THE IMPACT OF THE STANDARD VAT RATE ADJUSTMENT ON BUDGET REVENUES: THE CASE OF ROMANIA

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Abstract

This paper examines the macro-fiscal implications of Romania's decision to increase the standard value-added tax (VAT) rate from 19% to 21%, a measure implemented on 1 August 2025 and maintained throughout 2026. The analysis employs a behavioral-adjusted revenue framework grounded in the Modern VAT model (Ebrill et al., 2001) and the behavioral approach developed by Keen and Lockwood (2010), combined with official fiscal data from the Ministry of Finance and macroeconomic projections provided by the National Commission for Strategy and Prognosis (CNSP).

The results indicate that although the statutory VAT rate increase generates a non-negligible mechanical revenue effect, the effective fiscal gain is significantly lower once behavioral responses are incorporated. For 2025, due to partial-year application, the gross effect is estimated at approximately 0.28% of GDP, while the behavioral-adjusted net gain amounts to 0.21–0.22% of GDP. In 2026, when the new rate applies for the full year, the gross effect reaches around 0.71% of GDP, whereas the effective fiscal gain is estimated at 0.53–0.57% of GDP. These findings are consistent with empirical evidence from emerging European Union economies and confirm that VAT-based fiscal consolidation is primarily constrained by compliance behavior, administrative efficiency, and the effectiveness of digital enforcement instruments rather than by statutory rates alone.

Keywords: *Value-Added Tax (VAT), Fiscal Consolidation, Behavioral Coefficient, Tax Compliance, Budget Revenues, Romania, Macroeconomic Adjustment*

Classification JEL: *H20, H21, H30, E62, C51*

1. Introduction and context of the study

Value-added tax (VAT) represents the core pillar of Romania's tax system, contributing over **41% of total tax revenues** in recent years (Ministry of Finance, 2025). Its prominence in the fiscal architecture amplifies the macroeconomic consequences of changes in the standard rate.

Romania implemented an increase in the standard VAT rate from 19% to 21% starting on 1 August 2025, as part of a broader medium-term fiscal consolidation strategy (Law No. 141/2025) aimed at correcting the excessive budget deficit by 2027, in a macroeconomic context characterized by modest real GDP growth (approximately +0.6% in 2025), persistent inflationary pressures (7.1% average CPI), and the ongoing implementation of extensive digital tax administration reforms, including SAF-T, e-Invoice, and e-Transport—structural factors that influence not only the potential, but also the effective fiscal impact of VAT rate adjustments.

Romania's historical experience shows that VAT changes have produced significant macroeconomic and social effects. The **2010 increase from 19% to 24%**, implemented during the post-crisis recession, contributed to short-term deficit reduction but also to heightened inflation, contracting consumption, and rising unemployment (Țițan et al., 2011). Conversely, the **2016–2019 reduction to 19%** stimulated consumption, improved compliance, and reduced tax fraud (Miron, 2020). This asymmetric evidence underscores that the effectiveness of VAT reforms depends less on the statutory rate and more on administrative efficiency, the VAT Gap, and taxpayer behavioral responses (Dragomir & Tureac, 2014; Teodorescu, 2014).

Against this background, the present study provides an integrated assessment of the fiscal impact of the VAT rate increase for both **2025** (partial-year application) and **2026** (full-year application), combining descriptive fiscal analysis with behavioral-adjusted modeling.

2. Theoretical Framework and Literature Review

VAT, as conceptualized in the IMF's *Modern VAT* framework (Ebrill et al., 2001), represents a broad-based consumption tax characterized by neutrality, transparency, and administrative efficiency superior to traditional turnover-based systems. VAT revenue can be expressed in reduced form as:

$$\mathrm{VAT} = t \times B \times C$$

where *t* denotes the statutory VAT rate, *B* the effective tax base, and *C* the compliance level. Any alteration in *t*—particularly an upward adjustment—tends to influence both *B* and *C* through behavioral and administrative channels, thereby generating a sub-proportional increase in revenue.

Keen and Lockwood (2010) formalized this non-linear relationship by introducing the **behavioral coefficient** (*Cb*), defined as the ratio of actual to theoretical VAT revenue following behavioral adaptation. Empirical studies indicate that *Cb* typically ranges between **0.6 and 0.8** in emerging European economies, reflecting consumption contraction, compliance deterioration, and partial price absorption by firms.

International research reinforces this behavioral perspective. Benedek et al. (2015) demonstrate that the VAT pass-through into consumer prices is largely incomplete, averaging **80–90%**, which moderates the expected fiscal gain. OECD (2019) further documents that VAT C-efficiency—the ratio between actual and theoretical collections—remains relatively low in Central and Eastern Europe, largely due to structural compliance gaps and administrative inefficiencies. Countries characterized by a high VAT Gap exhibit significantly lower revenue elasticity and less predictable fiscal outcomes.

Romania provides a relevant case in this regard. According to the European Commission's **VAT gap in Europe – Report 2025**, Romania's VAT compliance gap was **26.7% of the VAT total tax liability (VTTL) in 2022** and increased to **30.0% in 2023**, with fast estimates suggesting a slight decline to **29.5% in 2024**. For comparison, the EU average reported in the same country table was **7.9% in 2022** and **9.5% in 2023**. Despite gradual improvements relative to earlier peaks, Romania remains among the weakest-performing Member States in terms of VAT collection efficiency. This structural vulnerability implies that statutory VAT rate increases, in the absence of sustained administrative reinforcement and further VAT gap reduction, are unlikely to yield proportionate and durable revenue consolidation.

The Romanian economic literature converges on similar conclusions. Țițan et al. (2011) showed that the 2010 VAT increase to 24% generated short-term fiscal relief but was accompanied by inflationary pressure, a decline in private consumption, and rising unemployment. Teodorescu (2014) argued that Romania's VAT efficiency is primarily constrained by institutional capacity rather than tax policy design, emphasizing the importance of administrative modernization. Miron (2020) highlighted that reductions in the VAT rate during 2016–2019 encouraged voluntary compliance and reduced tax fraud, illustrating the asymmetrical behavioral responses to tax increases versus tax reductions. Furthermore, Bostan et al. (2017) underlined the decisive role of digital fiscal instruments—e-invoicing systems, real-time reporting, and electronic monitoring devices—in improving VAT collection and narrowing the VAT Gap.

This body of evidence demonstrates that the fiscal impact of Romania's 2025 VAT rate adjustment must be evaluated not solely in terms of statutory changes, but also through the lens of behavioral adaptation, compliance dynamics, and administrative capabilities.

3. Methodology and Data

The methodological approach adopted in this study follows the analytical tradition widely employed in the Romanian economic literature and in internationally indexed journals, combining descriptive fiscal analysis with a behavioral-adjusted estimation framework.

The assessment integrates both theoretical and empirical components, consistent with the conceptual structure advanced by Ebrill et al. (2001) in *The Modern VAT* and the behavioral model formulated by Keen and Lockwood (2010), which represent the dominant paradigms in evaluating the revenue implications of VAT policy adjustments.

In line with the established fiscal economics literature, the empirical strategy is structured around two core hypotheses:

- **H1:** An increase in the statutory VAT rate generates a proportional rise in gross VAT revenues, assuming that the tax base and compliance level remain unchanged.
- **H2:** The effective (net) revenue effect is significantly lower than the theoretical (gross) gain due to behavioral responses, consumption contraction, and variations in compliance, captured by the behavioral coefficient.

This formulation parallels the methodological architecture employed in Romanian VAT research (Țițan et al., 2011; Teodorescu, 2014; Miron, 2020) and aligns with international empirical evidence showing that statutory rate changes tend to produce sub-proportional revenue outcomes in economies characterized by substantial compliance gaps and administrative frictions (Benedek et al., 2015; OECD, 2019).

The analysis relies exclusively on verifiable and authoritative data sources:

- **Ministry of Finance** – Consolidated Budget Execution Report as of 31 December 2024, providing the baseline level of VAT revenues prior to the 2025 policy intervention.
- **National Commission for Strategy and Prognosis (CNSP, Summer Forecast 2025–2028)** – offering macroeconomic projections, specifically nominal GDP estimates for 2025 and 2026, required to express fiscal effects as shares of GDP.
- **Historical VAT data (2000–2019)** extracted from peer-reviewed Romanian studies (Țițan et al., 2011; Dragomir & Tureac, 2014; Teodorescu, 2014; Miron, 2020).
- **International benchmark studies** by the IMF (2015), European Commission (2025), and OECD (2019), essential for calibrating behavioral coefficients and comparing Romania with EU peers.

This combination ensures analytical coherence between historical patterns, recent fiscal developments, and projected macroeconomic dynamics.

Within the theoretical structure of the modern VAT, revenue can be expressed in a reduced form as:

$$R = t \times B \times C$$

where:

- t denotes the statutory VAT rate,
- B the effective tax base,
- C the compliance level.

An increase in t does not automatically generate a proportional increase in R, because both B and C respond endogenously to tax policy changes. Consequently, the estimation must distinguish between:

- **the gross (mechanical) effect**, assuming constant behavior, and
- **the net (behavioral) effect**, accounting for taxpayer adaptation.

The gross effect is determined using the relation:

$$\Delta R_{gross} = R_0 \times \frac{t_1 - t_0}{t_0}$$

The behavioral-adjusted effect applies the behavioral coefficient C_b:

$$\Delta R_{net} = \Delta R_{gross} \times C_b$$

In accordance with empirical evidence for Central and Eastern Europe, C_b is calibrated in the range **0.75–0.80**, reflecting partial compliance deterioration and consumption retraction following VAT increases (Keen & Lockwood, 2010; Benedek et al., 2015).

A critical methodological feature concerns the timing of the policy measure: **the increase from 19% to 21% is implemented starting 1 August 2025**, implying the policy applies for **only 5 out of 12 months** of the fiscal year.

Therefore, the gross fiscal effect for 2025 must incorporate a proportionality factor:

$$\Delta R_{gross,2025} = R_{2024} \times \frac{t_1 - t_0}{t_0} \times \frac{5}{12}$$

This adjustment is essential to avoid an upward bias in estimation. Ignoring it would mechanically overstate the fiscal effect by approximately **140%**, compromising both the internal validity and the policy relevance of the findings—an issue highlighted in multiple Romanian empirical contributions dealing with partial-year tax changes.

The net behavioral effect for 2025 follows accordingly:

$$\Delta R_{net,2025} = \Delta R_{gross,2025} \times C_b$$

For the year **2026**, the 21% VAT rate is applied over the entire fiscal year, allowing for a full-year estimation:

$$\Delta R_{gross,2026} = R_{2024} \times \frac{t_1 - t_0}{t_0}$$

The behavioral adjustment remains identical:

$$\Delta R_{net,2026} = \Delta R_{gross,2026} \times C_b$$

This methodological structure permits a direct and transparent comparison between:

- a **partial-year effect** (2025), and
- a **full-year effect** (2026).

Following standard practices in IMF and OECD fiscal assessments, the estimated effects are reported relative to nominal GDP:

- **GDP 2025 (CNSP)**: 1.902 trillion lei
- **GDP 2026 (CNSP)**: 2.037 trillion lei

This expression facilitates the evaluation of fiscal relevance, cross-country comparability, and macroeconomic sustainability.

The methodological contribution of this paper is threefold:

1. It provides a **rigorous partial-year correction** for the 2025 VAT increase, a feature often omitted in domestic fiscal analyses.
2. It uses a **regionally consistent behavioral coefficient**, ensuring empirical comparability with Central and Eastern European peers.
3. It integrates **administrative capacity and digital compliance dynamics**—elements increasingly recognized in Romanian VAT literature as critical determinants of revenue performance.

Together, these elements ensure that the analytical framework aligns with both international methodological standards and the specific institutional context of Romania.

4. Empirical Analysis of Fiscal Revenues

4.1. Baseline fiscal revenues and VAT performance (2023–2024)

An accurate estimation of the fiscal effects expected in 2025 and 2026 requires first the establishment of a robust empirical baseline. Table 1 presents the evolution of Romania's fiscal revenues during 2023–2024, illustrating the macro-fiscal context from which the VAT rate adjustment will operate. The data confirm a strong upward trend in indirect taxation, particularly in the case of VAT, whose performance continued to exceed the dynamics of the macroeconomic aggregates.

Fiscal data indicate that VAT revenues reached 120.9 billion lei in 2024, representing a nominal increase of 15.9% compared with 2023, significantly above the 10% growth in nominal GDP. The VAT's share in total tax revenues remained stable at **41.5%**, while its weight in GDP rose to **6.9%**, reaffirming its structural role within Romania's fiscal architecture.

Table 1. Fiscal revenues in Romania, 2023–2024

Indicator (million lei)	2023	% of GDP	% of total tax revenue	2024	% of GDP	% of total tax revenue	Annual Change (%)
GDP	1,604,554	—	—	1,764,500	—	—	+10.0
Total fiscal revenues	251,030.2	15.6	100.0	291,708.1	16.5	100.0	+16.2
Direct taxes	75,024.4	4.7	29.9	90,776.7	5.1	31.1	+21.0
Indirect taxes	165,717.7	10.3	66.0	189,060.3	10.7	64.8	+14.1
▪ Value-added tax (VAT)	104,334.7	6.5	41.6	120,946.1	6.9	41.5	+15.9
▪ Excise duties	37,260.3	2.3	14.8	46,328.1	2.6	15.9	+24.3

Source: Ministry of Finance, Consolidated Budget Report (December 31, 2024).

The data reveal a robust increase in VAT revenues (+15.9%) in 2024, outpacing nominal GDP growth (+10%). VAT continues to dominate Romania's fiscal landscape, contributing **41.5% of total tax revenues** and **6.9% of GDP**. This sustained growth reflects the effectiveness of digital reporting mechanisms and improved compliance through e-Invoicing and electronic monitoring.
The pattern aligns with Miron (2020), who demonstrated that increased fiscal transparency and digitalization enhance voluntary compliance and revenue stability.

Interpretation

The structure of the data reveals several relevant patterns:

1. **VAT outperformed both GDP and total fiscal revenue growth**, confirming its high elasticity relative to nominal economic activity.
2. **Indirect taxation remains the dominant component of Romania's fiscal system**, accounting for nearly two-thirds of total tax revenues (64.8% in 2024).
3. The consistent contribution of VAT—**over 41% of total tax receipts**—reflects increased compliance driven by the digitalization of tax administration (SAF-T, e-Invoice, e-Transport).
4. The 2024 performance confirms the findings of Miron (2020), who demonstrated that fiscal transparency and digital enforcement mechanisms enhance voluntary compliance and contribute to revenue stabilization.
5. The VAT trajectory prior to the rate increase provides the necessary baseline for estimating the mechanical and behavioral effects of the 2025–2026 adjustment.

Taken together, these developments highlight the structural importance of VAT in Romania's fiscal consolidation strategy and justify the analytical emphasis placed on its behavioral dynamics in response to policy changes.

4.2. Estimating the Gross and Behavioral-Adjusted Fiscal Impact for 2025

To assess the fiscal consequences of increasing the standard VAT rate from 19% to 21% beginning **1 August 2025**, it is essential to integrate both the mechanical (gross) and behavioral-adjusted effects. Given that the measure applies only for the final five months of the year, the empirical evaluation for 2025 must explicitly incorporate a **partial-year adjustment factor (5/12)**. This correction is rarely applied in Romanian empirical literature, but it is necessary to avoid overestimating the fiscal yield.

4.2.1. Gross (mechanical) effect for 2025

The theoretical increase in VAT revenue, assuming no behavioral reaction, is given by:

$$\Delta R_{gross} = R_{2024} \cdot \frac{t_1 - t_0}{t_0} \cdot \frac{5}{12}$$

Using the 2024 VAT revenue baseline of **120.946 billion lei**, the statutory rate increase from 19% to 21% represents a relative adjustment of:

$$\frac{21 - 19}{19} = 0.1053$$

Thus, the annualized gross effect becomes:

$$\Delta R_{gross} \approx 120.946 \cdot 0.1053 \approx 12.73 \text{ bn lei}$$

Applying the partial-year factor:

$$\Delta R_{gross,2025} \approx 12.73 \cdot \frac{5}{12} \approx 5.30 \text{ bn lei}$$

This mechanical yield corresponds to approximately:

$$\frac{5.30}{1902} \approx 0.28\% \text{ of GDP}$$

Hence, the statutory rate increase would generate—under perfect compliance and no behavioral response—a gross fiscal impact of **5.3 billion lei**, or **0.28% of GDP**, for the five-month period of application in 2025.

4.2.2. Behavioral-adjusted (effective) effect for 2025

International evidence (Keen & Lockwood, 2010; Benedek et al., 2015; OECD, 2019) and Romanian empirical studies (Țițan et al., 2011; Teodorescu, 2014; Miron, 2020) show that VAT increases have sub-proportional effects due to:

- consumption contraction,
- partial price absorption by firms,
- the persistence of compliance gaps,
- temporary disruptions in tax reporting behavior.

The behavioral coefficient for Romania in 2025 is estimated within the empirically consistent interval:

$$C_b = 0.75\text{–}0.80$$

Thus:

$$\Delta R_{net,2025} = \Delta R_{gross,2025} \cdot C_b$$

This yields:

Lower bound (Cb = 0.75):

$$5.31 \cdot 0.75 = 3.98 \text{ bn lei}$$

Upper bound (Cb = 0.80):

$$5.31 \cdot 0.80 = 4.25 \text{ bn lei}$$

Expressed as a share of GDP:

$$\frac{3.98}{1{,}902} = 0.21\% \text{ of GDP}$$

$$\frac{4.25}{1,902} = 0.22\% \text{ of GDP}$$

Effective fiscal gain in 2025:

4.00–4.26 bn lei (≈ 0.21–0.22% of GDP)

Thus, the 2025 VAT rate change—applied for only five months—generates a **modest but non-negligible contribution to fiscal consolidation**, substantially lower than the mechanical effect due to behavioral adjustment.

Interpretation within the Romanian context

The empirical findings reinforce several structural features of Romania's tax system:

1. **VAT elasticity remains below unity**, consistent with the literature on emerging EU economies.
2. The **short implementation window** (August–December) naturally constrains the fiscal impact.
3. Even with enhanced digital enforcement (SAF-T, e-Invoice), the VAT Gap continues to dampen revenue performance.
4. The behavioral coefficient (0.75–0.80) aligns fully with historical precedents, including the 2010 rate increase (Țițan et al., 2011) and the elasticity patterns documented by OECD (2019).

In summary, the 2025 effect represents a **transitional adjustment period**, preparing the fiscal system for the full impact expected in 2026.

4.3. Full-Year Fiscal Impact for 2026

The fiscal implications of maintaining the standard VAT rate at **21% for the entire year 2026** differ substantially from the partial-year effects estimated for 2025. With the full-year application, the elasticity of VAT revenues responds more clearly to macroeconomic conditions, the dynamics of private consumption, and changes in compliance behavior. The year 2026 offers a more accurate representation of the steady-state impact of the VAT reform.

4.3.1. Baseline VAT revenue projection for 2026

To estimate the fiscal impact for 2026, the analysis requires a projected VAT baseline under the assumption of no policy change. Building on the Ministry of Finance data for 2024 (VAT revenue: 120.946 bn lei) and assuming conservative nominal growth in private consumption consistent with CNSP forecasts, the projected VAT baseline for 2026 (without rate adjustment) can be expressed as:

$$R_{baseline,2026} = R_{2024} \cdot (1 + g_{2025}) \cdot (1 + g_{2026})$$

Where

- g_{2025}= nominal consumption growth 2025 (CNSP: +7.2%),
- g_{2026}= nominal consumption growth 2026 (CNSP: +6.0%).

Thus:

$$R_{baseline,2026} = 120.946 \cdot 1.072 \cdot 1.060 \approx 137.43 \text{ bn lei}$$

This represents the theoretical VAT collection at a 19% rate, assuming no behavioral distortions and maintaining the 2024 compliance level.

4.3.2. Gross (mechanical) effect for 2026

The full-year mechanical increase from raising the statutory rate from 19% to 21% is calculated as:

$$\Delta R_{gross,2026} = R_{baseline,2026} \cdot \frac{t_1 - t_0}{t_0}$$

$$\Delta R_{gross,2026} \approx 137.3 \cdot 0.1053 \approx 14.45 \text{ bn lei}$$

This represents the **maximum theoretical gain** under perfect compliance and zero behavioral reaction.

Expressed as a percentage of nominal GDP (CNSP 2026: 2.037 trillion lei):

$$\frac{14.45}{2037} \approx 0.71\% \text{ of GDP}$$

Thus, the mechanical fiscal gain for 2026 would equal approximately 14.5 bn lei, equivalent to **about 0.71% of GDP**.

4.3.3. Behavioral-adjusted (effective) effect for 2026

As shown extensively in VAT literature (Keen & Lockwood, 2010; IMF, 2015; OECD, 2019), the behavioral impact is amplified in the first full year following a rate increase. Romania's historical patterns (Țițan et al., 2011; Teodorescu, 2014) reveal that compliance deteriorates more visibly in the period immediately after a major tax rate adjustment.

For 2026, the behavioral coefficient remains consistent with the Central and Eastern European interval:

$$C_b = 0.75\text{–}0.80$$

Therefore:

$$\Delta R_{net,2026} = \Delta R_{gross,2026} \cdot C_b$$

Lower bound (Cb = 0.75):

$$14.45 \cdot 0.75 \approx 10.84 \text{ bn lei}$$

Upper bound (Cb = 0.80):

$$14.45 \cdot 0.80 \approx 11.56 \text{ bn lei}$$

As a percentage of nominal GDP:

$$\frac{10.84}{2037} \approx 0.53\%; \frac{11.56}{2037} \approx 0.57\%$$

Effective fiscal gain in 2026: 10.8–11.6 bn lei (≈ 0.53–0.57% of GDP).

The 2026 fiscal effect is significantly larger than that of 2025 due to:

1. **full-year application**,
2. **higher VAT base from nominal consumption growth**,
3. **consumption rebalancing after the initial adjustment period**,
4. **stabilization of post-reform compliance behavior**.

4.3.4. Interpretation in the Romanian economic context

The results are consistent with the structural characteristics of Romania's fiscal system:

- The VAT system exhibits **high revenue concentration**, increasing the sensitivity of the budget to rate adjustments.
- The VAT Gap, although declining due to digital reforms, still moderates revenue elasticity.

- Behavioral adaptation is stronger in full-year applications, confirming the sub-proportionality observed in the empirical literature.
- Administrative modernization directly shapes the effective fiscal gains (Miron, 2020; Bostan et al., 2017).

The net revenue effect of **10.8–11.6 bn lei** in 2026 consolidates Romania's fiscal position but does not eliminate structural vulnerabilities linked to compliance and consumption volatility.

4.4. Inflationary Impact (2025–2026)

The adjustment of the standard VAT rate from 19% to 21% generates not only fiscal effects but also measurable macroeconomic consequences, primarily through its impact on consumer prices. The inflationary pass-through of VAT changes has been widely documented in international literature and represents a critical transmission channel in emerging European economies.

4.4.1. Inflationary pass-through in 2025 (partial-year application)

Because the VAT increase becomes effective **on 1 August 2025**, the inflationary shock is concentrated in **Q3 2025**, with spillover effects extending into early 2026. According to Benedek et al. (2015), the average VAT pass-through coefficient in emerging EU economies ranges between **0.8 and 0.9**, meaning that **80–90% of the statutory rate adjustment is transmitted to final consumer prices**.

Given the 2-percentage-point increase (19% → 21%), the estimated direct inflationary effect is:

$$\Delta CPI_{2025} = 2pp \times (0.8 - 0.9)$$
$$\Delta CPI_{2025} \approx 0.4 - 0.5 \text{ percentage points}$$

This estimate is consistent with the inflationary dynamics anticipated by the National Commission for Strategy and Prognosis (CNSP, Summer Forecast 2025), which projects:

- **average CPI 2025:** 7.1%
- **year-end CPI 2025:** 8.9%

Approximately **0.4–0.5 pp** of the year-end figure is directly attributable to the VAT rate adjustment.

The short-run effect is amplified by anticipatory consumer behavior. Households typically accelerate durable goods purchases before the VAT increase (as observed in Romania in 2010, according to Țițan et al., 2011), followed by a post-adjustment decline in real consumption.

However, the inflation-targeting framework of the National Bank of Romania (2.5% ± 1 pp) acts as a nominal anchor, dampening potential second-round effects through monetary policy signaling and inflation expectations management.

4.4.2. Inflationary impact in 2026 (full-year propagation)

In 2026, the inflationary effect of the VAT increase is transmitted through second-round and structural channels rather than through a new policy shock. The literature suggests that the **primary price adjustment occurs within 3–6 months** of implementation, while the **secondary effects** (wage-price spirals, indexation mechanisms, input cost rebalancing) are partially absorbed over the following year.

Given that the VAT increase is fully embedded in prices from August 2025 onward, the **incremental effect on 2026 inflation** is significantly more moderate.

CNSP (2025) projects:

- **average CPI 2026:** 4.9%
- **year-end CPI 2026:** 5.2%

The contribution of the VAT increase to 2026 inflation is estimated at only:

$$\Delta CPI_{2026} \approx 0.05\text{–}0.10 \text{ pp}$$

This aligns with international findings (OECD, 2019) showing that after the first year, VAT-induced inflationary effects diminish sharply and do not persist unless accompanied by additional cost-push pressures.

4.4.3. Interpretation in the Romanian macroeconomic context

The inflationary dynamics associated with the 2025 VAT adjustment exhibit structural characteristics consistent with Romania's fiscal and monetary environment:

1. **High Spending Elasticity:** Private consumption, representing over 60% of GDP, reacts strongly to price shocks, amplifying initial inflationary effects.
2. **Partial Absorption by Firms:** Evidence from Miron (2020) indicates that Romanian companies partially absorb VAT-related price shocks in profit margins, moderating full pass-through.
3. **Digital Enforcement:** The widespread adoption of e-Invoice and SAF-T reduces opportunities for informal price adjustments, which may contribute to a more transparent and predictable pass-through mechanism.
4. **Monetary Policy Constraints:** With inflation already above target in 2025 (7.1%), the VAT-induced shock complicates short-term disinflation efforts.

Thus, while the VAT increase induces a measurable but temporary inflationary acceleration in late 2025, the persistence of its effects into 2026 is limited and macroeconomically manageable.

4.5. Comparative Analysis of Behavioral Coefficients in Central and Eastern Europe

Understanding the behavioral coefficient (Cb) is essential for evaluating the effectiveness of VAT-based fiscal consolidation. The Cb reflects the extent to which taxpayers and firms adjust their consumption, reporting behavior, and compliance decisions following a VAT rate change. A higher Cb suggests a closer alignment between theoretical and actual revenue, while a lower Cb indicates substantial behavioral erosion.

The comparative evidence from Central and Eastern Europe (CEE) shows that VAT revenue responses tend to be **sub-proportional**, primarily due to structural compliance gaps, widespread use of cash transactions, and partial tax shifting by firms. Table 2 provides a synthetic overview of behavioral coefficients observed in recent VAT adjustments in the region.

Table 2. Behavioral coefficients in Central and Eastern Europe

Country / Period	VAT rate change	Behavioral coefficient (Cb)	Source
Romania (2010)	+5 pp (19 → 24)	0.72–0.75	Țițan et al. (2011)
Poland (2011)	+1 pp (22 → 23)	0.78	IMF (2015)
Hungary (2012)	+2 pp (25 → 27)	0.76	OECD (2019)
Romania (2025 est.)	+2 pp (19 → 21)	0.75–0.80	Present study

Sources: Țițan, E., Boboc, C., Ghiță, S., & Todose, D. (2011); IMF (2015), Republic of Poland: Selected Issues – Tax Administration and VAT Policy Reform; OECD (2019), Consumption Tax Trends 2019; authors' calculations for Romania (2025).

4.5.1. Interpretation of comparative findings

The comparative data confirms several stylized facts relevant for Romania's fiscal policy:

(1) Sub-proportional revenue elasticity is the norm in CEE.

All Cb values fall below 1, indicating that increasing the statutory VAT rate systematically generates lower-than-proportional revenue gains. This result is consistent with the theoretical expectations of Keen and Lockwood (2010), reflecting consumption contraction and decreased compliance.

(2) Romania's estimated Cb for 2025 (0.75–0.80) is consistent with regional benchmarks.

This suggests that Romania's behavioral response is neither unusually high nor low relative to its peers. The 2010 VAT shock (Cb = 0.72–0.75) occurred in recessionary conditions; therefore, a slightly higher Cb in 2025 reflects improved compliance infrastructure (e-Invoice, SAF-T), though structural weaknesses persist.

(3) Countries with more advanced digital tax administration show higher Cb.

For example, Poland's 0.78 reflects the early introduction of mandatory electronic reporting and strong institutional capacity. Miron (2020) similarly shows that digitalization significantly improves compliance in Romania.

(4) The behavioral coefficient is influenced more by compliance and enforcement than by the rate change itself.

This finding reinforces the central theme of the Modern VAT literature (Ebrill et al., 2001): administrative efficiency—not higher statutory rates—is the core driver of VAT performance.

4.5.2. Behavioral dynamics specific to Romania (2025–2026)

Several behavioral mechanisms are expected to apply to the Romanian case:

(a) Anticipatory consumption (Q2–Q3 2025)

Households may accelerate purchases before 1 August 2025, temporarily boosting VAT collections, followed by a post-adjustment slowdown.

(b) Post-hike consumption contraction

A 2-percentage-point VAT increase raises consumer prices by an estimated 1.68%, which—given the short-run consumption elasticity of –0.3 (IMF, 2015)—reduces real consumption by about 0.5% of GDP.

(c) Compliance erosion in vulnerable sectors

Sectors with higher informality (hospitality, retail trade, construction) may experience a temporary shift toward cash transactions, lowering effective VAT collection in Q3–Q4 2025.

(d) Digital enforcement moderating non-compliance

Romania's advanced digital reporting systems create a structural brake on VAT erosion, helping maintain the Cb within the 0.75–0.80 range.

(e) Stabilization in 2026

With no additional VAT policy shocks, behavioral erosion diminishes in 2026, allowing for a slightly higher net gain relative to GDP.

4.5.3. Implications for revenue projections

Based on the comparative and theoretical evidence discussed above, the behavioral coefficient applied in the present study is maintained within a **uniform interval of 0.75–0.80 for both 2025 and 2026**. This choice ensures methodological consistency across partial-year and full-year estimations and reflects the persistent structural characteristics of Romania's VAT system, including compliance gaps and enforcement constraints.

Accordingly, the revenue effects associated with the 2025–2026 VAT rate adjustment are expected to remain **sub-proportional to the statutory increase**, with administrative efficiency and compliance dynamics representing the dominant determinants of the effective fiscal gain rather than the duration of application alone. This reinforces the conclusion that improvements in VAT administration and enforcement are essential for achieving sustainable revenue consolidation.

5. Discussion and policy implications

The empirical findings derived from the 2025–2026 VAT adjustment indicate that the fiscal impact of raising the standard VAT rate from 19% to 21% is **positive but moderate**, and significantly constrained by behavioral, compliance, and macroeconomic factors. This discussion section synthesizes the main drivers that shape these outcomes and provides policy recommendations consistent with international best practices and Romania's institutional context.

5.1. Direct and Indirect Budgetary Effects

5.1.1. Direct fiscal impact

The gross fiscal gain from the VAT rate increase—estimated at approximately **0.28% of GDP in 2025**, reflecting the partial-year application of the measure, and at around **0.71% of GDP in 2026**, when the new rate applies for the full year—demonstrates the revenue-generating potential of consumption taxation, especially in an economy where VAT contributes over **41% of total tax revenues**. However, once behavioral adjustments are incorporated through the C_b parameter, the net effect declines to:

- **0.21–0.22% of GDP in 2025, and**
- **0.53–0.57% of GDP in 2026.**

This trajectory is broadly consistent with the findings of Keen and Lockwood (2010), who emphasized that statutory increases in VAT rates produce diminishing marginal effects due to consumption contraction and compliance erosion.

5.1.2. Indirect fiscal effects

Indirect effects also materialize through:

- higher taxable turnover for corporate and personal income taxes,
- increased excise bases for complementary goods,
- improved accuracy of fiscal reporting due to digital monitoring.

However, the magnitude of these indirect effects is constrained by **weak economic growth** (+0.6% in 2025), **elevated inflation**, and the structural vulnerabilities of the Romanian tax system (high VAT Gap, cash-intensive sectors, administrative overload).

Thus, while the VAT increase strengthens short-term fiscal consolidation, it does not substitute for deeper structural reforms.

5.2. Behavioral and Macroeconomic Responses

Behavioral reactions represent the core mechanism through which the statutory VAT increase translates into sub-proportional revenue gains. Several channels are identified:

(a) Consumption contraction

Given the estimated price effect of +1.68% from the VAT hike and the short-run demand elasticity of –0.3 (IMF, 2015), real private consumption is expected to decline by nearly **0.5% of GDP** in late 2025. This contraction reduces the tax base and contributes to the lower Cb values in the Romanian case.

(b) Adjustment in consumer purchasing timing

A significant share of households accelerate durable goods purchases prior to 1 August 2025, generating a temporary increase in Q2–Q3 revenues but followed by a marked slowdown in Q4.

(c) Margin absorption by firms

Romanian companies often partially absorb VAT-induced cost increases, especially in competitive sectors (retail, consumer goods), thereby reducing effective pass-through. This aligns with Miron (2020), who observed similar behavior during the 2016 VAT reduction episode.

(d) Compliance erosion

In sectors characterized by informality (hospitality, small retail, construction), a portion of transactions temporarily shifts toward cash-based operations, lowering effective VAT collection. However, SAF-T and e-Invoice systems mitigate this risk more effectively than in past VAT adjustment episodes.

(e) Macroeconomic spillovers

The inflationary impact (0.4–0.5 pp in 2025) slightly erodes real incomes and dampens household consumption. In 2026, this effect becomes marginal (0.05–0.10 pp), confirming that VAT-induced inflation does not persist unless compounded by supply-side shocks.

5.3. Administrative and Structural Constraints

Romania's VAT performance is heavily influenced by its longstanding structural weaknesses:

(1) Persistently high VAT compliance gap

According to the *VAT gap in Europe – Report 2025* published by the European Commission, Romania recorded a **VAT compliance gap of 26.7% in 2022**, which **increased to 30.0% in 2023**, while **fast estimates for 2024 indicate a slight decline to 29.5%**. Despite episodic improvements, these values remain among the highest in the European Union and constitute a binding structural constraint on VAT revenue performance. Consequently, the persistence of a large compliance gap fundamentally limits the effectiveness of statutory VAT rate increases in generating proportionate and sustainable fiscal gains.

(2) Compliance heterogeneity

Large firms exhibit high compliance due to digital monitoring, while SMEs rely heavily on cash transactions and exhibit lower administrative capacity.

(3) Institutional rigidity

The tax administration faces staff shortages, outdated internal processes, and limited analytical capacity—factors that reduce the effective enforcement of the VAT system.

(4) Partial digital integration

Although e-Invoice and SAF-T have improved data transparency, their integration into risk analysis and compliance algorithms remains incomplete.

These constraints indicate that **VAT rate increases cannot compensate for structural weaknesses in tax administration**.

5.4. Policy Implications

The findings of this study lead to several policy-relevant conclusions highly consistent with both academic evidence and international recommendations:

(1) Prioritizing VAT Gap Reduction

Reducing the VAT Gap by **just 5 percentage points** would generate revenue equivalent to or greater than the entire net gain from the 2025 VAT increase. Therefore, consolidation efforts must prioritize compliance, not statutory rates.

(2) Consolidating digital enforcement tools

A unified digital platform linking e-Invoice, SAF-T, e-Transport, and POS transaction data would significantly improve real-time risk detection and compliance monitoring.

(3) Ensuring VAT rate stability (2025–2028)

Frequent changes in the VAT rate increase uncertainty, undermine consumption, and reduce trust in the tax system. Stability enhances voluntary compliance and reduces the administrative burden on firms.

(4) Supporting vulnerable households

Given the regressive nature of consumption taxes, compensatory measures—targeted social transfers, energy subsidies, or VAT reductions on essential goods—can mitigate adverse distributional effects.

(5) Strengthening institutional capacity

Investments in staff training, analytical systems, and data-driven risk management are imperative for sustainable increases in tax revenues.

(6) Broadening the tax base

A more diversified tax portfolio, including closing loopholes in excises, property taxation, and digital economy activities, reduces overreliance on VAT.

6. Conclusions

This paper has examined the fiscal and macroeconomic implications of Romania's decision to raise the standard VAT rate from 19% to 21% starting 1 August 2025 and to maintain the rate throughout 2026. Using a behavioral-adjusted revenue framework grounded in the theoretical contributions of Keen and Lockwood (2010) and the IMF's Modern VAT model (Ebrill et al., 2001), the analysis demonstrates that VAT rate changes produce **sub-proportional fiscal effects** due to the combined influence of consumption contraction, compliance behavior, and administrative constraints.

The empirical results indicate that the gross fiscal effect of the VAT rate increase is approximately 0.28% of GDP in 2025 (reflecting partial-year application) and around 0.71% of GDP in 2026 (full-year effect). However, once behavioral responses are incorporated, the net fiscal gain declines substantially, reaching:

- **0.21–0.22% of GDP in 2025**, reflecting the partial-year application of the new rate and the anticipatory adjustment in consumption patterns;
- **0.53–0.57% of GDP in 2026**, when the full-year effect materializes under conditions of subdued economic growth and persistent inflationary pressures.

These results are fully consistent with international empirical evidence showing that higher statutory VAT rates do not automatically translate into proportionally higher revenues. Instead, VAT yield is predominantly determined by administrative effectiveness, the VAT Gap, and the behavioral elasticity of taxpayers—dimensions in which Romania continues to exhibit significant structural vulnerabilities.

The macroeconomic assessment confirms that the VAT increase will generate a **temporary inflationary impulse** of approximately **0.4–0.5 percentage points** in 2025, with a near-zero continuation effect in 2026. Real private consumption is expected to contract moderately, in line with the estimated –0.3 short-term elasticity of demand to VAT-induced price changes. These findings suggest that while the VAT policy contributes to short-term fiscal consolidation, it may simultaneously exert contractionary pressures on household welfare and aggregate demand.

Furthermore, the comparative analysis of behavioral coefficients in Central and Eastern Europe positions Romania's estimated **Cb = 0.75–0.80** within the regional norm, confirming the structural pattern of sub-proportional VAT revenue responses. This underscores the broader conclusion that **administrative modernization and compliance improvements outweigh statutory rate adjustments in determining long-term fiscal performance**.

The policy implications are therefore clear: sustainable fiscal consolidation in Romania requires prioritizing VAT Gap reduction, strengthening digital enforcement instruments (e-Invoice, SAF-T, e-Transport), enhancing institutional capacity, and stabilizing the VAT rate over the medium term. A reliance on repeated rate adjustments would offer diminishing returns and could undermine both consumption stability and business confidence. At the same time, measures targeted toward vulnerable households can mitigate the regressive effects of consumption taxation.

In conclusion, the 2025–2026 VAT adjustment provides Romania with a temporary fiscal gain that supports the correction of the excessive deficit, but it should not be viewed as a substitute for structural administrative reform. The long-term success of Romania's fiscal consolidation strategy will depend on its ability to strengthen compliance, modernize tax administration, and maintain a coherent and predictable tax policy framework. The present study contributes to the empirical literature by offering a behaviorally calibrated assessment of VAT efficiency within an emerging European economy and by highlighting the strategic relevance of institutional capacity in shaping fiscal outcomes.

6.1. Limitations and data considerations

Consequently, the persistence of a structurally high VAT compliance gap is likely to remain a binding constraint on revenue mobilization even after the statutory rate adjustment. Although available estimates suggest that Romania continues to exhibit one of the largest VAT gaps within the European Union, the exact magnitude relevant for the 2025–2026 horizon depends on the timing and methodology of official assessments. From an analytical perspective, this implies that reliance on statutory rate increases alone is subject to diminishing marginal returns in environments characterized by persistent compliance deficiencies. In contrast, sustained reductions in the VAT gap—through administrative strengthening and improved enforcement—have the potential to generate fiscal gains comparable to, or exceeding, those associated with the rate increase examined in this study.

Moreover, short-term fluctuations in VAT receipts around the implementation of the reform should be interpreted with caution. High-frequency cash-based data may be influenced by temporary factors such as intertemporal shifts in consumption, inventory adjustments, seasonal patterns, and variations in the timing of VAT refunds, none of which necessarily alter the underlying annual revenue effect. Accordingly, the evaluation of the fiscal impact of the VAT rate adjustment should be grounded primarily in consolidated, full-year execution data, which provide a more reliable basis for assessing the medium-term implications of the reform within the standard annual fiscal accounting framework.

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