25	25	25	25	25	25
EU (median)*	21	21	21	21	21	21

Source: own elaboration. Download underlying data [here](#).

Annotation: in case of changes in statutory rates during the course of the year, the rates were calculated as weighted averages.

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Table 221. C-efficiency (%)

Country	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
EU Member States												
BE	48.2	48.2	46.9	47.7	47.8	48.3	47.5	44.6	49.3	46.0	44.8	43.6
BG	62.1	59.1	60.5	63.6	65.8	68.1	69.3	69.7	70.2	68.4	65.4	69.0
CZ	53.6	55.2	56.1	56.4	57.7	60.2	57.2	56.3	57.5	59.8	59.6	57.1
DK	58.4	58.9	59.1	59.9	60.9	62.0	59.6	62.8	63.0	64.8	62.1	62.7
DE	55.5	55.8	57.0	56.8	57.1	57.6	56.1	54.4	57.6	58.4	55.8	54.7
EE	57.8	60.5	63.2	63.5	64.8	66.5	70.3	70.9	74.1	72.3	69.5	67.5
IE	45.0	49.2	48.4	49.3	48.5	49.2	50.4	46.9	51.4	49.7	48.2	49.0
EL	33.1	33.9	34.6	39.3	38.9	40.4	38.9	36.6	39.6	42.3	41.7	43.5
ES	37.8	38.5	40.6	40.5	41.0	42.5	42.0	41.1	44.5	44.3	41.6	41.5
FR	46.6	47.6	48.1	48.3	49.4	50.2	51.2	48.7	52.6	52.5	51.5	49.6
HR	.	59.5	62.8	64.1	65.9	67.2	66.6	63.2	63.8	62.4	65.9	64.1
IT	35.0	36.0	36.8	36.9	38.0	38.7	39.9	39.0	41.8	43.2	43.5	43.3
CY	.	54.4	53.5	57.0	56.1	61.2	60.4	58.0	63.2	67.8	67.7	68.6
LV	48.4	49.7	51.6	53.3	53.5	57.4	62.1	61.6	61.5	68.8	65.5	63.3
LT	49.2	50.3	51.0	51.2	52.7	53.3	55.2	58.0	61.1	62.4	58.9	59.9
HU	50.2	53.6	56.8	52.9	53.7	56.8	56.0	57.7	60.1	60.5	55.6	53.5
MT	51.4	54.2	54.1	56.2	59.8	61.8	54.5	56.3	58.3	58.9	53.3	52.3
NL	48.1	48.2	48.8	51.5	52.0	50.7	54.6	56.2	57.2	55.3	55.2	54.4
AT	56.7	56.3	56.9	57.5	57.7	57.9	58.7	56.5	58.5	61.1	60.6	59.8
PL	42.2	43.3	43.6	45.2	49.3	53.1	51.2	51.3	56.3	46.3	47.0	50.6
PT	43.8	46.0	47.0	46.4	47.5	48.3	49.3	47.9	51.1	52.4	51.3	52.6
RO	64.1	59.5	63.7	49.1	46.0	48.2	47.1	46.5	49.4	52.2	51.9	51.3
SI	54.7	55.5	55.6	54.8	55.4	57.2	57.2	54.1	57.7	55.6	56.7	55.1
SK	46.3	48.7	51.4	49.3	51.2	52.0	52.6	51.2	52.7	53.0	53.4	53.7
FI	55.1	54.4	53.9	55.1	56.4	57.5	57.6	58.4	60.1	60.2	55.3	56.4
SE	56.2	56.8	57.4	58.9	59.5	59.7	59.0	59.2	59.7	61.1	57.6	55.5
EU (average)*	46.6	47.7	48.6	48.9	49.7	50.6	50.7	49.1	52.7	52.7	51.2	53.3
EU (median)*	48.8	53.9	53.7	53.1	53.6	57.0	55.6	56.2	57.6	58.7	55.5	54.6
Former EU Member State												
UK	42.4	44.3	45.1	44.7	45.2	45.9	46.6	.	.	.	.	.
EU candidate countries and potential candidates												
AL	.	.	.	.	.	.	48.7	49.5	59.4	65.0	54.7	.
GE	.	.	.	.	.	.	74.9	62.1	64.0	76.1	79.1	.
UA	.	.	.	.	.	.	56.4	55.8	64.4	.	.	.
XK	.	.	.	.	.	.	73.1	64.4	76.4	79.2	82.1	.
Countries with limited reliability of estimates**												
LU**	89.2	93.9	70.9	72.2	73.7	73.0	78.3	76.1	82.0	84.0	83.0	82.5
BA**	.	.	.	.	.	.	88.6	87.9	96.1	94.7	92.2	.
MK**	.	.	.	.	.	.	56.5	50.7	57.5	56.4	56.2	.
RS**	.	.	.	.	.	.	64.1	62.7	68.9	70.8	68.1	.

Source: own elaboration. Download underlying data [here](#).

Annotation: "EU (average)" refers to the weighted average, calculated using each country's share in the EU household final consumption as its weight. "EU (median)" represents a robust central estimate: half of the Member States score above it, and half below.

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