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Consumption Tax at the EU 27 Level – Evolutions, Comparisons, Romania in Relation to the EU 27

Florina Popa

SR III Dr. Romanian Academy, Institute of National Economy, Bucharest, Romania

florinapopa289@gmail.com

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Abstract. The objectives of the study were to analyze the evolution over a period of thirteen years, respectively, 2009-2021, of Consumption Tax Revenues, expressed as a share in GDP, both at European Union Average - EU-27 level and Romania in relation to the countries of the European Union. The study was done by research, processing of ideas from specialized literature through the author's own interpretation, the collection and processing and analysis of statistical database, in order to highlight the results obtained. The results obtained reflects the synthesis of ideas resulted from data analyzed concerning Consumption Tax Revenues, expressed as a share in GDP. The significance of the results lies in the importance of the study's topic choosed.

Keywords: consumption tax, economic growth, revenues, comparisons, hierarchy.

Introduction

Reason of taxation, of the taxes applied on the three major categories of tax bases (labour, consumption and capital) result from the need of governments to accumulate financial resources at

the state budget by collecting tax revenue, in the aim to carry out activities belonging to the central and local public administration (Shome, 1995, Macek, 2018).

As a part of the macroeconomic policies of governments, tax policy has direct implications, economically and socially. The measures taken under fiscal policies can aim at an increase in tax revenues, but can also focus on reducing tax expenditures, depending on the economic and social conjuncture. These are aspects that highlight the orientation and concerns of state authorities, regarding tax issues (Shome, 1995, Macek, 2018).

The orientation towards the development and use of fiscal policy, as a tool for growth, can lead to positive effects in economy. Sustained efforts, by developing countries, are needed to increase institutional quality, for a greater administrative efficiency. (Manwar Hossein & Pairote, 2022)

The structure of a country's tax system and the way of distribution of the tax burden, by income category, are of particular importance (Astarita et al., 2018).

Some introductory aspects about consumption taxation and economic growth

→ A series of authors expressed their opinions on the *positive* link between the consumption taxation and its effects on economic growth, as shown in the following:

Analyzing the data of 24 EU member states, for the period 1995 – 2010, applying an econometric test on EU (24) countries, for the interval 1995-2010, Szarowska (2013) find that consumption taxes have a *positive* effect on GDP growth.

Acosta-Ormaechea and Yoo (2012), after examining the *relationship* between fiscal structures and growth rates, find that consumption or property taxes are *favorable* to growth, compared to income tax. (McNabb, 2018).

Other authors show that *consumption taxation* is often considered to be *more growth-favorable* because it distorts the decisions of market participants (such as decisions about saving, decisions between work and leisure) less than labour taxation. As such, taxation systems should be designed so that the tax burden on labour is reduced, and higher taxes are levied on consumption. *Increasing* taxes on consumption, while *reducing* taxes on labour and capital, can stimulate economic growth, and taxation of labour and capital should be kept low to prevent disturbance in the decisions of economic agents (Zipfel et al, 2012).

There are also opinions of some authors who believe that VAT could have *unfavourable* effect on consumer behaviour, labour and economic growth.

Value Added Tax - VAT has the largest weight in the category of indirect taxes and has *unfavorable* effects on consumption behavior and decision-making, between work and leisure. (Zipfel et al, 2012).

Stoilova (2016) find that consumption tax, such as VAT, could have a *negative* effect on economic growth, the results of studies showing that society does not obtain economic benefits from it.

Arnold et al., (2011), show that higher taxes on consumption, for example VAT, could lead to a diminishing reward for labour, and consequently, can impact labour supply.

In the European Union, increasing consumption taxes while tax burden on capital were decreasing is a reconsideration of tax systems, in a positive direction. As an exception, the taxation of the labour factor, continued the orientation in the opposite direction (Zipfel, Heinrichs, Böttcher – Edt., Hoffmann, Speyer, Deutsche Bank DB Research Management, 2012).

This paper *aims* to analyze the evolution over a period of thirteen years, respectively, 2009-2021, of Consumption Tax Revenues, expressed as a share in GDP, for the Evolution of Consumption Tax Revenues at EU-27 level (% of GDP), Romania in relation to the countries of the European Union, exemplified in data, provided by European Commission - Data from the European Commission, DG Taxation and Customs Union, based on Eurostat Data, Data extracted December 2022, Data on Taxation Trends, Tax revenues by tax base, https://taxation-customs.ec.europa.eu/taxation-1/economic-analysis-taxation/data-taxation-trends_en,

Research Results

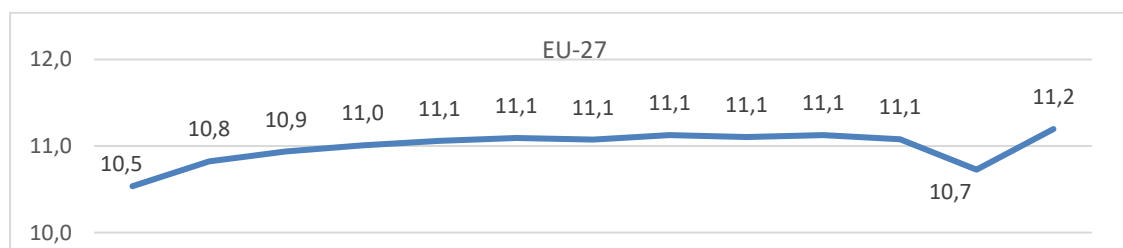
Consumption tax (% in GDP)

2.1.1. Evolution of consumption tax revenue at European Union (EU 27) level

At the EU-27 level, the series of average rates of **consumption tax** revenue, in terms of GDP, shows a relatively constant level in the interval between the two crises, with a decrease of 0.4 pp, in 2020, compared to year 2019 and an increase of 0.1 pp, in 2021, respectively 11.2% of GDP, compared to the same year, 2019. It is worth noting that compared to the year 2010, the lowest level of consumption tax, in terms of GDP, it was in 2020 and the highest in the year 2021, according to Figure 1.

Figure 1

Evolution of consumption tax revenues at the EU-27 level (% in GDP)



Source: Graphical representation based on data of European Commission, DG Taxation and Customs Union, based on Eurostat data. Data extracted December 2022, Data on Taxation Trends, Tax revenues by tax base, https://taxation-customs.ec.europa.eu/taxation-1/economic-analysis-taxation/data-taxation-trends_en

Following the level of taxation in the case of the Member States, compared to the EU-27 average, regarding the consumption tax revenues, in relation to GDP, different situations appear between the Member States.

A smaller number of countries present taxation levels below that of the average of the European Union EU-27, either for the entire period of the analyzed interval, namely 2009-2021, or for a large segment of the period, with short intervals of excesses. In this situation there are seven states, of which:

✓ Lower levels than the EU-27 average:

- Spain, Ireland and Luxembourg, for the entire interval;
- The other four countries: Belgium, Germany, Italy and Slovakia, for periods between 8 and 12 years, the rest of the years having very small exceedances.

The lowest level is 5.7%, the year 2020 (in Ireland) with 5 pp. below the EU-27 level.

✓ Higher levels than the EU-27 average:

- 12 countries, throughout the range: Bulgaria, Denmark, Estonia, Croatia, Cyprus, Hungary, Austria, Poland, Portugal, Slovenia, Finland and Sweden.
- 7 countries, for a period between 8 and 12 years: Czech Republic, Estonia, France, Latvia, Lithuania, Malta and the Netherlands.

The highest level of 19.1% in Croatia in the year 2019, by 8 pp. above the EU-27 level.

✓ *Romania has overruns against the EU-27 average, in 6 years, and in the other 7 years, it has values below the EU-27 average. The minimum is observed in 2009, 9.7%, with 0.8 pp. below the EU-27 average, and the maximum in 2015, 12.6 %, by 1.5 pp., above the EU-27 average.*

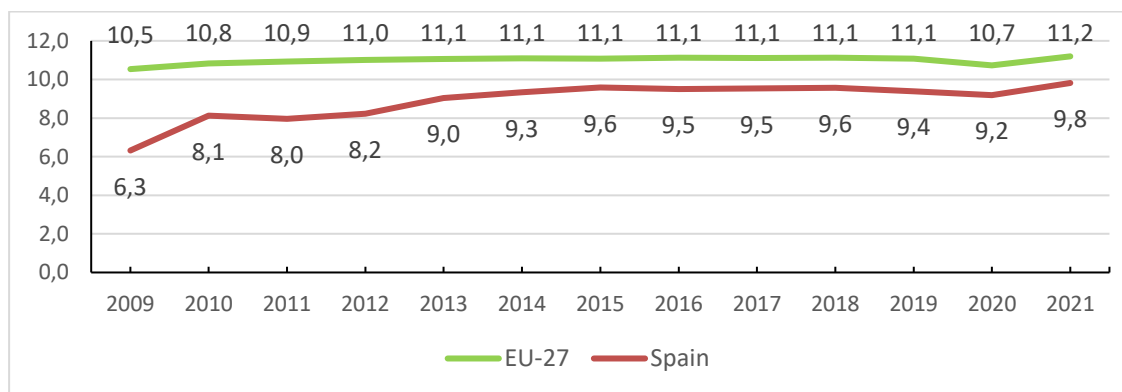
The trends of the Member States regarding the level of taxation, the tax/GDP ratio, respectively, have varied from one country to another.

Analyzing *each year*, in part, the following is observed:

The lowest levels of consumption taxes (% in GDP) are identified in Spain and Ireland, at different periods of the 2009-2021 interval, respectively (Figure 2, 3):

Figure 2

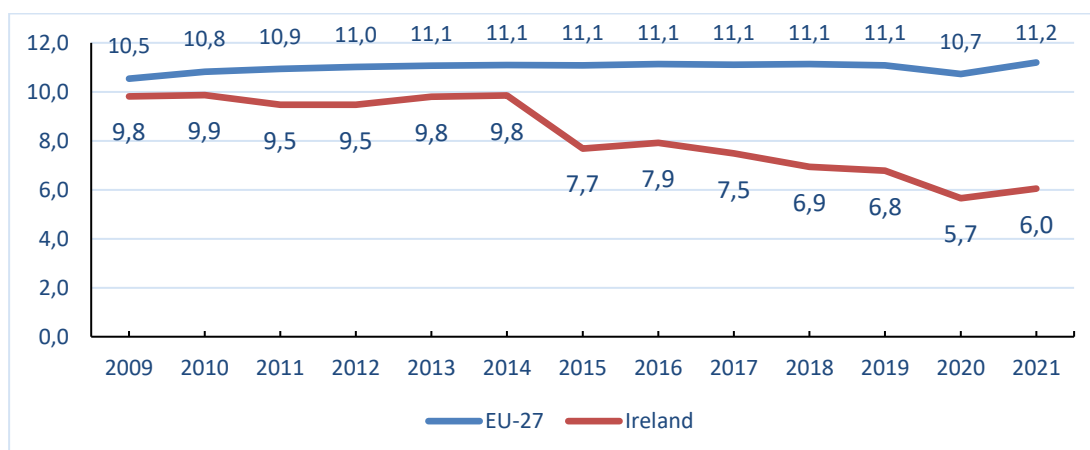
Consumption Tax revenue (% in GDP) Spain compared to EU-27



Source: Graphical representation based on data of European Commission, DG Taxation and Customs Union, based on Eurostat data Data extracted December 2022, Data on Taxation Trends, Tax revenues by tax base, https://taxation-customs.ec.europa.eu/taxation-1/economic-analysis-taxation/data-taxation-trends_en

Figure 3

Consumption tax revenue (% in GDP) Ireland compared to EU-27 (2009-2021)



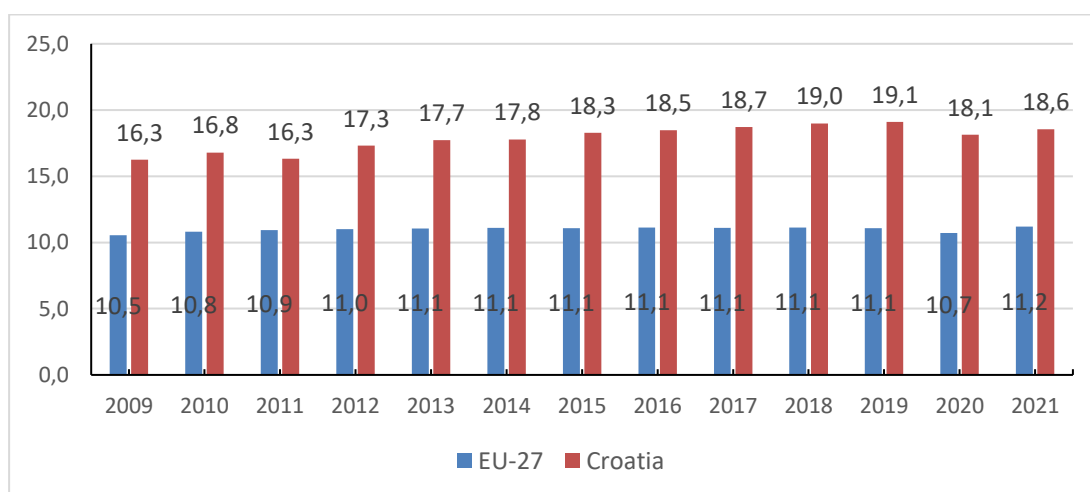
Source: Graphical representation based on data of European Commission, DG Taxation and Customs Union, based on Eurostat data Data extracted December 2022, Data on Taxation Trends, Tax revenues by tax base, https://taxation-customs.ec.europa.eu/taxation-1/economic-analysis-taxation/data-taxation-trends_en

Spain has the lowest shares in 2009-2014 (between 6.3% and 9.3%) and Ireland in the period 2015-2021 (minimum 5.7%, the year 2020 and maximum 7.9%, the year 2016). The lowest level compared to the EU average is in Ireland, of 5.2 pp, in 2021. Among the countries with levels close to Ireland and Spain is noted Romania – the year 2009 (8.7%), Slovakia - year 2010 (9.8%), Luxembourg - the years 2015-2021 (minimum 8.3%, the year 2020 and maximum 8.9%, the year 2019), Germany, the years 2017-2019 (minimum 10.2%).

The highest consumption tax rates, in terms of GDP, are identified, throughout the interval of the years 2009 – 2021, in Croatia (Figure 4)

Figure 4

Revenue from consumption taxes (% of GDP) Croatia compared with EU-27



Source: Graphical representation based on data of European Commission, DG Taxation and Customs Union, based on Eurostat data Data extracted December 2022, Data on Taxation Trends, Tax revenues by tax base, https://taxation-customs.ec.europa.eu/taxation-1/economic-analysis-taxation/data-taxation-trends_en

The level of income based on tax rates increased, in the period 2009-2019, by 2.8 pp (from 16.3% to 19.1%), the highest rate being in 2019. In the following years, lower tax rates, compared to 2019, are recorded, by 1 pp in 2020 and, respectively, by 0.5 pp in 2021. Tax rates (% in GDP) are significantly higher compared to the EU-27 annual averages, the biggest difference being 8 pp, in 2019 (19.1% - Croatia, compared to 11.1% - EU-27).

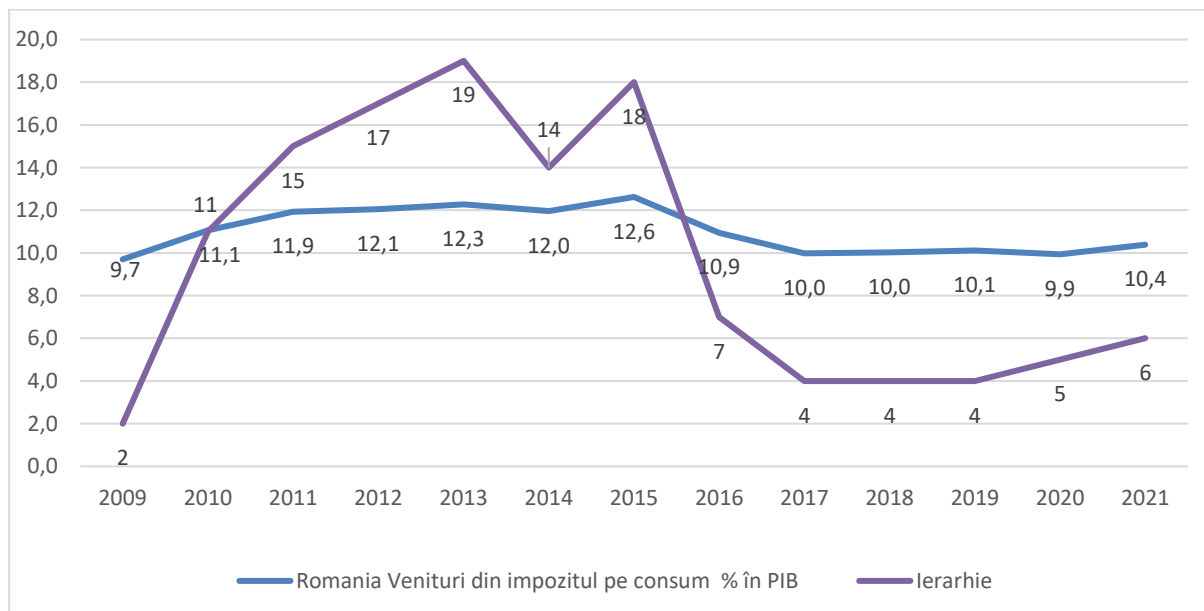
Croatia is followed by other countries that have high levels of revenues from consumption tax, at different times, such as: Denmark - 2009-2012 years (minimum 14.6%, and in 2010 and a maximum of 14.8% in 2009.); Bulgaria - year 2013 – 14,6% and years 2015-2017 (rates between 14,6% and 14,7%); Greece - years 2016-2021 (minimum 14,1%, in year 2020 and maximum 15%, in the year 2018).

2.1.2. Romania in relation to the countries of the European Union

According to the European Commission data (DG Taxation and Customs Union, based on Eurostat data Data extracted December 2022), the evolution of revenue from consumption taxes (% in GDP) in the period 2009-2021, in the case of Romania, can be seen both in the aspect of the percentage values and the hierarchical position one, towards the EU-27 countries, as shown in Figure 5.

Figure 5

Evolution of income from consumption taxes (% in GDP) in Romania in the period 2009-2021



Source: Graphical representation based on data of European Commission, DG Taxation and Customs Union, based on Eurostat data Data extracted December 2022, Data on Taxation Trends, Tax revenues by tax base, https://taxation-customs.ec.europa.eu/taxation-1/economic-analysis-taxation/data-taxation-trends_en

Percentage

The evolution of fiscal revenues from consumption, in relation to GDP, shows the following:

✓ increase, in the first part of the interval, by 2.9 pp and, respectively, from 9.7%, minimum value, in 2009, to 12.6% in the year 2015; the increase was accentuated in the year 2010 compared to 2009, respectively, 1.3 pp, followed by the sensitively close annual changes;

✓ decrease, by 1.7 pp, starting with 2016 (10.9%), with a relatively constant evolution, until the end of the period - 2021 (10.4%), with small oscillations.

Hierarchical

Table 1

*The hierarchical position of Romania in relation to the **lowest** level of consumption taxation (% in GDP)*

Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
% consumption taxation Spain	6,3	8,1	8,0	8,2	9,0	9,3							
% consumption taxation Irlanda							7,7	7,9	7,5	6,9	6,8	5,7	6,0
% consumption taxation Romania	9,7	11,1	11,9	12,1	12,3	12,0	12,6	10,9	10,0	10,0	10,1	9,9	10,4
Hierarchical position Romania	2	11	15	17	19	14	18	7	4	4	4	5	6

Source: European Commission, DG Taxation and Customs Union, based on Eurostat data Data extracted December 2022, Data on Taxation Trends, Tax revenues by tax base, https://taxation-customs.ec.europa.eu/taxation-1/economic-analysis-taxation/data-taxation-trends_en

In relation to the lowest level of taxation (Spain 2009 - 2014; Ireland 2015-2021), the hierarchical position of Romania, within the 27 Member States has sensitive oscillations, as a result of the change in percentage values, respectively:

- In the first part of the interval, advancing the values of other Member States, Romania grows in the hierarchy, from position 2 in the year 2009 to the position 18, in 2015 (maximum position, 19, in 2013);
- In the next period, the hierarchical position, on the decrease, evolves with significantly lower oscillations (the lowest hierarchical position – 4, in the years 2017-2019). It is noted that in the period 2011-2015, in which the tax rates are higher, the hierarchical position of Romania is further away from the lowest level of taxation, respectively, positions 14-18, and between the years 2016-2021, where the tax rates are lower, the hierarchical position is also lower, respectively, the positions 4-7, but this positioning is also influenced by the change in the tax rates of other states in the respective periods.

In the period 2009-2015, as the consumption tax rates increase, Romania is moving away from countries with lower levels and is approaching those with higher levels, especially in the period 2012-2015, when the quotas exceed 12%; in the period 2016 – 2021, when the quotas decrease, as

shown above, it is moving nearer countries with the lowest levels of taxation considering the level 1, the lowest limit of Ireland.

In relation to the highest level of taxation, which is identified in Croatia (over the entire interval), the hierarchical position of Romania, corresponding to the tax rates, is found in the table below.

Table 2

*The hierarchical position of Romania in relation to the **highest** level of consumption taxation (% in GDP)*

Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
% consumption taxation Croatia	16,3	16,8	16,3	17,3	17,7	17,8	18,3	18,5	18,7	19,0	19,1	18,1	10,4
% consumption taxation România	9,7	11,1	11,9	12,1	12,3	12,0	12,6	10,9	10,0	10,0	10,0	9,9	10,4
Hierarchical position Romania	26	17	13	11	9	14	10	21	24	24	24	23	22

Source: European Commission, DG Taxation and Customs Union, based on Eurostat data Data extracted December 2022, Data on Taxation Trends, Tax revenues by tax base, https://taxation-customs.ec.europa.eu/taxation-1/economic-analysis-taxation/data-taxation-trends_en

In the period 2011 – 2015, when the level of tax rates is higher, the hierarchical position of Romania is closer to the country with the highest level of taxation, Croatia and after 2016, when the tax rates of consumption are lower, the hierarchical position of Romania is farther away, the place in the hierarchy being in the range of 22-24.

Among the countries with the highest level of taxation, which Romania is approaching, in the period 2012-2015, are constantly finding Greece, Finland, Denmark, Hungary, Slovenia and Bulgaria. In the period 2016 – 2021, when Romania has lower tax rates, it approaches countries such as: Germany, Belgium, Italy, Lithuania and Austria.

Conclusions

Consumtion tax (% in GDP)

The analysis of the data regarding the distribution of tax revenues according to the tax base, Romania compared to the countries of the European Union – EU-27, leads to a number of aspects, as follows:

Following **the level of taxation, in the case of Member States, compared to the EU-27 average**, it results that 12 countries are found to be at higher levels than the EU-27 average, throughout the whole range, to which 7 other countries are adding, that have higher levels of taxation, for a period between 8 and 12 years. Below the EU average - EU-27, a number of three countries across the range, as well as four other countries, between 8 and 12 years are found as a level of taxation.

Romania has overruns against the EU-27 average, in 6 years (2010–2015) and in the other 7 years, it has values below the EU-27 average. The minimum is observed in the year 2009, 9.7%, with 0.8 pp. below the EU-27 average, and the maximum in 2015, 12.6 %, by 1.5 pp., above the EU-27 average.

The lowest level of consumption taxation in relation to GDP is identified in Spain, between 2009-2014 and in Ireland, in the years 2015-2021, with tax rates, in, between 5.7% (Ireland) and 9.3% (Spain).

It is noted that in the period 2011-2015, in which the tax rates are higher, the hierarchical position of Romania is further away from the lowest level of taxation, respectively, positions 14-18, and between 2016-2021, in which the tax rates are lower, the hierarchical position of Romania is closer, respectively, positions 4-7, but this positioning is also influenced by the change in the tax rates of other states in the respective periods.

Compared to the country that has the highest consumption taxation revenue, Croatia, the hierarchical positions of Romania differ in the range; between the years 2011 – 2015, when the level of the tax rates is higher, the hierarchical position of Romania is closer to the country with the highest level of taxation, Croatia (positions 9-13) and after 2016, when the consumption tax rates are lower, the hierarchical position of Romania is further away, the place in the hierarchy being in the range of 21-24.

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