**Can we reconcile French people with the carbon tax?**

[or Did the Yellow Vests bury the carbon tax?]

**Thomas Douenne**, Assistant Professor, University of Amsterdam

**Adrien Fabre**, Postdoc, ETH Zürich

Economists like the carbon tax. Citizens, not so much. Sapienza and Zingales (2013) compared the opinion of economic experts and average Americans on several policy issues. Of all the policies considered, the degree of disagreement was highest on carbon taxation: while 92.5 percent of economic experts agreed with the statement that carbon taxation is more cost-effective than pollution standards, only 22.5 percent of Americans did. Recent examples also illustrate this sharp contrast. In 2019, over 5,000 economists called for the rapid development of carbon taxation in the U.S. and in Europe.[[1]](#footnote-1) At the same time, the French government, which had recently committed to an ambitious carbon tax trajectory, had to abandon its plans because of the public opposition of the Yellow Vests.[[2]](#footnote-2) Public resistance to carbon pricing is not specific to France, and other countries have also experienced significant opposition to such policies (see Carattini et al, 2018; Klenert and Hepburn, 2018).

Why do citizens often oppose carbon taxation? Two major explanations come to play. First, carbon taxation alone is generally regressive because poorer households spend on average a larger share of their income on polluting goods. Granted, since they spend less on these goods in absolute terms, it is sufficient to transfer the proceeds of the tax as a uniform transfer (a policy known as a carbon tax and dividend) to design a progressive policy (Pizer and Sexton, 2019; Paoli and van der Ploeg, 2021). Yet, although it benefits most low-income households, a carbon tax and dividend may not always make a majority of people better off (van der Ploeg , Rezai, and Tovar, 2021), and it necessarily entails distributional effects *within* income groups —as opposed to *between* income groups— (Douenne, 2020). Second, ~~as we show in a recent paper (Douenne and Fabre, 2022),~~ citizens tend to be overly pessimistic about the economic impacts of a carbon tax with dividend, leading them to oppose policies even when they are expected to financially benefit from them. Our work also suggests that these two explanations may be related, as past experiences with regressive carbon tax reforms may have affected the general perception of this policy independently of its design.

**Pessimistic Beliefs and public support for carbon taxation**

In Douenne and Fabre (2022), we assess the attitudes toward a carbon tax and dividend in France during the Yellow Vests movement. We created a survey administered over 3,000 respondents representative of the French population in February/March 2019. We presented to respondents a budget-neutral 50€/tCO2 carbon tax and dividend policy, with information on the effect on energy prices (e.g., +0.11€ per liter of gasoline) and the transfer that each household would receive (110€/year for each adult). We find that people largely reject this proposal: only 10% of our survey respondents approve, while 70% do not accept the reform. This level of rejection is very high compared to what has been measured before or after the Yellow Vests movement, where about half of the population is found to support an increase in the carbon tax (ADEME, 2020). Thus, a first hindsight from our survey is that public opinion can be very volatile and strongly reacts to contemporary events.

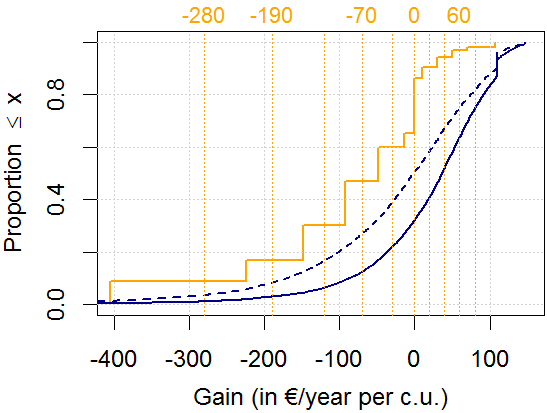
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Figure 1 CDF of objective (dark blue) vs. subjective (orange) net gains from our Tax & Dividend. Dashed blue lines represent distributions of objective gains in the extreme case of totally inelastic expenditures. Vertical dotted orange lines show the limits of intervals answers of subjective gains.

We then show that people hold pessimistic beliefs about the policy. Using household budget survey data, we estimate that 70% of households would financially win from the policy (see solid blue line in Figure 1). In the survey, we ask respondents to estimate their expected gain or loss from the reform (we proceed step by step, asking separately for the impact on their heating and transport expenditures). Only 14% think that their household would win through the reform. This pessimism cannot be explained by an ignorance of price elasticities as respondents correctly estimate them in another question, and the gap between perceived and actual net gain would still be too large if the respondents assumed that their expenditures are inelastic. Similarly, respondents are pessimistic about the distributional and environmental effects of the policy: 60% believe that the policy would not benefit poorer households and 66% think that the policy would be ineffective in reducing polluting and fighting climate change.

We also find that the more people are opposed to the policy, the more pessimistic they are, and that the causality between beliefs and opposition runs both ways. On the one hand, when provided with new information about the policy, people discard positive news but correctly process negative ones. This phenomenon is stronger for people who initially oppose the policy or who feel close to the Yellow Vests, which is consistent with the endogenous formation of beliefs through motivated reasoning. In other words, the less people like the policy, the less likely they are to assimilate positive information about it. On the other hand, our survey design enables us to show that beliefs also causally determine support for the policy: when convinced that they would financially gain, people’s likelihood to accept the policy increases by 50 p.p. Similarly, the likelihood to support it is 40 p.p. higher when people are convinced that the policy would effectively reduce emissions. To obtain causal effects, beliefs about environmental effectiveness are instrumented by randomly providing (or not) information that there is a scientific consensus on the effectiveness of carbon taxation. Beliefs about one’s own gains are instrumented with two independent designs that both lead to very similar outcomes. Our preferred specification uses variants of the main policy where the dividend is targeted to the bottom 20%, 30%, 40%, or 50% of the income distribution. Each respondent is randomly assigned a variant where ze is either eligible to the dividend or not. For example, a respondent at the 35th. percentile of the income distribution has equal chances to be assigned the reform targeted to the bottom 40% (there ze is eligible) or 30% (not eligible). This random assignment creates an exogenous variation in the belief to win or lose from the tax and targeted dividend. Under the credible assumption that, conditional on income and controlling for the variant, eligibility affects acceptance only through the belief of self-interest, we estimate the causal effect of the belief that one loses on the acceptance of the reform using a fuzzy regression discontinuity design. Figure 2 shows that acceptance of a given variant is indeed higher for those eligible to the dividend, i.e. on the left of the income eligibility threshold.

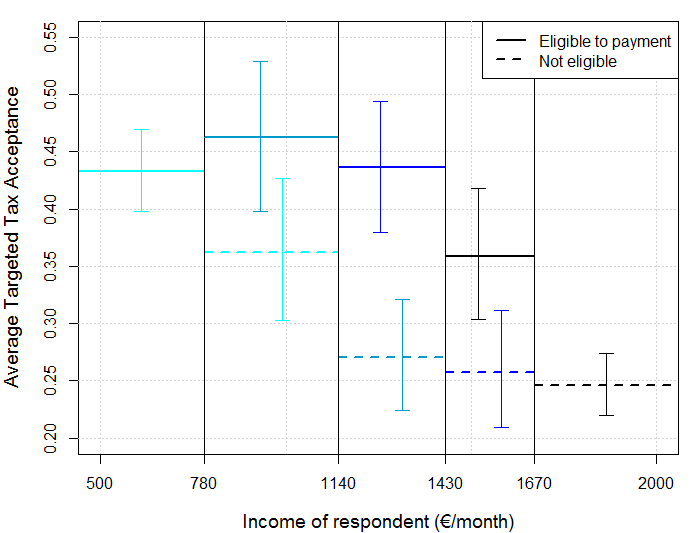


Figure 2 Acceptance of a tax and targeted dividend in function of income (hence eligibility to the dividend) and of the variant’s target. For example, acceptance rate is 43% for those eligible to the dividend in the reform targeted to the bottom 20%, while it falls at 36% for those who are not eligible.

This result confirms that policy rejection is not driven by people’s intrinsic preferences, but rather by endogenous pessimistic beliefs, leading to a vicious circle where opposition leads to more pessimistic beliefs that further strengthens opposition.

**An agenda for ambitious climate policies**

While many French people reject a carbon tax with dividend, the vast majority is concerned about climate change and supports other policies, as we show in a companion paper using the same survey data (Douenne and Fabre, 2020). The main insights from this survey is that people prefer norms or subsidies to taxes, that they favor measures that bring co-benefits (like reduced air pollution), and that they strongly support public investments. Indeed, we find that a crucial obstacle to changing habits is the lack of alternatives to fossil fuels like public transportation. These observations suggest the following path towards a successful decarbonization. First and foremost, a massive and long-lasting information campaign could be launched to improve understanding about climate policies. Second, the government could develop alternatives to fossil fuels through diverse policies: investments, subsidies, and regulations in favor of public transport, cleaner vehicles and thermal insulation, etc. Third, a tax and dividend restricted to kerosene could serve as a learning example as kerosene taxation is popular. Last but not least, European-level carbon pricing should later complement these policies, as people get convinced by the progressivity of a carbon tax and dividend and by the government's commitment to a fair decarbonization.

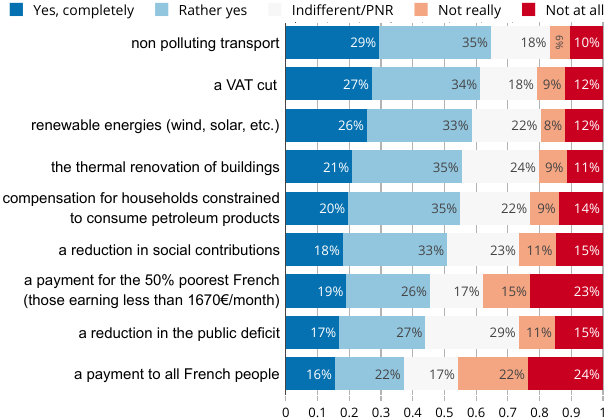


Figure 3 “Would you approve of an increase of the carbon tax if the revenues were used to...?”

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1. In January 2019, 3,354 American economists signed a column in the Wall Street Journal in support of carbon pricing with lump-sum rebates (Climate Leadership Council, 2019). The same year, the EAERE statement on carbon pricing received 1,772 signatures. [↑](#footnote-ref-1)
2. The French carbon tax was introduced in 2014 at an initial level of 7€/tCO2. This level was rapidly rising: it was 44.6€/tCO2 in 2018 and it was planned to reach 86.2€/tCO2 by 2022. In November 2018, in a context of high fuel prices, protests started. The massive scale of these events and the general public opinion rapidly forced the French government to suspend the increases initially scheduled. As of today, the tax remains at its 2018 level. [↑](#footnote-ref-2)