

European Biofuel Policies: Supporting Whom At Which Cost?

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The recent enthusiasm for biofuels has not spared the European Union (EU). The EU has set ambitious substitution targets for biofuels to gasoline and diesel. It is granting generous assistance schemes for reaching such targets, on the top of which EU Member States have added their own thick layer of assistance measures.

This policy brief aims to assess the global level of assistance provided by all these measures to the production of biofuels, and to identify the main beneficiaries—farmers or biofuel producers—of such a protection.

Calculating effective rates of assistance

Effective rates of assistance (ERAs) offer a simple way to answer these questions for two reasons. First, they take into account not only the applied tariffs (the usual measure of the level of protection) but also the many other instruments, such as domestic taxes and subsidies, that contribute to the global level of assistance to biofuels. Second, they also take into account all the measures that are applied on the inputs—in this case, the farm commodities—needed for producing biofuels in the EU.

ERAs summarize the combined impact of all these measures in a single figure (by product) which captures the extent to which the current assistance policies favor some products relative to others—in short ERAs provide a comparative analysis.² As economic distortions increase when disparities between ERAs increase, what matters most are the differences between the ERAs, not their absolute values.

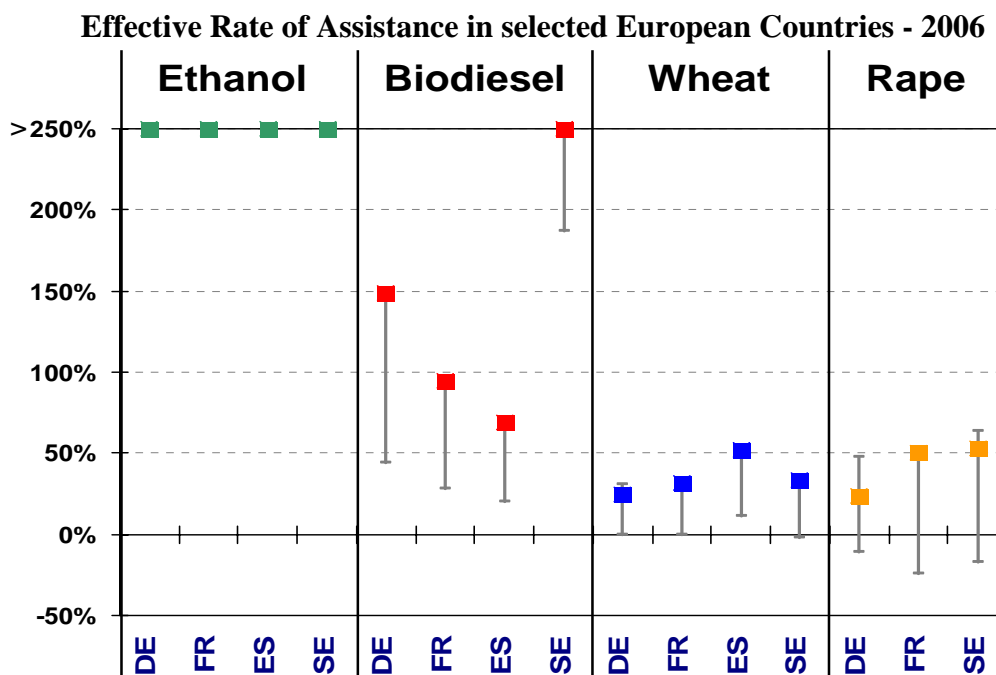
ERAs calculations have been made for four products: two farm commodities (wheat and rapeseed) used as inputs for producing two biofuels (ethanol and biodiesel). They have been made for four EU Member States (France, Germany, Spain and Sweden) in order to take into account the assistance policies of these countries. They do not include technical barriers (alcohol content, iodine content in biodiesel, etc.) that could push even higher the global level of assistance.

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² ERAs, as they are expressed in percentages (like usual tariffs), can be interpreted as the percentage increase in value added per unit in an economic activity which is made possible by a support structure relative to the situation in the absence of assistance [Productivity Commission 1995].

The global level of assistance: key results

The chart below summarizes the main results. Squares illustrate the key figure for each ERA. Following the tradition of the Australian Productivity Commission, no precise figure above 250 percent is mentioned (figures obtained for ERAs to ethanol are many times higher than this ceiling). The chart shows biofuels as the most protected segment of the two-stage (farm commodity and biofuel) production chain.



The chart also shows vertical segments associated to each square. These segments illustrate the range of results that are obtained when alternative methodological choices are made—in short, they illustrate the sensitivity of the key figures to various assumptions. They confirm the conclusion that biofuel production tends to be the most protected activity in the four Member States.

More on ERAs to ethanol and biodiesel

At the outset, it should be mentioned that the above results for ethanol do not reflect the consumption targets imposed by the EU biofuel policy because these targets were not mandatory in 2006 (the year chosen for the analysis). Enforcing these targets is expected to increase the ERAs to ethanol.

The main measure explaining the paraonic ERAs to ethanol is the EU tariff on ethanol (€0.19 per liter). It means that the main responsible is the instrument defined at the EU level. A 50 percent cut of the EU tariff would still keep the ERAs to ethanol above 250 percent. The key role of the EU tariff explains why Sweden—a long time importer and consumer of ethanol—exhibits an ERA as high as the others Member States.

The ERAs to biodiesel are not as high as those to ethanol, but they are still huge. They amount to 149 percent in Germany, the world's largest producer and consumer of biodiesel, and to 95 percent in France, the second EU largest producer.

The main measure explaining the very high ERAs to biodiesel are the various excise duties exemptions that are granted to biofuels by the Member States. Also, it should be noted that the above results rely on the assumption that the EU import tariff is 0 percent (instead of 6.5 percent as shown in the EU tariff schedule). This assumption has been made because there is no notable biodiesel trade flows outside the EU. If non-EU countries increase their production and generate an international market for biodiesel, it is likely that the EU import tariff would play a role and increase the calculated ERAs.

More on ERAs to wheat and rapeseed

The ERAs to the two farm commodities are lower than the ERAs to the two biofuels, but they remain high—over 20 per cent for the four Member States.

The main instrument explaining these high ERAs is the decoupled Single Farm Payments (SFPs). In fact, ERAs can turn negative (as shown by the sensitivity tests) but only when the SFPs are not included among the assistance measures. Negative ERAs would mean that the returns earned in growing farm commodities under the current assistance schemes are lower than they would be without them. As it would be surprising that EU farmers manage to be worse off with the current system of assistance than without it, this result suggests that EU farmers still link to some extent their SFPs and their productions.

By contrast, the EU tariffs for the two farm commodities analyzed do not play a major role for different reasons. The EU tariff on wheat is high, but the EU is a net exporter. The EU tariff on rapeseed is zero.

Tax exemptions granted to biofuel producers could be transferred to farmers when there are institutional links between farmers and biofuel producers (when such producers are farm cooperatives). However, assuming that farmers would get a third of the excise tax exemptions would not increase significantly the ERAs to the two farm commodities.

Conclusions

The paper suggests two policy conclusions. First, if support to farmers is an objective of the assistance schemes, as often claimed by EU politicians, it is clearly a failure. Biofuel producers reap most of the benefits—even though EU farmers enjoy a very important assistance rate—with ERA's ranging from 25 to 50 percent.

Second, the current assistance schemes for the production to the two biofuels examined are extremely costly for the EU Treasuries—on average, total support amounted to 1.10 euro per liter of ethanol and 0.55 euro per liter of biodiesel in 2006 [Kutas et al. 2007]. Only huge environmental benefits could make such costs acceptable—but are they there?

Bibliography

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