



# Does the taxation of motor vehicles work? Evidence from Eastern European Countries<sup>1</sup>

**Radu-Ștefan TOADER<sup>2</sup>**

Faculty of Public Administration

The National University of Political Studies and Public

Administration, Bucharest, Romania

Bucharest, Romania

*radu.toader@snsa.ro*



**Abstract:** *Taxation represents a unique opportunity for governments to solve multiple problems, economic, social, or environmental. Motor vehicle taxation intends to solve all those problems by incentivizing the taxpayers to make the best decisions for the environment and to use the collected funds to implement multiple policies to solve its intended purpose. Eastern Europe is a special case study because it falls behind compared to Western countries in terms of greenhouse gases and the average state of their motor vehicles.*

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<sup>1</sup> DOI:

<sup>2</sup> ORCID iD: <https://orcid.org/0009-0007-6160-2514>

## **1. Introduction**

Motor vehicle taxation stands at the intersection of economic policies, environmental sustainability, and public finance strategies, influencing and reflecting the complex dynamics of nations. In Eastern European Countries, where economic transitions and unique policy landscapes prevail, the effectiveness of motor vehicle taxation becomes a critical area of exploration. This study aims to analyze the impact of such taxation policies, offering evidence-based insights into their economic, environmental, and social consequences.

The significance of motor vehicle taxation extends beyond revenue generation, intertwining with concerns related to environmental sustainability, urban planning, and public health. Understanding the nuanced relationship between taxation policies and their intended outcomes is essential, particularly in the distinctive socio-economic and geopolitical context of Eastern European Countries.

The primary objective of this research is to assess the impact and effectiveness of motor vehicle taxation in Eastern European Countries. Through empirical analysis and case studies, the study seeks to discern patterns, variations, and potential areas for improvement within existing taxation policies.

In the European Union, policymakers have come up with new solutions to maintain air quality at normal levels. A significant factor in air quality is road transportation, so, the policymakers have to come up with strategies so the motor vehicles that are being used pollute as little as possible.

The subsequent chapters will unfold the intricacies of motor vehicle taxation policies in Europe and delve into case studies from Eastern European Countries. Through this investigation, we strive to contribute valuable insights that can inform policy decisions and foster sustainable development in the region.

## **2. Public policy in the European Union**

Public policy in the European Union (EU) constitutes a comprehensive approach aimed at addressing a myriad of problematic situations. The EU's policymaking endeavors encompass a

spectrum of challenges, incorporating socio-economic, environmental, and other dimensions. The collaborative nature of EU institutions, as outlined by Peterson and Shackleton (2012), facilitates a holistic response to issues that span national borders. Policies are designed not only to foster economic growth but also to ensure social cohesion, environmental sustainability, and the well-being of its citizens. This integrated approach aligns with the principles of subsidiarity and proportionality, emphasizing that decisions are made at the level most effective for tackling the specific challenges at hand (Peterson & Shackleton, 2012). The EU's commitment to multifaceted public policies reflects a recognition that societal issues are inherently interconnected and require comprehensive solutions.

As Wiener et al. (2018) highlight, the EU's approach to policymaking is characterized by multi-level governance, allowing for the incorporation of diverse perspectives and expertise. This collaborative governance model involves not only the European Commission, Parliament, and Council but also engages regional and local authorities, fostering a more inclusive decision-making process. Public policies within the EU strive not only to resolve immediate issues but also to align with long-term objectives, as emphasized by Checkel (2005). This forward-looking perspective is crucial for addressing complex challenges, including those related to climate change, economic inequality, and social justice.

To have a complete process, policymakers must keep in mind an important aspect of policy making, the evaluation stage. As Miroiu (2001) states, “Policy evaluation represents the objective and systematic empirical examination, with the help of social research methods, of public policies, in terms of the objectives proposed by them”, we must use these evaluations to improve the quality of a program or helping to correctly inform a decision-maker.

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### **3. Motor vehicle taxation in the European Union**

Taxation represents a complex instrument used by policymakers that can shape the market's guidelines. According to Schneider and Ingram (1993), taxation not only serves as a revenue-generation tool but also as a means of shaping societal behaviors. Tax policies, whether focused on motor vehicles or other domains, play a pivotal role in influencing economic decisions, promoting environmental sustainability, and achieving social objectives. By recognizing taxation as an integral component of broader public policies, the EU positions itself strategically in addressing challenges at both national and supranational levels. Understanding the interplay between taxation policies and overarching public strategies becomes imperative for comprehending the holistic nature of governance in the European Union.

Transitioning to the realm of taxation as a form of public policy, diverse viewpoints contribute to a nuanced understanding of this critical instrument. Building on contemporary perspectives, Chetty et al. (2009) assert that taxation is not solely a revenue-generation tool but a mechanism that influences individual behavior and societal outcomes. This behavioral economics lens, introduced by Chetty et al. (2009), emphasizes the importance of designing tax policies, including those targeting motor vehicles, with insights from behavioral economics to promote desirable economic and environmental outcomes.

Additionally, Acemoglu et al. (2012) delve into the role of institutions in shaping effective taxation policies. Their work underscores the dynamic relationship between political institutions and the design of tax systems, shedding light on how institutional structures can impact the success of taxation as a tool for economic and social objectives. Understanding the intricate interplay between institutional design and taxation policies becomes crucial for comprehending the strategic positioning of the EU in addressing challenges at both national and supranational levels.

#### **4. Taxation of motor vehicles in Eastern Europe**

Taxation of motor vehicles is a comprehensive method that aims to solve more problems at the same time. However, two dimensions emerge with particular significance: environmental considerations and economic significance.

Revenue generation stands as a fundamental economic function of motor vehicle taxation for EU member states. This perspective is reinforced by Sijbren (2016), who underscores the pivotal role of motor vehicle taxation in contributing substantial funds to national budgets. Taxes levied on the acquisition, ownership, and use of vehicles serve as critical financial instruments, facilitating investments in public infrastructure, healthcare, education, and other essential services. Registration taxes, typically imposed at the point of vehicle purchase, emerge as a noteworthy one-time revenue source.

Environmental considerations constitute a cornerstone in the taxation framework applied to motor vehicles within the European Union. This perspective is underscored by Hintermann et al. (2014), emphasizing the profound link between motor vehicle taxation and the EU's commitment to environmental sustainability. EU has been a vanguard in implementing policies aimed at curbing the environmental footprint of the automotive sector, with a specific focus on carbon emissions reduction. Hintermann et al.'s (2017) research further accentuates the significance of taxation strategies in fostering environmental objectives. This symbiotic relationship between motor vehicle taxation and environmental considerations highlights the EU's proactive role in addressing environmental challenges within the automotive domain, showcasing its dedication to a sustainable and eco-friendly future.

For this case study, we will focus mainly on Romania, and its effort to use the taxation of motor vehicles to generate revenue and to reduce the emissions of CO<sub>2</sub>. At the moment, Romania faces a significant problem, it has the second oldest average age for its registered cars in the European Union (the European Automobile Manufacturers' Association, 2022). To combat this problem, the only policy applied is a CO<sub>2</sub>-based scrapping scheme, bringing incentives for scrapping an older vehicle and replacing them with a new, low-emission, or a zero-emission vehicle.

Romania had until 2017 when law no. 1/2017 eliminated multiple taxes, an “environmental tax for motor vehicles” that taxed each motor vehicle upon registration based on multiple factors, such as the age of the vehicle, the vehicle's emissions standard, and the CO<sub>2</sub> emissions. According to the European Environment Agency, from 1990 until 2016 total greenhouse gases were reduced by 72,54%, followed by two years in which there was a heavy import of old cars that increased the greenhouse gases by 13,19%. Based on a report from the European Automobile Manufacturers' Association (ACEA), from 6,427,322 total motor vehicles in 2016, Romania had

7,521,031 in 2018, a 17% increase in just two years. Even though Romania since 2017 has had the smallest number of vehicles per 1,000 EU inhabitants, the environmental significance of the emissions caused by motor vehicles has to represent a key aspect that the government and policymakers have reglementate so the macro objectives of the European Union will come to fruition.

### Emissions in Romania

Hover over the bars to see emissions



From a policy point of view, this case of a motor vehicle tax represents a failure of the government to reach its intended purpose. The money collected from 2007, when this tax had been introduced to 2017, had been returned to the taxpayers, so the government couldn't use the funds to bring significant improvements to the environment. Also, from an environmental point of view, the removal of this tax had the exact opposite effect, increasing the total amount of greenhouse gases by removing the incentive that gave new cars the upper hand, and allowing a sudden influx of old, polluting cars.

## 5. Conclusion

In conclusion, the analysis of motor vehicle taxation in Eastern European countries, with a focus on Romania reveals a complex interplay between economic imperatives and environmental sustainability.

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