Social Observatory
of "la Caixa"

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The redistributive effects of **special taxes**

The aim of excise duties is to reduce the negative impact on society of specific consumption, such as fuels, tobacco or alcohol. Like all taxes, they also share the function of collection. This report shows that they are regressive in their current design, given that they account for a significantly higher percentage of income from poor rather than rich households. It also presents the design of possible reforms that would help to increase their redistributive impact.

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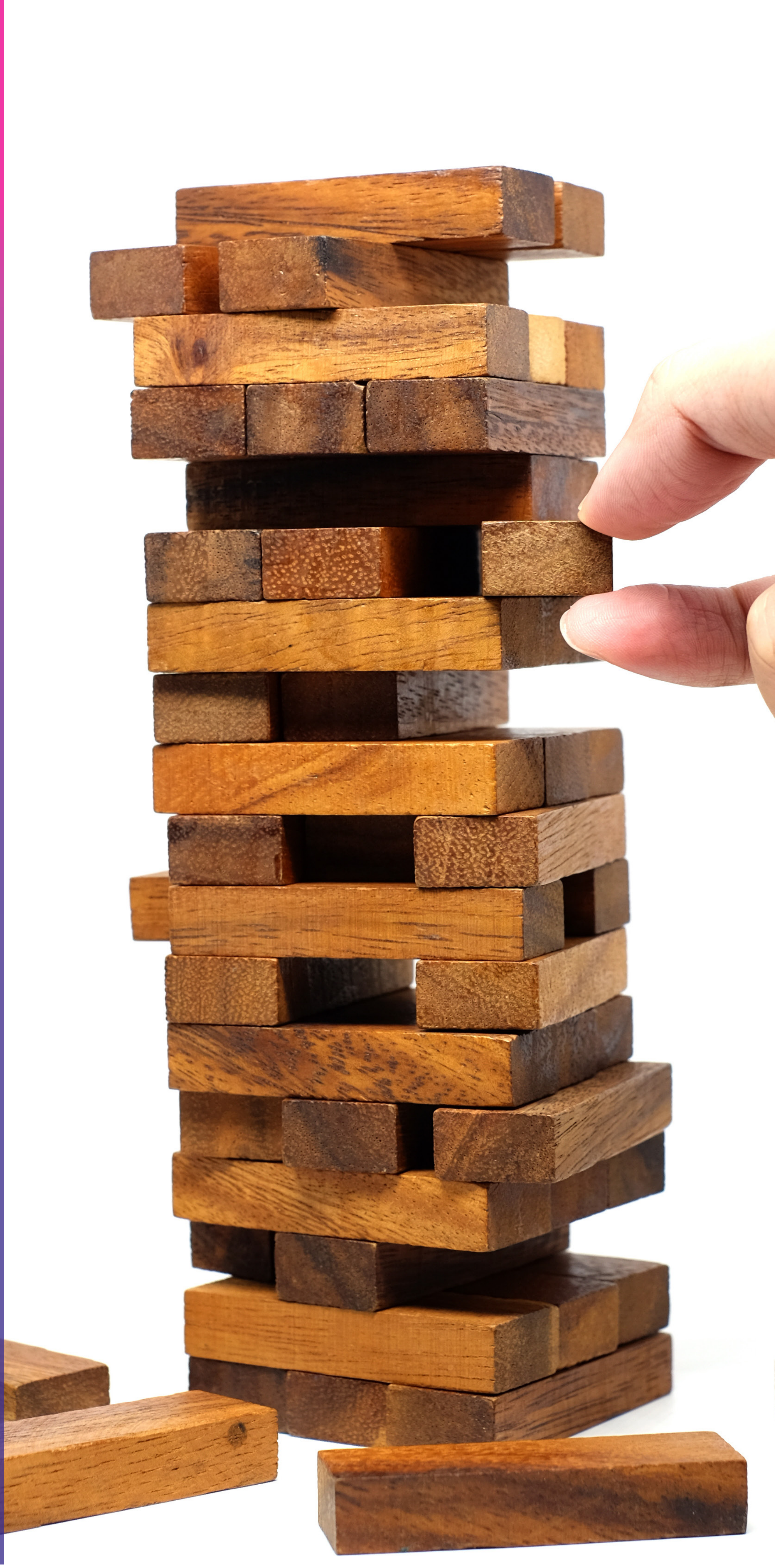

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"Reports on the **Redistributive Economy"**
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- **The redistributive effects of social benefits and taxes: a review of the current situation**

  Luis Ayala, UNED and Equalitas, and Olga Cantó, Universidad de Alcalá and Equalitas

- **The redistributive effects of the system of taxes and transfers in Europe**

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- **The redistributive effects of wealth tax**

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Summary

The general view obtained from the effects of excise duties in Spain (and in Europe) is that they are regressive and their capacity to redistribute income is not clear. The use of these duties has not progressed beyond that of a permanent source of revenue for governments, taking advantage of the limited response of consumers to price changes. Under these circumstances, the question arises of whether it is possible to provide more focus on alternative collection functions and thereby simultaneously contribute to income redistribution. Several possible reforms of these taxes are assessed that can lead to a positive response, especially when it comes to excise duties on electricity and fuels.

Key ideas

// Various goods in all countries of the European Union (EU) are levied with an additional charge to that of VAT in the form of excise duties, which are justified by a regulatory norm because of the existence of *negative externalities* not included in prices.

// The goods subject to these duties are alcoholic beverages, tobacco, hydrocarbons and other energy products.

// Excise duties are regulated by Law 38/1992, of December 28, 1992, "because the consumption of goods that are subject to these duties generates social costs that are not taken into account when setting their private prices [...]".

// The study has revealed the regressive nature of excise taxes and their use solely to generate revenue for public administrations.

// The maximum average rate of excise duties for the period 2006-2017 was paid by the poorest households in 2010 and was equivalent to 8.45% of their income. The richest households in 2010 paid 2.73%, in other words, 3.1 times less in relative terms than the poorest households.

// The reforms of excise duties on fuels and electricity that have been considered have helped to demonstrate that they can be used to fulfil not only a dissuasive but also a redistributive function.

Justification of excise duties

The origins of excise duties date back to ancient Rome. The first known duties were applied to the production of what were considered luxury goods, such as wines and products imported from other areas. These duties have been maintained until today and come under the banner of indirect taxes. They are indirect because they are applied to the consumption of specific products and are in line with the amount consumed, in other words, separate from the income of a consumer. Excise duties fulfil two functions: *collection*, like all taxes, and *dissuasive*, seeking to avoid externalities.

The logic behind levying specific taxes on products or services is based on the idea that consumers react in a very limited way to price increases, given that the charge is usually transferred to end consumers. Their collection function seems to prevail in their design, thereby greatly reducing their dissuasive function.

General situation and description of data

Article 1 of Directive 2008/118/EC of the Council of the European Union, of December 16, 2008, concerning the general arrangements for excise duty, lists the products subject to excise duties that are in turn covered by the following Directives:

/ energy products [including hydrocarbons] and electricity covered by Directive 2003/96/EC;

/ alcohol and alcoholic beverages covered by Directives 92/83/EEC and 92/84/EEC;

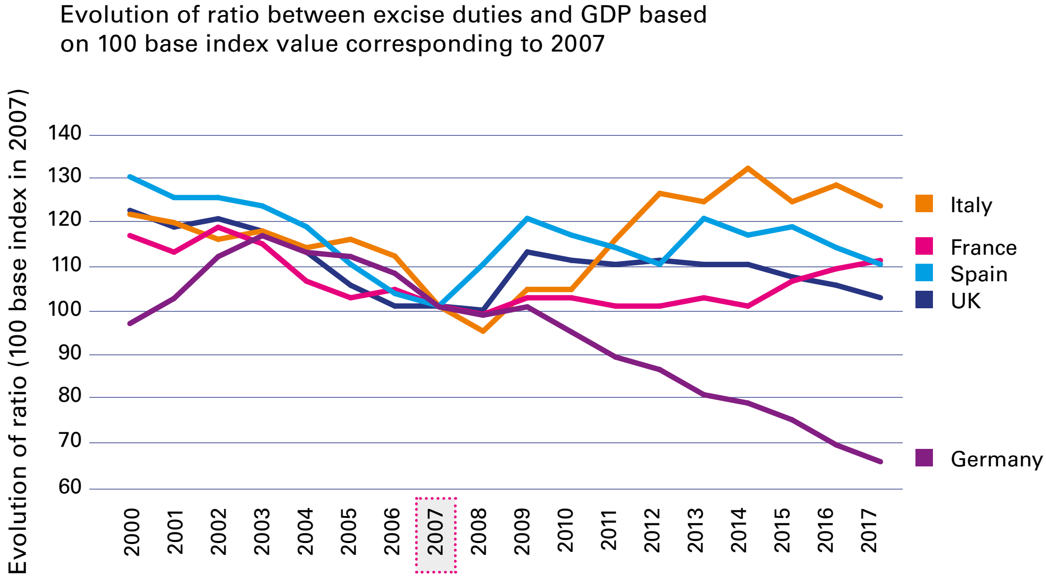
/ manufactured tobacco covered by Directives 95/59/EC, 92/79/EEC and 92/80/EEC.

There is great heterogeneity among EU countries with regard to collection. The average collection percentages of GDP range from the minimum in Luxembourg (0.4%) to the maximum in Bulgaria (17.5%). Spain is above the EU-28 average (6.4% versus 5.7%) and is only surpassed by the United Kingdom (8.6% of GDP) when it comes to large countries.

The rate of collection of excise duties on GDP has been affected by the crisis and by regulatory changes. If we take 2008 as the first year in which the effects on collection caused by the crisis can be observed, Figure 1 presents the changes in fiscal pressure in the five major countries with regard to the situation in 2007. The crisis had a minor effect in Spain, France, Italy and the United Kingdom, but collection has recovered strongly in the four countries. Germany is an exception, as both its regulation and the limited effect of the crisis on its GDP led to less fiscal pressure on excise duties.

Spain represents a paradigm case. The proportion implied by excise duties in the period 2000-2007 as part of total collection coincides with the amount contributed by these very same taxes during the period 2008-2013. The evolution in collection is the result of legislative changes introduced, according to which rates have risen in most countries (again, the exception is Germany), and the low sensitivity of these products to price changes.

Figure 1. **How has the collection of excise duties evolved?**



General redistributive effects

The results obtained with regard to distributive effects unequivocally indicate that only the collection capacity of excise duties has been taken into account for their application in Spain. It is clear that charging excise duties is markedly regressive, given that this charge decreases when income increases.

The average tax rate on the equivalent income presented in Figure 2 summarises the collection and distribution aspects of excise duties. First, the crisis contributed to increasing average rates, primarily of the poorest. This may be due to an increase in the rates of excise duties, a fall in income or a combination of both factors, which is what occurred in the case of Spain.

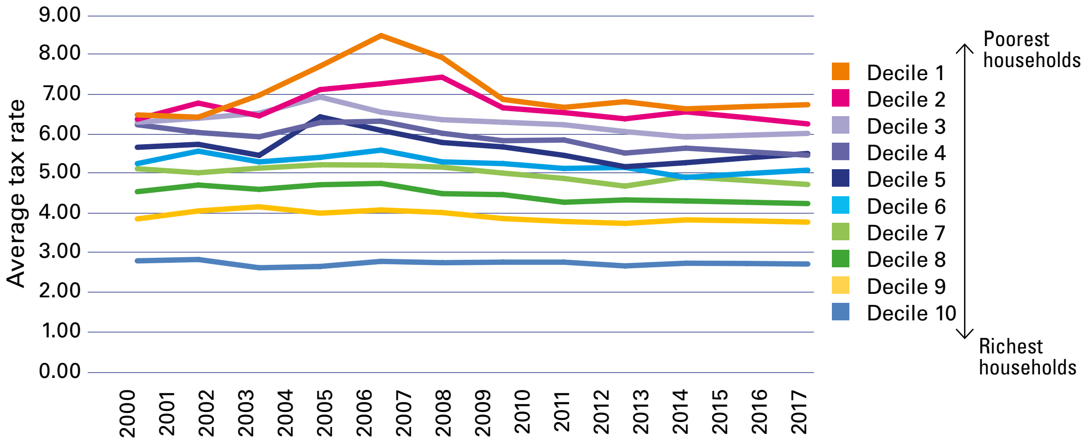
Growth is relatively maintained over time depending on how great the fall in income has been, which, as is well known, was more pronounced in low income segments. An inverse relationship can be seen between average rates and equivalent income. In other words, depending on the fiscal pressure of excise duties, the highest average rates are borne by the poorest households with more members.

The maximum average rate of excise duties for the period was paid by the poorest households in 2010 and was equivalent to 8.45% of their income. In that same year, the richest households paid 2.73% of excise duties, in other words, 3.1 times less in relative terms than the poorest households.

The richest households did not need to adapt their consumption (at least in the goods levied by excise duties) as a result of these adjustments. As the country has overcome the crisis, slight increases in income and maintaining these measures have stabilised the evolution of rates throughout their entire distribution, although the poor continue to pay the highest rates and the rich the lowest.

Figure 2. **How much do Spanish households pay in excise duties?**

Average tax rate on equivalent income (1)
of excise duties by deciles



(1) Equivalent household income is obtained by dividing total household income by the number of consumption units (household members).

Redistributive effects according to household consumption

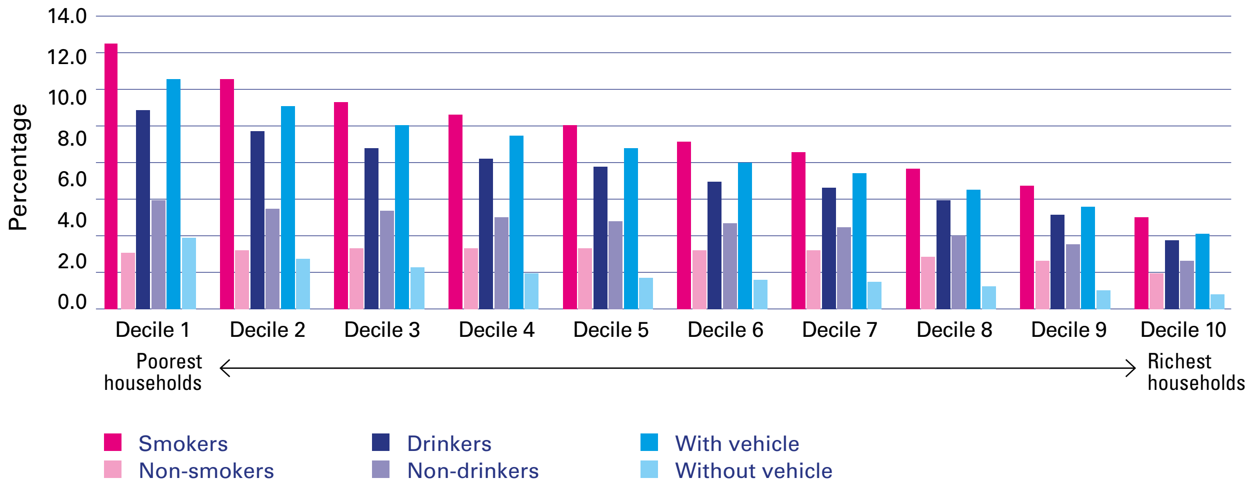
If the consumption of a good or service implies negative externalities that lead to social costs, these must be borne by those contributing to them. It is clearly the buyers of these products who pay excise duties, but our aim is to determine whether there are differences in redistributive terms between those who contribute (pay for the externalities they generate) and those who are not consumers of these goods.

The study to identify whether or not a good subject to an excise duty is consumed in the household involves dividing the sample into two groups. In the case of tobacco products, these are so-called *Smokers*, including all households with positive expenditure in any of the three tobacco categories of the Household Budget Survey, and the group of *Non-smokers*, comprising households with no expenditure in any of these categories.

The tax charge for excise duties is on average almost three times higher in households with smokers than in non-smoking households (Figure 3). Almost one-third of excise tax revenue comes from tobacco. We can thereby deduce that the tax paid is regressive based on these prevalence profiles and tax payments.

Figure 3. **Which households pay excise duties?**

Proportion that excise duties represent in the equivalent income of the household by type of consumption



With regard to alcoholic beverages, the tax charge of excise duties on income levels has a similar profile in terms of deciles between consuming and non-consuming households, and it is more pronounced among those who consume, but always decreases with income.

The third good that has been studied is fuel, which combines investment (owning a vehicle) and consumption (buying fuel). The sample distinguishes between so-called *With vehicle* households, which are those that present positive expenditure in the category of "Fuels and lubricants" in the Household Budget Survey ("Diesel and/or petrol" from 2016), and *Without vehicle* classified households, which are those without any expenditure in these consumption categories.

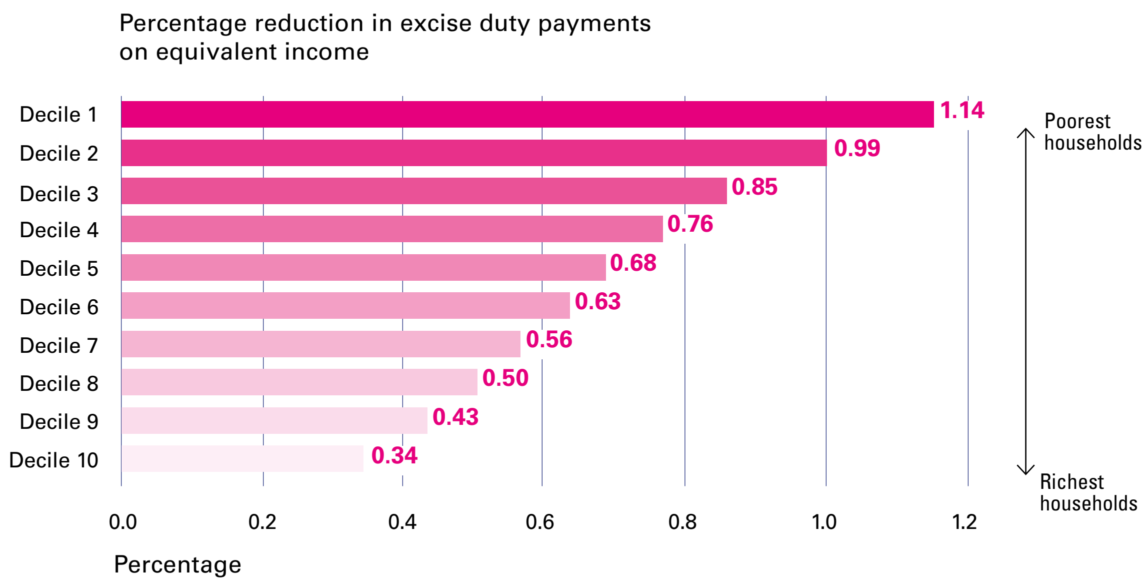
The proportion of excise duties paid by the household of its income is on average more than three times greater in households with a vehicle than those without, which means that the average tax charge decreases with income and reconfirms its regressive nature.

Reform of excise duty on electricity

The previous sections unmistakably reveal that excise duties are regressive and have not had any redistributive capacity or it has been very limited. The question therefore arises as to whether it is possible to reform these taxes to imbue them with this capacity. The problem of energy poverty needs to be tackled urgently in Spain, as does the problem of climate change, even though the latter is of a global nature.

More than 21% of the final price of electricity paid by households corresponds to support costs for renewables, cogeneration and waste. The final price would be reduced by 27.3% if these costs were eliminated from the tariff, thereby leading to a 5.5% increase in demand and a 0.49% increase in CO_2 emissions.

Figure 4. **Effect of reducing price of electricity**



The decrease in price would also lead to a decrease in economic expenditure on electricity and a reduction in revenue of 1,016.1 million euros. This reduction is due to the fact that both excise duties and VAT are applied to the price of electricity, which implies a significant drop that is not compensated for by an increase in consumption.

The reform would have redistributive effects under these circumstances. The impact of the reform will be progressive as household expenditure on electricity is reduced, thereby helping to benefit poorer households more. As can be seen in Figure 4, the reduction of the charge is 3.3 times greater in poorer than in richer households.

Reform of excise duty on fuels

The second simulation is framed within the goods used for transport, addressing the inefficiencies of existing taxes and introducing dissuasive effects to correct pollution. The hypothetical scenario involves the immediate equalisation of the tax rates on petrol and diesel. Litres consumed are taxed and diesel vehicles produce both more greenhouse gases and more local pollutants per litre, even though a litre of diesel pays a special lower tax rate than a litre of petrol.

The proposed exercise demonstrates a large revenue-generating capacity (more than 2,600 million additional euros) and a reduction in associated CO_2 emissions. The proposal unfortunately has undesirable redistributive effects because it is regressive. But these effects can be reversed by designing a compensatory scheme that affects 50% of lower-income households and 50% of car-owning households. In the former (compensation 1), households with an equivalent annual income of less than 10,625 euros are compensated, and in the latter (compensation 2), those with an equivalent annual income of less than 13,828 euros.

Figure 5. **Equalisation of excise duties on diesel and petrol**
A reform can be defined to make the tax progressive

Difference in excise duties payments resulting from reform as percentage of equivalent household income

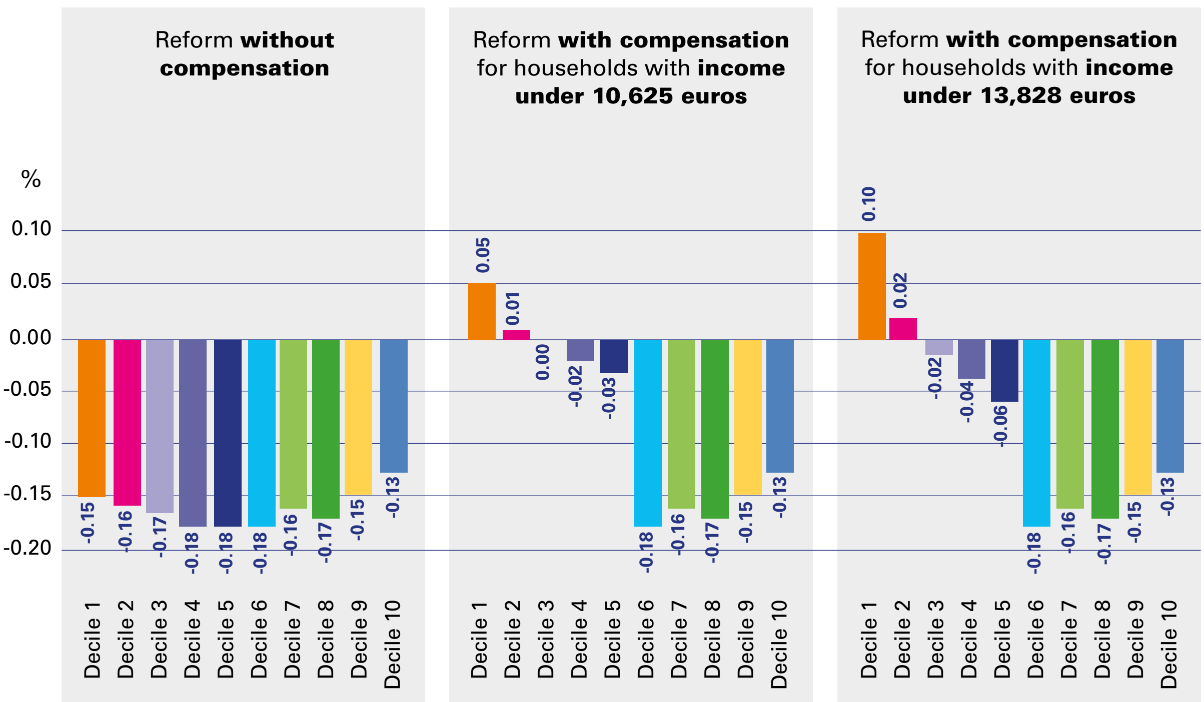


Figure 5 shows the effects of the reform over the distribution of equivalised income, as well as the changes that occur when the aforementioned compensation schemes are introduced. It can be seen that 20% of the poorest households come out on top in both compensations, but if we compare the diagram on the left with those in the middle and on the right, it can also be seen that households in deciles 3, 4 and 5 – in other words, the next 30% of poor households – do not lose as much when the compensation is introduced as before its introduction.

The initial reform is regressive, but it becomes progressive with the compensation schemes. The compensations represent an expense of 230 and 300 million euros respectively, in other words, between 8.8% and 11.3% of the total collected.

Discussion and implications of fiscal policy

This report has attempted to address a fundamental question concerning the distribution by income level of the excise tax charge, as well as by taking into account family size and using household data from the Household Budget Survey for Spain. These tax figures have focused on the effect of collection and not on the effect of dissuasion. This means that the aim of internalising the externalities generated in prices has been weakened.

Under these circumstances, the study has raised a new question as to whether it would be possible to provide more focus on other functions of excise duties and simultaneously contribute to income redistribution. The answer is affirmative both in relation to the redistributive capacity of changes in the electricity duty and in the fuel duty, although the tax increases have to be complemented by compensation mechanisms in the latter.

In short, it is clear that excise duties can be reformed to fulfil functions other than those of collection, with and even without compensation mechanisms, so as to achieve redistributive effects and simultaneously help to tackle other problems faced by the Spanish economy.

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