



ENERGY EFFICIENCY WATCH

Energy Efficiency Policies in Europe



Case Study

Car Registration Tax - Latvia



Co-funded by the Intelligent Energy Europe
Programme of the European Union

Key facts and figures

Country	Latvia
Name of policy	Car registration tax
Type of policy	Fiscal, behavioural
Target sector	Passenger transport
Actions targeted	Purchasing behaviour
Duration	Taxation scheme has been in force since 2004; but only since 2009 the tax amount has been based on car-related emissions; no end year set
Overall target and/or achievements	No quantitative targets were set. The general objective is to prevent the purchase of cars with high CO ₂ emissions and, hence, of energy-inefficient cars; pricing externalities
Overall aim of the policy	Reducing the carbon footprint of Latvia's passenger car fleet
Innovativeness	The innovativeness is high: The registration tax for new cars takes into account the CO ₂ emissions of the car. The tax rate is low for cars with a low CO ₂ emission but increases disproportionately high for cars with high CO ₂ emissions.

Policy objectives

If a new car is registered in Latvia, the passenger car registration tax applies. For calculating the tax amount, the scheme takes into account CO₂ emissions. The higher the emissions, the higher the taxation; for instance, the car registration tax for a car emitting 120 grams of CO₂ is EUR 51.60 (EUR 0.43 per gram of CO₂), while the registration tax for a car emitting triple emissions (360 grams of CO₂) does not only triple, but amounts to EUR 2,556.60 (EUR 7.11 per gram of CO₂), which is in fact nearly the fiftyfold (see Table 1 below) (Mure II & Institute for Physical Energetics 2015a).

Table 1: Taxation (pricing) scheme for registering new passenger car in Latvia (Ministry of Finance 2015)

Carbon dioxide (CO ₂) emissions grams for 1 km	Tax rate for 1 gram per 1 km (EUR)
Not over 120 grams	0,43
121-170 grams	1,42
171-220 grams	2,13
221-250 grams	3,56
251-300 grams	4,27
301-350 grams	5,69
Over 350 grams	7,11

Due to the registration tax, less efficient passenger cars are put in a disadvantaged position due to higher (registration) costs. Hence, less polluting cars become cheaper in comparison to inefficient models. Through the price signal of the tax scheme, the Government seeks to motivate end-users to buy environment-friendly cars and to make car manufacturers penetrate the market with more efficient vehicles.

Apart from energy performance enhancement, the Government is able to reduce energy import needs and reduce pollution through the policy (OECD 2015). Moreover, the Government is able to collect tax revenues, but no information is available on how such revenues are spent.¹

¹ Ideally, revenues would contribute to enhance environmental and climate protection measures.

According to OECD (2015, p. 23 based on Dreblow et al. 2013) “[n]ew passenger cars in Latvia have the highest CO₂ emissions per kilometre in the EU” in 2012 with 152 grams of CO₂ per kilometre. Moreover, substantial amounts of Particulate Matter were recorded in the City of Riga (OECD 2015 based on European Commission 2014). This suggests that emission reduction in the transport sector are difficult to decrease, but also that action by policy-makers to change this situation remains critical. While the registration tax should not be regarded as a silver bullet to change the situation in Latvia, it can be considered to be an essential part of a policy package to initiate change in the Baltic state. More concretely, the policy primarily aims at behavioural changes of end-users to opt for more efficient cars. This may result in an increasing availability of environment friendly cars in Latvia. Given Latvia’s rather small (domestic) market and the European car industry being predominantly based in other countries such as Germany, France or Italy, the ability of the policy to drive car manufacturers towards more innovative and energy-efficient vehicle production is rather limited.

Beneficiaries and action targeted

At least four groups can be assumed to benefit from the policy. First, manufacturers of energy-efficient, low-emission cars are less affected by the taxation scheme (see Table 1 above). Second, the government receives tax revenues. In addition, low tax revenues can be considered as one indicator showing that the taxation scheme indeed fosters the purchase of low-emission cars. Third, owners of energy efficient, low-emission cars benefit from the policy as they have to pay comparatively low taxes. Fourth, in particular, the population in urban areas with heavy traffic benefits from lower emissions and air pollution.

The policy directly addresses car buyers. Through the car registration tax, Latvians seeking to purchase a car are encouraged to opt for a low-emission car – otherwise they have to pay (higher taxes) for the environmental damage caused by higher car-related emissions. Hence, the policy primarily aims at decreasing emissions in the transport sector by disincentivising the purchase of cars harmful to the climate. In addition, by establishing this type of disincentive, the policy also affects the supply side (car manufacturers), which become more inclined to penetrate the market with climate-compatible cars.

While the Government did not establish any minimum energy efficiency requirements for cars, it provides a scaling system to determine the taxes to be paid (see Table 1 above).

Design and implementation

The Latvian Ministry of Finance is in charge of the policy, while the Road Safety Directorate (CSDD) can be considered as the executive arm enforcing the car registration tax. Car owners must present several documents including tax payments to one of CSDD’s 26 branch offices (CSDD 2013). Since cars are not individually tested, emission related data provided by car manufacturers must be assumed to be reliable. Information on the process of policy formation is not available.

For transferring the policy to other country contexts, it appears critical to (i) have a ministry that leads the implementation of a car registration policy scheme and a reliable enforcement structure such as the CSDD in Latvia. Prior to implementing a similar scheme, it is necessary to (ii) examine the car market and focus the examination on emissions and to (iii) assess the scope and the design of the taxation scheme and how it can result in behavioural changes. The tasks (ii) and (iii) can be carried out by an independent consultant or a national research laboratory. In parallel, (iv) car manufacturer representatives and other stakeholders should be included in stakeholder discussions.

Apart from the car registration tax, the Government of Latvia also established an annually claimed taxation scheme taking into account the full mass of the car, the engine size and the maximum power of the engine. The higher these values, the higher the tax payment (Mure II & Institute for Physical Energetics 2015b). Cars with high values in these parameters, in general, result in a negative environmental performance. The annual tax can be regarded as a behavioural measure to

disincentivise the purchase of climate-harmful cars as well. Hence, it complements the CO₂-based registration tax, which is raised only once. Moreover, cars in Latvia have to be labelled. Through labels, car purchasers gain information on the environmental performance of a car and may abstain from buying energy inefficient cars. If knowledgeable about the taxation schemes, purchasers will also become aware of the higher registration and operation costs of a less efficient car. Side-effects are only partly handled by the policy. Rebound effects, which may occur due to irrational driving behaviour, are rather prevented through higher fuel prices. Opportunities are lost, as there are cars on the market, that perform below 100 grams of CO₂ emissions per kilometre, but there is not another registration tax class distinguishing these very energy-efficient models (Topten.eu 2015). The reviewed literature highlights an important barrier experienced when implementing the car registration tax. According to OECD (2015) “[t]here is also some evidence of tax evasion through car registration in neighbouring Estonia.”

Policy impacts

While concrete data with respect to policy monitoring and evaluation were not available, the car registration tax in combination with the annual car tax mentioned above had a positive effect on decreasing the “average emissions of new cars” (OECD 2015, p. 23).

The taxes, in combination with other measures, resulted in a positive development in the following years: The average CO₂ emissions of new cars decreased by 3.2 % in 2013 (147.1 g/km) and by 4.5% in 2014 (140.4 g/km). Nevertheless, it is important to notice that these emissions are still very high, the average emission level of new cars in Europe in 2014 was 123.4 grams per kilometer.

Policy innovation

While a tax or fee is a relatively usual procedure for registering a vehicle, Latvia links the taxation scheme with the emission output of a car.² The registration costs increase significantly, the more emissions are set free. The tax for a car emitting 120 grams of CO₂ is EUR 0.43 per gram of CO₂, while the registration tax for a car emitting triple emissions (360 grams of CO₂) does not only triple, but amounts to EUR 7.11 per gram of CO₂, which is in fact nearly the fiftyfold (Mure II & Institute for Physical Energetics 2015a).

In order to easily identify the amount to be taxed, the Ministry of Finance established a classification system shown in Table 1 above.

Lessons learnt 1: Success factors

An important factor for the success of the scheme is certainly the agency structure created for enforcing the car registration tax (cf. under Design and implementation above).

Due to the scaling system established, authorities can easily apply the tax to determine the payments. Apart from the registration scheme, it appears crucial to have further mechanisms in place, that also affect the purchasing behaviour including the annual car tax, which e.g. takes into account the mass of the car, as well as the labelling scheme providing energy- and emission-related information to car buyers.

Lessons learnt 2: factors to avoid and possible further improvements

² For an overview of CO₂-based taxations schemes for cars in the EU, see European Automobile Manufacturers Association (2015).

Four aspects can be mentioned with respect to enhancing the instrument. First, the scaling system could be further subdivided by establishing a classification ranking for low-emission cars, e.g. for cars emitting below 100 grams of CO₂ per kilometre.

Second, it must be safeguarded that car owners cannot simply register a car in neighbouring countries with no or hardly any emission-related registration fees. If that is a problem like in Latvia, a Government should consider a regional approach with neighbouring states.

Third, the registration tax only applies to passenger cars and motorcycles and could be extended.

Last but not least, what should be taken into account is the fact that the registration tax as well as the annual car taxation scheme rather focus on the ownership of the car, but do not address the rational use of the car and the fuel price, and hence, do not provide an incentive to drive less.

References and further information

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The Project

In 2006, the European Union adopted the Directive on energy end-use efficiency and energy services ("ESD"). The Directive sets an indicative energy saving target of 9 % by 2016 as well as obligations on national authorities regarding energy savings, energy efficient procurement and the promotion of energy efficiency and energy services. It requires Member States to submit three National Energy Efficiency Action Plans (NEEAPs), scheduled for 2007, 2011 and 2014.

The Energy-Efficiency-Watch Project aims to facilitate the implementation of the Energy Efficiency Directive. This Intelligent Energy Europe project tried to portray the progress made in implementation of energy efficiency policies since the Energy Service Directive via NEEAPs screening and an extensive EU wide expert survey.

www.energy-efficiency-watch.org

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List of Abbreviations

EE – Energy Efficiency, **EED** – Energy Efficiency Directive, **EPC** – Energy Performance Certificates, **EPDB** – Energy Performance of Buildings Directive, **ES&A Targets** - Energy Savings and Action Targets, **ESCO** – Energy Service Company, **ESD** – Energy Service Directive, **EU** – European Union, **EEW** – Energy-Efficiency-Watch, **MEPS** – Minimum Energy Performance Standards, **MRV** – Monitoring, Reporting and Verification, **MURE** – Mesures d'Utilisation Rationnelle de l'Énergie, **NEEAP** – National Energy Efficiency Action Plan, **R&D** – Research and Development