

The Social Cost and Benefits of Biofuel Policies

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The seminar will outline a welfare theoretic framework to analyze key biofuel policies of tax credits, mandates, import tariffs and farm subsidies. The relationships between feedstock, biofuel and oil prices are explained, depending on the relative value of the fuel tax and tax credit, the by-product value, whether the mandate is binding and whether or not consumers adjust purchases for mileage achieved.

We show that a tax credit with a mandate is a direct *gasoline consumption subsidy* with no effect on the ethanol price. This means the tax credit does the exact opposite to what it is intended to do. This is a very important result because most countries employ both mandates and tax credits. We also evaluate the effects of the U.S. import tariff under different scenarios and find that exporters like Brazil are far better off with the elimination of the tax credit and tariff while maintaining the mandate.

Because the intercept of the biofuel supply curve is above the gasoline price, part of the tax credit (or price premium due to the mandate) is redundant and represents 'rectangular' deadweight costs that dwarf standard Harberger inefficiency costs. Biofuel policies cannot therefore be justified on the grounds of mitigating the effects of farm subsidies. In addition, biofuel policies increase the inefficiency of farm subsidies while the latter increase both the tax costs and inefficiencies of the biofuel policies. In fact, there have been situations where farm subsidies have been the sole cause of biofuel production.

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