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POLICY BRIEF N°2

Who would support and pay for a residential carbon tax in Hungary – and under what conditions?

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June 2025

EXECUTIVE SUMMARY

The European Union will introduce carbon pricing for the building and transport sectors in 2027. This policy shift will directly affect household expenses in member states, including Hungary. Understanding public attitudes toward carbon pricing is therefore critical to designing effective and socially acceptable climate policies.

This policy brief presents the first study to examine public acceptance of, and willingness to pay (WTP) for, a carbon tax in a Central and Eastern European country. It also analyses the impact of a broad set of revenue recycling mechanisms on support – covering more options than previous international studies.

Based on a nationally representative survey conducted in Hungary in the summer of 2022, the results reveal low public acceptance of, and WTP values for, a carbon tax, and limited increases in both acceptance and WTP when revenue recycling is introduced. All values are lower than those typically observed in Western European surveys. A unique finding is the relative popularity of allocating carbon tax revenues to health care and education – a preference not reported in earlier studies.

The results underline the importance of thoroughly considering the distributional impacts of carbon pricing and of integrating strong social elements into climate policy design. Special attention should be paid to those who support carbon pricing only if revenues are recycled. To enhance public acceptability, this brief recommends (1) cutting taxes on energy alongside introducing carbon pricing with compensation for vulnerable groups, (2) legally earmarking carbon tax revenues for selected climate and social spending in underfunded areas, and (3) improving public understanding of climate change, the benefits of climate policy, and how carbon pricing works. The findings can inform Hungary's Social Climate Plan, due by June 2025, which could unlock substantial EU funds to help mitigate the social impacts of carbon pricing.

INTRODUCTION

Anthropogenic carbon dioxide emissions, primarily from the combustion of fossil fuels, are the main driver of climate change. Reducing these emissions is therefore essential. One way to do so is through carbon pricing, which gives emissions a cost and thereby encourages households and businesses to adjust their behaviour to minimise expenses. Two key instruments are carbon taxes and emissions trading systems (ETS).[1]

As part of its climate goals, the EU will extend the ETS to the building and transport sectors in 2027, aiming to reduce greenhouse gas emissions by at least 55% by 2030 compared to 1990 levels. This is expected to raise the price of heating fuels and motor fuels – directly affecting household well-being in Hungary.

Public acceptance of carbon pricing largely depends on how fair and effective people perceive these policies to be. Carbon pricing tends to place a relatively higher burden on poorer households: demand for heating and transport fuels is relatively inelastic, while low-emission alternatives such as heat pumps and electric vehicles remain expensive. At the same time, carbon taxes generate significant public revenue, which can be recycled to improve economic, social, and environmental conditions – potentially increasing public support.

This brief examines the level of public acceptance of, and willingness to pay (WTP) for, a carbon tax in Hungary, as well as how revenue recycling measures may influence these attitudes.

[1] *For the sake of simplicity, the term 'carbon' tax was used instead of an ETS in the survey.*

BACKGROUND

Three carbon tax questions were included in a comprehensive, nationwide face-to-face survey of 7,000 adults on public attitudes towards climate change, conducted between 10 June and 1 August 2022:[2]

1. If respondents were willing to pay a carbon tax, how much would they pay?

2. Among those initially unwilling to pay: would they do so under specific revenue recycling measures, and if so, how much?

3. Among those already willing to pay: would they pay more under such measures, and how much?

Respondents were offered five revenue recycling options: using the revenues to reduce the tax burden on individuals and companies, to fund environmental projects, to support the poorest households, to invest in or finance education and health care, or to reduce public debt.

For the analysis, a sub-sample of 3,013 respondents was used, representative by sex, age, place of residence, and level of education.

KEY FINDINGS

Acceptance rates and WTP values

All figures from the Hungarian survey were lower than those found in Western countries:

- Only 20% of respondents supported the introduction of a carbon tax, and most were willing to pay no more than HUF 1,000 per month.
- When revenue recycling mechanisms were introduced, support increased to 27%.
- Among those who changed their minds due to recycling, the average amount they were willing to pay was HUF 1,625 per month; for those already supportive, the average was HUF 1,804.

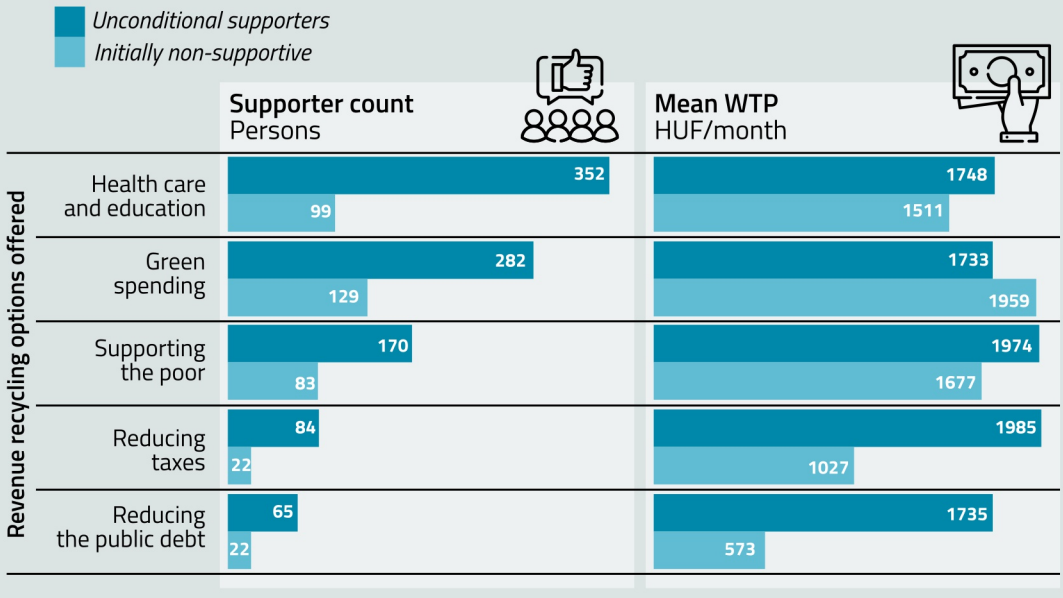
[2] Only a small number of questionnaires were completed after the announcement of the restructuring of the residential energy price reduction programme on 13 July 2022, so this is likely to have had only a marginal effect on the results.

Effectiveness of revenue recycling options

1. Recycling-contingent supporters (initially non-supportive): The most effective option was spending on health care and education – a finding not previously reported in the literature. At the opposite end of the spectrum, tax cuts and public debt reduction had negligible effects on acceptance, consistent with earlier studies. Green spending and support for low-income households performed better – both of which are typically the most popular options in Western countries. While green spending was selected by a relatively large share of respondents, support for low-income households was noticeably lower – albeit associated with relatively high willingness to pay.

2. Unconditional supporters (initial supporters): Green spending was the most favoured form of resource allocation, ahead of health care and education. Among these initial supporters of a carbon tax, the highest average willingness to pay was recorded for tax reductions and support for low-income households.

NUMBER OF SUPPORTERS AND MEAN WILLINGNESS-TO-PAY VALUES



Source: Authors' own elaboration

Patterns of acceptance

1. Correlations between initial acceptance and other factors

Initial acceptance was higher among those living in Budapest, county seats, or other cities with county rights; among grammar school, vocational grammar school, and university graduates; among those who monitor their household electricity use; and among respondents who reported living well or modestly. There is no significant difference between those who completed vocational school and those with an eighth-grade education or less. Acceptance does not correlate with age, sex, or the type of housing.

2. Similarities and differences between initial and recycling-contingent supporters

Similarities: They were similar in terms of education, place of residence, and sex. **Differences:** They differed in financial situation and energy awareness. Among those who only supported the tax with revenue recycling, a higher proportion lived modestly rather than well-off. At the same time, fewer of them monitored their household electricity consumption for environmental reasons.

3. Lowest and highest acceptance likelihood

Lowest likelihood: Those least likely to accept the tax were people living in villages or in towns that are neither cities with county rights nor Budapest, with no more than eighth-grade education, in poor financial conditions, and not monitoring their household electricity consumption. **Highest likelihood:** Those most likely to accept the tax were people living in Budapest or in cities with county rights, with a university degree, living in good financial conditions, and monitoring their electricity consumption for environmental reasons.

These two social groups respectively showed the lowest and highest likelihood of acceptance for both initial and extended acceptance – that is, among people open to paying a carbon tax, with or without revenue redistribution – although the exact figures varied slightly.

When the role of age was examined separately in relation to extended acceptance, the likelihood of acceptance was found to decline with age – in both the least and most receptive social groups.

EXPLANATIONS AND POLICY CHALLENGES

Explanations for low acceptance and willingness to pay

1. Deficiencies in the culture of environmentally conscious thinking and action: Environmental protection is under-represented in both the political and civil spheres. The public is generally aware of environmental and climate issues, considers climate change a serious problem, and expresses concern about it, yet does not rank it among the most pressing socio-economic threats.

2. Level of economic development and economic hardship at the time of the survey: Many Hungarians may feel unable to afford additional costs to support climate action. During the time of the survey, the country was experiencing massive consumer price inflation. In general, material considerations tend to outweigh environmental concerns.

3. Climate responsibility attributed to wealthier countries and large corporations: Both the government and the public may believe that the costs of mitigation and adaptation should not fall on them, as climate change has largely been caused by wealthier countries and multinational companies.

4. Individualism, low social capital and trust, weak solidarity, and high perceived corruption: Hungarian society is characterised by individualism, low levels of trust and social capital, and limited solidarity. Corruption is also a major concern. Trust plays a key role in linking climate concern to a sense of individual responsibility, and in determining whether concern translates into action.

5. Government policies and narratives around energy prices: The Orbán governments have strongly shaped public discourse. Carbon pricing is framed as a threat to economic well-being and competitiveness. The government especially opposes EU initiatives that could increase household energy prices.

Explanations for the effectiveness of revenue recycling

1. Health care and education: Choosing this combined category is not surprising, given the state of these sectors and the fact that their future received significant public attention at the time of the survey. Of the two, health care was likely the stronger trigger, as it was perceived as the most pressing issue – both in our data and in other research. Education, by contrast, did not emerge as a threatening concern.

2. Green spending: Of the two examples provided – insulating buildings and developing public transport – insulation likely played a particularly important role in the relative popularity of green spending, given the poor energy efficiency of Hungary's housing stock.

3. Support for the poor: Public attitudes towards poverty may help explain why support for low-income households ranked only third among both groups of supporters. The relatively high WTP values among initial supporters may reflect socially minded, higher-income individuals for whom redistribution is important.

4. Tax cuts: Reducing the tax burden might have seemed a straightforward choice, especially given that respondents identified inflation and poverty or hunger as two of the country's top three threats. However, this same set of problems may have played a role in the decision to support assistance for the poor. Additionally, responses regarding tax cuts may have been influenced by the fact that this option combined the reduction of taxes on individuals and businesses. Among initial supporters, relatively high WTP values for this measure could be linked to perceived importance of economic competitiveness.

5. Public debt reduction: Reducing public debt was unpopular, likely because it does not bring any direct social benefit.

POLICY RECOMMENDATIONS

1. One recommendation is to reduce existing taxes on energy in parallel with the introduction of carbon pricing, while also providing a comprehensive compensation package for groups vulnerable to adverse distributional effects – thereby mitigating negative impacts and addressing the sensitivity and resistance of Hungarian households to price changes.

2. A second recommendation is to legally earmark carbon tax revenues for climate action and social services – especially by directing funds to areas that clearly require investment and improved service quality, which may enhance public acceptability.

3. A third recommendation is to strengthen public awareness and understanding – particularly regarding climate change, the co-benefits of climate policy, and the effectiveness and design of carbon pricing.

CONCLUSIONS

The key conclusion is that social considerations must be integrated into climate policy design to build public support.

Findings suggest that those who would only support a carbon tax if the revenue were recycled are a key group to target with carefully designed redistribution mechanisms. This group includes people who monitor their household electricity use for financial reasons and show openness to supporting climate measures – which is why compensation and green spending should be paired, given their limited capabilities.

The EU's Social Climate Fund offers Hungary significant resources to mitigate the negative impacts of carbon pricing and increase public acceptance. Member states must submit their Social Climate Plans by June 2025, and these findings could help inform Hungary's submission.

REFERENCE

Muth, D., Weiner, C., & Lakócai, C. (2024). Public support and willingness to pay for a carbon tax in Hungary: Can revenue recycling make a difference? *Energy, Sustainability and Society* 14, 30. **> Link**

This research project, entitled 'The potential for climate adaptation in Hungary', was supported by the HUN-REN Hungarian Research Network.

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